ASTRONOMICAL

AND

METEOROLOGICAL OBSERVATIONS

MADE DURING

THE YEAR 1871,

AT THE

UNITED STATES NAVAL OBSERVATORY.

REAR-ADMIRAL B. F. SANDS, U. S. N.,
SUPERINTENDENT.

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ERRATA TO WASHINGTON OBSERVATIONS FOR 1870.

Pages XXXVIII and XXXIX. Between zenith distances 20° and 67° the values given for the factor B must all be diminished by unity.

Page 53, observations Nos. 4 and 5. There is a mistake in the reduction, the correction for wire A having been used instead of that for wire B. This has been corrected, and the proper value of the north polar distance has been used, in making up the table of observed and computed places of Saturn, given on page 248.

ERRATA TO WASHINGTON OBSERVATIONS FOR 1871.

The observations of δ Canis Majoris, Jupiter, α^2 Geminorum, α Canis Minoris, and β Geminorum, made on August 14.9, and the observations of the Sun, δ Leonis, Mercury, Venus, and Polaris, S. P., made August 15, were all reduced with a zenith point correction $1''.0$ too large. Hence the apparent north polar distances of these objects, given on page 9, must all be diminished by $1''.0$, and the miscellaneous corrections must be altered accordingly. Further, the corrections to the north polar distances found for these stars in the American Ephemeris, given on pages 119, 122, 123, and the geocentric north polar distances of the centers, and the corresponding corrections to the American Ephemeris for the Sun, Mercury, Venus, and Jupiter, given on pages 167 and 169, all require a correction of $-1''.0$.

Additional Errata to the Catalogue of Stars forming Appendix III to the Washington Observations for 1871.

Page.	Number.	Column.	For—	Read—
1	30	Name of Star	Weisse O, 24	Weisse O, 21
4	144	Right Ascension	$0^h\ 13^m\ 48^s.89$	$0^h\ 13^m\ 45^s.89$
7	241	Right Ascension	$0^h\ 25^m\ 30^s.34$	$0^h\ 25^m\ 30^s.40$
7	246	Declination	$+8°\ 58'\ 52''.2$, $58^y.4$, 4	$+8°\ 59'\ 52''.0$, $54^y.9$, 2
11	425	Name of Star	Weisse O, 233	Weisse O, 733
13	483	Precession in Right Ascension	$3^s.060$	$3^s.050$
14	541	Mean year in Declination	68.9	68.0
15	574	Right Ascension	$0^h\ 59^m\ 25^s.16$, $2^s.914$	$1^h\ 0^m\ 25^s.18$, $2^s.912$
16	600	Right Ascension	$49^s.67$	$47^s.93$
18	676	Declination	$-6°\ 43'\ 49''.3$	$-6°\ 42'\ 49''.2$
18	681	Declination	$+9°\ 48'\ 37''.7$	$+9°\ 40'\ 37''.7$
19	713	Name of Star	Weisse I, 1402	Weisse I, 402
25	962	Precession in Declination	$17''.36$	$17''.37$
27	1049	Declination	$+13°\ 3'\ 36''.3$	$+13°\ 1'\ 36''.3$
27	1053	Declination	$+13°\ 37'\ 34''.0$	$+13°\ 17'\ 34''.0$
30	1157	Mean year in Declination	67.9	67.0
31	1196	Precession in Right Ascension	$3^s.162$	$3^s.262$
32	1232, 33	Name of Star	Weisse (2)	Weisse
34	1329	Right Ascension	$3^h\ 2^m\ 0^s.29$	$3^h\ 3^m\ 0^s.29$
35	1362	Declination	$+13°\ 9'\ 53''.0$	$+13°\ 19'\ 53''.0$
38	1490	Declination	$+2°\ 8'\ 13''.7$	$+2°\ 18'\ 13''.7$
41	1609	Declination	$+28°\ 58'\ 21''.2$	$+28°\ 57'\ 21''.2$
44	1737	Right Ascension	$3^h\ 50^m\ 41^s.44$	$3^h\ 50^m\ 42^s.44$
46	1818	Declination	$+23°\ 42'\ 21''.7$	$+23°\ 43'\ 21''.7$

Errata—Continued.

Page.	Number.	Column.	For—	Read—
48	1896	Right Ascension.	$4^{h}\ 19^{m}\ 38^{s}.14,\ 3^{s}.429$	$4^{h}\ 18^{m}\ 38^{s}.15,\ 3^{s}.428$
48	1896	Precession in Declination	$8''.50$	$8''.58$
48	1899	Declination	$+23^{\circ}\ 47'\ 6''.4$	$+23^{\circ}\ 48'\ 6''.4$
57	2259	Right Ascension	$5^{h}\ 19^{m}\ 10^{s}.93$	$5^{h}\ 19^{m}\ 11^{s}.93$
62	2445	Declination	$+22^{\circ}\ 2'\ 48''.9$	$+22^{\circ}\ 3'\ 50''.4$
64	2543	Precession in Right Ascension	$+3^{s}.900$	$+3^{s}.882$
66	2614	Precession in Right Ascension	$+3^{s}.381$	$+4^{s}.381$
69	2728	Right Ascension.	$6^{h}\ 39^{m}\ 15^{s}.49,\ 4^{s}.332$	$6^{h}\ 39^{m}\ 15^{s}.57,\ 4^{s}.340$
69	2728	Declination	$+43^{\circ}\ 43'\ 39''.8$	$+43^{\circ}\ 54'\ 39''.8$
74	2925	Declination	$-14^{\circ}\ 15'\ 59''.2$	$-14^{\circ}\ 15'\ 18''.2$
74	2928	Declination	$-14^{\circ}\ 15'\ 57''.0,\ 53^{y}.5,\ 3$	$-14^{\circ}\ 15'\ 57''.8,\ 57^{y}.7,\ 4$
75	2971	Right Ascension	$7^{h}\ 13^{m}\ 43^{s}.24,\ 4^{s}.195$	$7^{h}\ 13^{m}\ 43^{s}.20,\ 4^{s}.199$
75	2971	Declination	$+41^{\circ}\ 31'\ 34''.9$	$+41^{\circ}\ 37'\ 34^{s}.9$
75	2984	Right Ascension	$7^{h}\ 15^{m}\ 33^{s}.59$	$7^{h}\ 15^{m}\ 34^{s}.59$
78	3093	Declination	$-14^{\circ}\ 11'\ 8''.7,\ 55^{y}.5,\ 3$	$-14^{\circ}\ 11'\ 8''.8,\ 55^{y}.8,\ 2$
82	3250	Right Ascension	$7^{h}\ 51^{m}\ 16^{s}.74$	$7^{h}\ 51^{m}\ 12^{s}.78$
92	3639	Precession in Right Ascension	$2^{s}.847$	$2^{s}.808$
92	3639	Declination	$-12^{\circ}\ 9'\ 32''.4$	$-14^{\circ}\ 9'\ 32''.5$
93	3674	Name of Star	Weisse (2) VIII, 936	Weisse VIII, 936
102	4062	Declination	$+16^{\circ}\ 12'\ 23''.4$	$+16^{\circ}\ 12'\ 13''.4$
106	4200	Precession in Right Ascension	$3^{s}.233$	$3^{s}.237$
106	4205	Precession in Right Ascension	$3^{s}.237$	$3^{s}.233$
107	4256	Declination	$+12^{\circ}\ 23'\ 19''.7$	$+12^{\circ}\ 25'\ 19''.7$
114	4523	Right Ascension	$10^{h}\ 43^{m}\ 33^{s}.60$	$10^{h}\ 44^{m}\ 32^{s}.60$
114	4523	Precession in Declination	$18''.95$	$18''.98$
122	4832	Precession in Right Ascension	$2^{s}.056$	$3^{s}.056$
122	4833	Precession in Right Ascension	$2^{s}.058$	$3^{s}.058$
124	4919	Declination	$+7^{\circ}\ 49'\ 27''.9$	$+7^{\circ}\ 48'\ 27''.9$
129	5113	Right Ascension	$12^{h}\ 8^{m}\ 58^{s}.36$	$12^{h}\ 7^{m}\ 58^{s}.36$
140	5586	Right Ascension	$13^{h}\ 35^{m}\ 18^{s}.04$	$13^{h}\ 25^{m}\ 16^{s}.04$
155	6157	Name of Star	Weisse (2) XIV, 1146	Weisse (2) XIV, 1147
161	6392	Name of Star	Weisse (2) XIV, 571	Weisse (2) XV, 571
170	6754	Declination	$+41^{\circ}\ 44'\ 29''.1$	$+41^{\circ}\ 46'\ 29''.1$
181	7210	Right Ascension	$17^{h}\ 15^{m}\ 1^{s}.83$	$17^{h}\ 15^{m}\ 0^{s}.83$

Page XII, line 6. For "those given," read "those of stars whose mean places are given."
7. For "the observations were," read "the observations of 1845 were."
7. For "to the beginning of that year," read "to the beginning of that year with the places of that Almanac."
9. For "to the beginning of 1850," read "to the beginning of 1850 with the places of that Almanac."
18. For "star-lists used," read "Right Ascensions previously reduced from observations."
34. For "for the observation," read "for the observations counted from the epoch."

REPORT OF THE SUPERINTENDENT OF THE OBSERVATORY TO THE CHIEF OF THE BUREAU OF NAVIGATION.

United States Naval Observatory,
Washington, October 6, 1871.

Sir: Having already submitted estimates for the support of the Naval Observatory for the next fiscal year, I have now the honor to present a report of the work done, and its condition during the past year.

ASTRONOMICAL WORK.

The Equatorial Telescope.—During the past year the observations with this instrument have been made by Professor Asaph Hall, United States Navy. The Transit Circle having been dismounted in August, 1870, for the purpose of repolishing its object-glass, and some delay having necessarily occurred in remounting that instrument, more attention than usual has been given to observing the minor planets with the Equatorial. Since February, twenty-seven of these planets have been observed. Observations have also been made of the two new comets discovered during the present year, and the elements of the orbit of Comet I, 1871, have been computed.

The driving-clock of the Equatorial has been for many years a source of trouble on account of its bad performance. During the winter, in the absence of Professor Hall on the observatory eclipse expedition, it was thoroughly cleaned and put in good condition by Mr. Gardner, the instrument-maker of the Observatory, and now performs as well perhaps as can be expected of a clock of its kind.

For several years we have had frequent requests from European astronomers for observations of the minor planets that come into opposition during the summer months, and which are generally in low southern declinations, and in regions where it is very difficult to find known stars of comparison. This has led to the examination of the zones of stars observed at the Naval Observatory, in the years 1846 to 1852, and which are all in southern declinations. The zones were reduced by Dr. B. A. Gould, and it has been decided to publish a portion of them. The zones observed by Lieutenant T. J. Page and Professor J. H. C. Coffin, United States Navy, with the Mural Circle, in the years 1846 to 1850, are now being printed, and will be published as an appendix to our annual volume for 1869. The reading of the proof and care of the work I have placed in the charge of Professor Hall.

The New Large Equatorial is in the hands of the contractors, Messrs. Alvan Clark & Sons, opticians, of Cambridgeport, Massachusetts. The casting of the object-glass has not yet been successful, and, as it is a work of great delicacy to obtain in the casting the proper quality of glass, it will take time and frequent trials to attain perfection, after which the work will go steadily on. The contractors have no doubt of its completion in the specified time. In addition to the $10,000 installment on the contract for the manufacture of the telescope, for the present fiscal year, I have inserted in the estimates for the Observatory $10,000 for the erection of the tower and dome, to be in readiness to mount the instrument when finished.

The Transit Circle.—The object-glass of this instrument, which was sent to Messrs. Alvan Clark & Sons for regrinding, during the absence of the officers in charge of it on the Observatory Eclipse Expedition, has been returned finished; and upon trial its definition now has been found to be excellent, δ Ursæ Minoris, a 4½ magnitude star, is easily observed with it in the day-time. Owing to the nearly fatal illness of Professor Harkness, who has charge of the instrument, and the absence of himself and Professor Eastman, in Europe, observing was not begun until August 1, 1871. Advantage was taken of the intervening time to make several improvements in the different parts of the instrument. The new wing built for it has answered our expectations, but will yet require some fitting up, for which I have submitted an estimate.

The works of the Kessels clock have been cleaned by Mr. J. Karr, clock-maker, Washington City. This and the counting clock have been regulated so that their rates are now less than one-tenth of a second per day.

Transit Instrument and Mural Circle.—Professor M. Yarnall, United States Navy, has had charge of these instruments, aided from time to time by Messrs. Frisby and Stone, assistant observers, and throughout the year by Mr. Skinner, assistant observer. Professor Yarnall was most of the year engaged in observing with the Mural Circle such stars as were needed for our catalogue; and during a portion of the time the moon and such larger planets as transited at night. Mr. Frisby assisted him with the Mural Circle, and for similar observations Messrs. Skinner and Stone used the transit instrument, with occasional assistance from Professor Yarnall. About the last of July, the observations with these instruments ceased, the Transit Circle coming again into use. Messrs. Frisby and Stone were then transferred to that instrument, and Mr. Skinner directed to assist Professor Hall at the equatorial.

Professor Yarnall has also been engaged in reducing for publication the work of those instruments for the year 1869, assisted by Mr. Skinner, and to some extent by Mr. Stone. Mr. Frisby compiled the mean right ascensions observed in that year, and Professor Nourse occasionally assisted in copying and reading proof. Captain Whiting transcribed a portion of the Mural work, and Mr. Thomas Harrison the Transit Observations of 1869. Mr. Skinner reduced a portion of the Mural work of the year, and assisted in other work when needed. Professor Yarnall has reduced the Mural and Transit work for the year 1870, and, except the copying, the whole work of that year is now ready for the press, and we shall at once proceed to reduce the work of 1871, with both instruments. He has also, as he could take the time, done something on the general catalogue; and after he has finished reducing the work of this year will devote all his time to the catalogue, so that it may be published as soon as possible.

The Naval Observatory Eclipse Expedition of December, 1870.—The officers of the Observatory ordered to Europe to observe the eclipse of December of last year have returned to their duties here. Very able reports in detail of their operations have been submitted, and are now in the hands of the printer, nearly ready for distribution.[1] Their observations mainly tend to corroborate those of the August eclipse. Existence in the corona of a bright line whose wave length is 531.6 is verified, and the line found in *all parts* of the corona; confirming the discovery made at Des Moines in August, 1869. Two other bright lines of less refrangibility were also found in one part of the corona.

Differences of Longitude determined by telegraph cable by Professors Newcomb, Hall, and Harkness of our eclipse party:

Spencer's monument, Malta, east of flag-staff at landing-place, Gibraltar, $1^h\ 19^m\ 27^s.52 \pm 0^s.15$. Light-house on Maniace Castle, Syracuse, east of Spencer's monument, Malta, $0^h\ 3^m\ 12^s.19 \pm 0^s.16$.

Latitudes Determined.—Flag-staff at landing-place, Gibraltar, 36° 7′ 20″ north; Spencer's monument, Malta, 35° 52′ 59″ north; light-house on Maniace Castle, Syracuse, 37° 3′ 8″ north.

The Telegraphic Apparatus of the Observatory, still in charge of Professor Harkness, in connection with his other duties, is in excellent order, and no changes have been made in it during the year. Since the mean-time clock was cleaned in November, 1869, by Mr. Gardner, its running has been excellent, the rate seldom amounting to so much as one-tenth of a second per day.

The wants of the Meteorological Stations of the Army Signal Corps have called for the distribution of daily time-signals to be greatly extended; they are now sent to all parts of the country, from the Atlantic to the Pacific and from the great lakes to the Gulf of Mexico. This is of vast importance, as it gives all the railroads accurate and uniform time, thus tending to the prevention of accidents, and making the Observatory contribute directly to the interests of the people.

After the return of Professor J. R. Eastman, United States Navy, from the Eclipse Expedition in Europe, he was engaged during the months of May and June, on the part of the Observatory, in connection with General C. B. Comstock, United States Army, Superintendent of United States Lake Survey, and Lieutenant G. M. Wheeler, United States Engineer Corps, commanding exploring expedition to Nevada and Arizona, in determining the difference of longitude by telegraph between this Observatory and Detroit, and also between the Observatory and Carlin and Austin, Nevada. The reduction of the work is not yet completed, but the preliminary reduction indicates that good results may be confidently expected. This co-operation on the part of the Observatory was undertaken at the request of General Humphreys, Chief of United States Corps of Engineers.

Professor Eastman, in addition to his duties with the Transit Circle, has had charge of the meteorological department, as in previous years. The observations have been made by the watchmen under his direction, in the same manner as in 1869–'70. The observations of 1868 and 1869 have been prepared for the press, but, owing to the pressure of other work, the observations of 1870 have not yet been reduced.

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[1] Published as Appendix I to the Washington Observations for 1869.

There is still a great lack of proper instruments in the meteorological department, and I again ask that the appropriation requested in 1869 may be urged for the coming year.

Chronometers.—We have in the chronometer-room one hundred and fifteen chronometers; eleven of them are on trial, and one hundred and four at present ready for issue. During the year thirty-four chronometers have been issued to vessels of the Navy; three of them, together with two pocket-chronometers, were issued to Captain C. F. Hall, commanding expedition to the North Pole.

In issuing chronometers it is our custom to give one of the chronometers made by Negus & Co., New York, as a standard, on account of their excellence, and two others of different manufacture, to each vessel.

The officers at present on duty in the chronometer-room are Lieutenant Commanders C. H. Pendleton and George C. Remey, United States Navy, who reported for duty, the former on the 9th of March last, the latter on the 13th of September. The following officers have also been on duty in the same connection during some portion of the year ending with their detachment for sea service: Commander S. L. Breese, from August 1, 1870, to April 25, 1871; Lieutenant Commander T. F. Jewell, from September 2, 1870, to March 17, 1871; Lieutenant W. H. Emory, from January to April, 1871; Master W. S. Cowles, from January to May, 1871; Lieutenant C. T. Hutchins, from February to March, 1871; Master A. Marix, from July 3 to August 8, 1871.

We have not been able to continue the plan of recording the history of the chronometers, as officers could not be spared from sea service for that work, the necessities of the service leaving for the last two months but one officer in this department.

Theory and Tables of the Moon.—Professor Simon Newcomb, United States Navy, who has this subject in charge, after his observations of the eclipse, under orders from the department, visited the principal observatories of Europe, and also some of the great libraries, for the purpose of making the most complete collection possible of observations of eclipses and occultations previous to 1750. Every facility was given by the directors of the different establishments, and his mission was successful to a degree scarcely hoped for. At the Observatories of Pulkova and Paris he found records of observations extending as far as 1680, of which the very existence seems to have been long forgotten, though they compare well in accuracy with those of modern times. Our accurate knowledge of the motion of the moon, as shown by observation, will thus be carried back seventy years before the epoch at which it has hitherto been supposed to begin, namely, 1750.

The reduction of these observations has been completed by Professor Newcomb, with some assistance from Mr. Stone, and the work of comparing them with the existing tables is making rapid progress. The appropriation of $2,000, made by Congress, is being expended in the employment of three young men to compute places of the moon from the tables; and it is expected that this sum will suffice to complete the comparison of the observations in question with the tables.

The comparison of the much more numerous observations since 1750 with the tables will remain to be made, and the theoretical calculation of the action of the planets on the moon will involve a good deal of merely mechanical calculation; a continuation of the appropriation is therefore asked for. The interest in these researches which has been privately expressed by distinguished astronomers abroad, leads to the belief that there are few ways in which so small an appropriation can be made to do more for the credit of this Observatory.

THE LIBRARY.

The scientific portion of the Library continues steadily to increase, almost exclusively through its foreign and home exchanges. Copies of the volume of astronomical and meteorological observations made at this Observatory in the year 1868 were received from the office of the Congressional Printer in May last, and were promptly distributed. Those sent abroad were forwarded through the courtesy of the resident legations, the Department of State, and the Smithsonian Institution.

The usual home distribution was made through the mail to observatories, scientific institutions, and individuals appreciating astronomical and meteorological results. The volume of observations for 1869, now in press, is early expected, together with separate copies of the report of the eclipse of 1870, printed also as an appendix to the volume.

Professor J. E. Nourse, United States Navy, has charge of the Library, its correspondence, and distribution of the publications of the Observatory. He is also employed in transcribing observations for the annual volume for the press, and revising proof.

In conclusion, I would wish to call the attention of the Department to the status of the professors of mathematics of the Navy, in regard to rank. By inadvertence or clerical error in the bill passed last Congress to regulate the relative rank of line and staff officers, the professors were omitted. A bill to correct this mistake was introduced by the chairman of the Naval Committee of the Senate, but before decisive action could be taken thereon, both Houses resolved that no new matter should be reported. The professors merely ask to be placed upon the footing of other staff officers, as was recommended by the board of officers who had that subject under consideration at the Navy Department; and I respectfully request that some action be taken by the Department to give to this meritorious class of officers the standing among other staff officers they so well deserve. To refer only to the past few years, their published works, in their province, have reflected great credit upon the service to which they are attached, and have elicited encomiums from the savans of Europe; showing that the Navy has been second to none in its contributions to science. The usefulness of this corps of officers in the Navy would be much enhanced by the increase of their number on the active list, so as to enable the Observatory to supply astronomers for scientific expeditions.

Very respectfully, your obedient servant,

B. F. SANDS,
Rear-Admiral, Superintendent,

Captain Daniel Ammen, U. S. N.,
Chief of Bureau of Navigation, Navy Department.

GENERAL INTRODUCTION.

The Observatory was originally built as a depot of charts and instruments for the Navy, the work being done under the supervision of Lieutenant James M. Gillis, United States Navy, and a very full account of it is given in his "Report on the Plan and Construction of the Depot of Charts and Instruments, with a Description of the Instruments, &c.," made to the Secretary of the Navy in February, 1845, and published as Senate Document No. 114, Twenty-eighth Congress, second session. A more general description, illustrated by plans of the building and drawings of the principal instruments, is contained in the volume of Washington Observations for 1845; and an account of the changes made for the reception of the large Transit Circle, together with a description of that instrument, will be found in the volume of Washington Observations for 1865.

Position of the Observatory.—The latitude deduced from observations made with the Mural Circle in 1845 and 1846 was $+ 38^\circ\ 53'\ 39''.25$;[1] and that value has been employed in the reduction of all observations made with the Mural Circle down to the present time. The observations made with the same instrument from 1861 to 1864, inclusive, give a latitude $0''.47$ less, viz, $+ 38^\circ\ 53'\ 38''.8$;[2] and this latter value is the one which has always been used in computing the published "Apparent North Polar Distances" obtained from observations made with the Transit Circle. It should be remarked, however, that in the published tables of "Right Ascensions, North Polar Distances, and Semi-diameters of the Sun, Moon, and Planets, deduced from Observations with the Transit Circle," "Corrections to the Right Ascensions and North Polar Distances of the American Ephemeris given by individual observations of Stars with the Transit Circle," and "Mean Places of Miscellaneous Stars given by individual observations with the Transit Circle," the final north polar distances depend upon the position of the pole determined from all the observations of circumpolar stars made with the Transit Circle during the same year as those contained in the tables in question. In interpolating tabular positions of the moon and planets, the longitude of the Observatory from Greenwich is assumed to be $5^h\ 8^m\ 12^s.0$.[3]

The point to which all differences of longitude measured from the Observatory are referred is the center of the dome. The most probable value of its latitude is $+ 38^\circ\ 53'\ 38''.8$, which has been determined from discussions of all the observations of circumpolar stars observed, both above and below the pole, with the Mural and Transit Circles, during the years between 1861 and the present time. For the determination of its longitude from Greenwich the following data are regarded as the most trustworthy. They were communicated to the Superintendent of the Observatory in an official letter from the Coast-Survey Office, dated August 10, 1872. The numbers preceding the differences of longitude are the years when they were measured:

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[1] Washington Observations for 1845, Appendix, p. 116.

[2] Washington Observations for 1864, Introduction, p. xliv.

[3] In some previous volumes this longitude is erroneously given. All the tabular positions of the moon since 1860 have been computed with the adopted longitude $5^h\ 8^m\ 12^s.0$.

	h.	m.	s.	s.
1866. Greenwich east of Foilhommerum - -	0	41	33.29	± 0.10
1866. Foilhommerum east of Heart's Content -	2	51	56.32	± 0.12
1866. Heart's Content east of Calais - - - - -	0	55	37.97	± 0.15
1857. Calais east of Bangor - - - - - - -	0	6	0.31	± 0.05
1851. Bangor east of Cambridge - - - - - -	0	9	23.06	± 0.05
1867. Cambridge east of Washington - - - -	0	23	41.11	± 0.03
Washington west of Greenwich - - - -	5	8	12.06	± 0.23

The points of reference are, at Greenwich, the Transit Circle, and at Cambridge and Washington, the domes of the observatories. The large probable errors are due to personal equation.

In August, 1873, at the Portland meeting of the American Association for the Advancement of Science, Professor J. E. Hilgard, of the United States Coast Survey, read a paper in which he stated that the Coast Survey has now made three independent determinations of the difference of longitude between Europe and America, different lines of telegraph, and different observers, being employed on each occasion. In 1867, ('66?) the Atlantic cable was used between Valencia and Heart's Content; in 1870 the French cables were used, coupled together in such a manner that signals were exchanged directly between Brest and Duxbury; and in 1872 the French cable was used from Brest to St. Pierre, whence the signals were sent through the land lines, via Sydney and the Provinces, to Cambridge and Washington. The results for difference of longitude between Greenwich and Washington are as follows:

	h.	m.	s.
1867 (?) - - - - - - - - - -	5	8	12.11
1870 - - - - - - - - - -			12.16
1872 - - - - - - - - - -			12.10
Mean - - - - - - - -	5	8	12.12

It will be observed that the result here given from the operations of 1867 ('66?) differs slightly from that communicated to the Observatory in 1872, but probably the later value is to be preferred. The very close agreement of these results is remarkable, and leaves little doubt that this longitude is now well determined.

Since the Observatory was built, there have been a number of changes in the positions of its instruments, and, in order to facilitate comparisons of the work done with them at different times, their co-ordinates, measured from the center of the dome, are given in the following table. The sign + before a co-ordinate indicates that the instrument to which it belongs is north or west of the center of the dome, while the sign — indicates that it is south or east of that point:

	Diff. Lat.	Diff. Lon.	Diff. Lat.	Diff. Lon.
	Feet.	Feet.	″	s.
Transit Instrument:				
January, 1845, to September 2, 1864 . .	0.0	+ 41.	0.00	+0.035
Since October 1, 1864	0.0	− 42.9	0.00	−0.036
Mural Circle:				
January, 1845, to September 15, 1845 . .	0.0	+ 32.	0.00	+0.027
Since October 1, 1845	0.0	− 33.9	0.00	−0.029
Old Meridian Circle:				
January, 1845, to August, 1864	0.0	− 42.9	0.00	−0.036
Prime Vertical Transit Instrument:				
Since January, 1845	− 45.4	0.0	− 0.45	0.000
Transit Circle:				
January 1, 1866, to June 5, 1869 . . .	0.0	+ 38.4	0.00	+0.032
Since October 1, 1869	0.0	+ 77.8	0.00	+0.066

Arrangement of work.—The system adopted at the time of the revival of the astronomical activity of the establishment in 1861 is still continued. Under this system, the observations with each instrument are directed by the officer having it in charge, who is held responsible for the proper performance of the work, and prepares the descriptions, explanations, and discussions of the observations contained in the annual volumes.

During the year 1871 the details for duty were as follows:

The Transit Circle was in charge of Professor William Harkness, U. S. N., who was assisted by Professor John R. Eastman, U. S. N., and by Assistant Observers Edgar Frisby and Ormond Stone.

The Transit Instrument and Mural Circle were in charge of Professor Mordecai Yarnall, U. S. N., who was aided by Assistant Observers Edgar Frisby, Ormond Stone, and Aaron N. Skinner, from January 1 till the end of July. After that period, although Mr. Skinner ceased to observe with the transit and mural, he continued to assist Professor Yarnall in making his reductions until the end of the year.

The Prime Vertical Transit Instrument was not used during the year.

The Equatorial was in charge of Professor Asaph Hall, U. S. N., who, after the end of July, was aided in observing by Assistant Observer Aaron N. Skinner.

In the Department of Chronometers, which includes the dropping of the time-ball at noon, and the transmission of time signals to the city through the police telegraph, the following officers were on duty for the periods specified, namely: Lieutenant William H. Emory, from January 3 to April 1; Master W. S. Cowles, from January 20 to May 21; Lieutenant Commander C. H. Pendleton, from March 9 to December 31; Master A. Marix, from July 3 to August 8; Lieutenant Commander George C. Remey, from September 13 to December 31; Lieutenant S. M. Ackley, from November 1 to December 31, and Lieutenant Commander J. D. Graham, from November 6 to December 31.

The meteorological observations were made, under the supervision of Professor J. R. Eastman, U. S. N., by the watchmen of the establishment, Messrs. Thomas Hays, Dennis Horigan, and Nicholas Cahill.

Mr. William F. Gardner, instrument-maker, executed all necessary alterations and repairs to the instruments during the year.

Mr. Thomas Harrison, clerk and disbursing officer, had charge of the official correspondence and accounts of the establishment.

The Observatory, being a naval establishment, is under the general supervision of the Bureau of Navigation of the Navy Department.

THE TRANSIT CIRCLE.

In the end of October, 1870, the officer in charge of the Transit Circle, together with his senior assistant, went to Sicily to observe the total solar eclipse, which occurred on December 22 of that year. The performance of the object-glass of the Transit Circle never having been satisfactory, advantage was taken of their absence to send it to Messrs. Alvan Clark & Sons to be reground. This process was successfully accomplished, and the object-glass was returned to the Observatory in the following spring; but, owing to the officer in charge of the instrument being detained in Europe by a severe and protracted illness, observing was not resumed until August 1. From that date until the end of the year the instrument was employed on the bodies of the solar system, on stars contained in the list of the American Ephemeris, and on a small list of miscellaneous stars, most of which had been used in observations with the equatorial.

Prior to August 1, 1871, a number of changes were made in the instrument, the most important of which was the regrinding of the object-glass already mentioned. This produced a wonderful improvement in the definition and color correction, while the focal distance was only shortened twenty-five hundredths of an inch. As originally constructed the declination micrometer screw carried nearly all the movable parts of the eye-piece, the total weight of which amounted to thirty-one ounces avoirdupois. In order to free it from this excessive load the eye-piece was altered in such a manner that the screw now carries nothing but its own micrometer plate, which weighs only twelve ounces. When the instrument came from the maker the arrangement for changing the color of the light, which illuminates the field of view of the telescope, consisted of a piece of thin paper painted of different colors. This has been removed and replaced by a piece of stained glass, which answers much better. In order to facilitate the accurate pointing of the collimators on each other, the north one has been provided with an excellent filar micrometer, by Messrs. Stackpole & Brother, of New York. Finally, the cushions of the observing couch have been restuffed and recovered, and its wooden legs and rollers proving too weak, in October they were replaced by gun-metal ones.

THE OBSERVING-ROOM.

The interior of the observing-room measures 40 feet from north to south, and 28 feet 3 inches from east to west. Its height, from the floor to the under side of the shutters which cover the slit, is, at the ridge, 23 feet 2 inches, and at the eaves 19 feet 6 inches. The ridge of the roof is placed due east and west. The slit opens to a width of 3 feet 9 inches, and extends downward to within 7 feet 4 inches of the floor. The portion in the roof is closed by means of four sliding shutters, while the portions in the north and south walls are each closed by a single door. The construction of the room is peculiar, its sides being formed of tinned iron 0.015 of an inch = 0.38 of a millimeter thick, shaded from the direct rays of the sun by light wooden louver work, as is more fully explained in the Washington Observations for 1870, page XIV. This construction was adopted in order to secure identity of temperature between the internal and external air, and is probably the best possible for that purpose.

In removing the Transit Circle to this room its latitude was not changed, but it is now 77.8 feet = $0^s.066$ west of the center of the dome, while from January 1, 1866, to June 5, 1869, it was only 38.4 feet = $0^s.032$ west of the center of the dome.

THE TRANSIT CIRCLE.

A description of the Transit Circle, together with an investigation of its constants, is contained in the Washington Observations for 1865. The following briefer account will probably suffice to render intelligible the explanation of the observations and their reduction:

The instrument was made in 1865 by Pistor & Martins, of Berlin; is of the reversible pattern; and is mounted upon two massive marble piers, with its axis 8 feet 2 inches above the floor.

The telescope has a clear aperture of 8.52 inches, and a focal length of 12 feet and 0.7 of an inch. The axis is cast in a single piece, into which the steel pivots, 2.09 inches in diameter and 1.70 inches long, are screwed. The Ys are of gun-metal, and their bearing surfaces are 0.28 of an inch wide. The distance between them, measured from center to center of the bearing surfaces, is 3 feet 9.1 inches. The telescope tube is made in two similar halves, which are bolted to opposite sides of a cube, measuring 16.64 inches on each edge, which forms the center of the axis.

There are two circles, identical in form and size, which are attached to the two extremities of the axis. Each of them has ten arms, is cast in a single piece weighing about eighty pounds, and is 45.30 inches in diameter at its outside edge, and 43.40 at the graduation. The circle on the clamp end of the axis is designated as circle A, and has inlaid upon its face two bands of silver, each 0.13 of an inch wide, the inner one of which is graduated to every 2′, and the outer one to every 10′. The circle on the other end of the axis is designated as circle B, and has inlaid upon its face a single band of silver, 0.13 of an inch wide, which is graduated to every 2′. The graduation on each of these circles is numbered from 0° to 360°, the numbers increasing from left to right; and, as they face in opposite directions, when the telescope is turned in zenith distance the reading of one circle increases while that of the other diminishes. The circles are attached to the axis in such a manner that they may be set to give any desired reading when the telescope is pointed to the zenith. Each of them is provided with four micrometer microscopes for reading its fine graduation; but the same microscopes are not always employed with the same circle, because they are attached to the piers, and reversing the instrument interchanges them and the circles. Each pier carries four microscopes, placed at the extremities of two diameters, which intersect each other at right angles, and each of which makes an angle of 45° with the vertical. The microscopes on the western pier are marked I, II, III, IV; those on the eastern pier, V, VI, VII, VIII. The readings of the former diminish, and those of the latter increase, as the telescope moves from the zenith toward the south. Assuming distinct vision with the naked eye to be obtained at a distance of ten inches, these microscopes magnify forty-five diameters. Each revolution of their screws is equal to 30″, and their micrometer heads are divided to 0″.5. In addition to the microscopes already mentioned, each pier carries another, which is employed as a pointer for setting the telescope by means of the coarse graduation on circle A. These microscopes magnify twenty-three diameters, and are placed at the extremities of horizontal radii to the circles; that on the western pier being to the north, and that on the eastern pier to the south of the axis. The horizontal microscope in actual use is always the one at the clamp end of the axis, that being the position of circle A.

In the eye-piece of the telescope is a fixed reticule of fifteen vertical and two horizontal wires. The latter have a space of about 8″ between them, and are used principally to mark the center of the field of view. The notation and approximate equatorial intervals of the vertical wires are as follows:

TABLE I.

	s.		s.		s.
I	+ 36.7	C_1	+ 4.1	D_1	− 8.1
II	+ 24.5	C_2	+ 2.0	D_2	− 9.7
III = B_1	+ 12.2	IV = C_3	0.0	V = D_3	− 12.2
B_2	+ 9.7	C_4	− 2.0	VI	− 24.5
B_3	+ 8.1	C_5	− 4.1	VII	− 36.7

The wires B_1 to B_3 are called set B; C_1 to C_5, set C; and D_1 to D_3, set D. In reference to the notation, it should be observed that the wire first crossed by an equatorial star is always designated wire I; consequently, when the instrument is reversed, the notation of the wires is also reversed.

In addition to the fixed reticule, the eye-piece contains a right-ascension and a zenith-distance micrometer, in each of which the readings increase as the wire moves from the micrometer head. The right-ascension micrometer serves for determining the collimation constant, and is sometimes used for obtaining the time of transit of close circumpolar stars when clouds prevent their being seen at the fixed wires. It is provided with a single vertical wire, moved by a micrometer screw, each revolution of which measures $1^s.024$. The zenith-distance micrometer carries four horizontal wires, the middle two of which are distant from each other about 4½″, and the center of the space between them is regarded as the standard middle wire. The other two are placed at a distance of about ten revolutions of the screw on each side of the middle wire; that nearest the micrometer head being designated wire A, the other wire B. When the telescope looks south the micrometer head is below the eye-piece if the clamp is west, above it if the clamp is east. An increase of micrometer reading is subtractive from the reading of circle A, and additive to that of circle B.

The illumination of the field of view is so arranged that the light can be made of any desired intensity, and the wires can be shown either dark on a bright ground, or bright on a dark ground. In the case of bright-field illumination the color of the light can be varied from deep red, through light red, yellow, and light blue, to dark blue.

SUBSIDIARY APPARATUS.

Collimators.—The Transit Circle is furnished with two collimators, having object-glasses of 35.2 inches focal length, and 2.13 inches clear aperture. Their eye-pieces produce a magnifying power of 67 diameters. The ends of each collimator project 7 inches beyond the bearing points of its Ys, which latter are only 21 inches apart. The field of view of collimator A contains a single vertical wire, crossed at its middle point by a single horizontal wire. The field of view of collimator B contains a pair of cross-wires, movable by means of a micrometer screw. Each of these wires makes an angle of 12° with the vertical, and, consequently, at their intersection they make an angle of 24° with each other. The positions of the collimators may be interchanged, but collimator A is usually mounted to the south, and collimator B to the north of the Transit Circle. A pair of delicate levels is provided, by means of which the axes of sight of the collimators may be placed truly horizontal.

Each side of the central cube of the Transit-circle telescope is pierced with a circular opening, 2.4 inches in diameter, which is closed by a cap screwing into it. By removing these caps, and setting the telescope vertical, the wires of either collimator may be seen from the other.

The Standard Sidereal Clock was made by Kessels, of Altona, and is marked No. 1324. For the purpose of securing it as much as possible against changes of temperature, it is inclosed in a heavy masonry vault situated in the clock-room, which adjoins the observing-room on its eastern side. When first placed there the steel parts of its works showed a strong tendency to rust, and, in order to obviate this, the vault was lined with plates of tinned iron. The rusting still continuing, a small stove was put in the clock-room, and a fire is now kept there all the year through. This insures the dryness of the air, and the rusting is entirely prevented. The clock has a gridiron pendulum, which maintains a very steady rate. It is included in the galvanic system of the Observatory by means of two wires, which run from the main switch-board, respectively, to the point of suspension of the pendulum, and to a globule of mercury situated near the middle of the pendulum-rod. A platinum point projecting from the rod touches the surface of the globule at each vibration, thus closing the circuit, and causing the beats of the clock to be registered on any chronograph with which it may be connected. The globule of mercury is kept quite small, and adjusted to such a height that the platinum point just grazes its surface without causing any sensible vibration of its mass. A fuller description of the apparatus is given in the Washington Observations for 1867, Appendix I, page 10.

The rating of this clock is effected by means of small weights placed in a little cup attached to the pendulum-rod about the middle of its length. The addition of 100 grains causes the clock to gain 9.7 seconds per day.

The Counting Clock is placed on the pier of the south collimator in the Transit-circle room. It was made by Parkinson and Frodsham, of London; has a mercurial pendulum; and is regulated to sidereal time. Its rating is effected by means of small weights placed on the top of the jar containing the mercury. The addition of 100 grains causes it to gain 2.9 seconds per day.

This clock contains a delicate spring, furnished with a platinum point, resting upon a small plate of the same metal; the whole so arranged that at the beginning of each minute an arm attached to the arbor of the seconds-hand raises the spring and separates the point from the plate for a period of one second. Wires are attached to this apparatus so that when desired it may be included in the same galvanic circuit with the Kessels clock, and when such is the case it breaks the circuit for a single second once in each minute.

The Standard Mean-Time Clock is situated in the chronometer-room, but the officer having charge of the Transit Circle is responsible for furnishing its errors and rates. It was made by Parkinson & Frodsham, of London, has a mercurial pendulum, and is probably one of the best time-pieces in existence. Its rating is effected by means of small weights placed on top of the jar containing the mercury. The addition of 100 grains causes it to gain 2.9 seconds per day. To test the compensation of its pendulum the following observations were made:

Date.	Clock Correction.	Interval in Days.	Rate per Day.
d.	s.	d.	s.
1870. April 18.5 . .	+ 8.15		
October 21.4 . .	− 14.52	185.9	− 0.122
1871. April 22.4 . .	− 33.93	183.0	− 0.106
October 19.3 . .	− 45.93	179.9	− 0.071

The slight, but constant, retardation of rate is probably owing to progressive thickening of the oil. In order to eliminate it we take the mean of the first and last rates, and thus find for the rate from April to October — 0^s.097, while the rate from October to April is — 0^s.106. Bearing in mind that the mean temperature at Washington is above the average from April 21 to October 19, and below the average from October 19 to April 21; and also remembering that the room in which this clock is kept is not artificially heated, it appears that the compensation is perfect.

The Chronograph has a barrel, 8.15 inches in diameter and 24.0 inches long, which revolves once in each minute, and will run continuously for four hours without requiring the paper to be changed. It has but a single pen, by which both the clock signals and those of the observer are recorded. The record is made upon ordinary writing-paper with an ink which does not freeze at 0° F. It is composed of

Alcohol - - - - - - - - - - - -	2 fluid ounces.[1]
Water - - - - - - - - - - - - -	4 fluid ounces.
Concentrated Glycerine - - - - - -	1 fluid drachm.
Crystalized Aniline Blue - - - - - -	40 grains.

If desired, 400 grains of white sugar may be substituted in place of the glycerine. The solution must be filtered before it is used. The pen is of glass, and consists of a tube, 0.25 of an inch in external diameter and 1.15 inches long, to which is joined a bulb 0.65 of an inch in diameter; the lower end of the bulb being drawn out to a capillary tube 0.003 of an inch in internal diameter. The total length of the pen is about 2.5 inches. The bulb being filled with ink, when the pen is allowed to rest upon the paper by its own weight, it produces a fine sharp line.

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[1] One fluid ounce is equivalent to 28.5 cubic centimeters, and one fluid drachm to 3.56 cubic centimeters.

The Barometer and Thermometer.—The barometer employed was made by I. Newman, of London, and is a standard of the cistern form, with a tube whose internal diameter is 0.532 of an inch. It is the one used for the regular meteorological observations, and is situated in the northwest room, on the first floor of the main building. The thermometer, a standard by James Green, of New York, is suspended outside the north front of the observing-room. It is 11 feet above the surface of the ground, and is protected from radiation by a double shield of bright tinned-iron plate.

The Sympiesometer.—This instrument was made by James Green, of New York, and is designed to lessen the number of observations and computations necessary for determining the correction to the refraction on account of the density of the air. It consists of a vertical tube, the top of which expands into a bulb, while the bottom is bent round in the form of the letter **U**. The large arm or cistern of the **U** holds sulphuric acid, and is closed by connection with an air-tight bag of oiled silk. The rest of the tube contains air, the quantity of which is so adjusted that in the hottest weather it nearly fills the vertical tube, while in the coldest weather the acid rises nearly to the bulb. If, now, the density of the fluid were zero, the density of the air within the bulb and tube would be the same as that of the external air. But, the sulphuric acid being quite heavy, its height in the tube of the sympiesometer is a function of any two of the three quantities, barometric pressure, temperature, and density of the external air. As, at all zenith distances at which it is worth while to observe for the determination of star positions, the refraction may be regarded as a function of the zenith distance and the density of the air simply, the datum wanted is the density of the external air, which must be expressed as a function of the height of the sympiesometer and barometer. Let

B = height of barometer.

τ = temperature, counted from the absolute zero.

D = actual density of external air.

D_0 = density of air when the surfaces of the fluid in the tube and in the cistern are on the same level.

c = constant of elasticity of air.

l = total capacity of tube and bulb, counted from the point at which the surfaces of the acid in the cistern and tube are on the same level, measuring that capacity by the length to which it would be necessary to extend the tube in order that it might hold as much as the bulb.

h = height of internal surface of acid, counted from the same point with l.

a = specific gravity of acid, increased in the ratio of the bore of the tube to that of the cistern, specific gravity of mercury being unity.

B' = pressure of the confined air, in inches of mercury.

Then, from well-known properties of elastic gases, we derive the equations,

$$B = c\, D\, \tau$$

$$B' = c\, D_0\, \tau \frac{l}{l - h}$$

$$B' = B - ah$$

From the last two equations,

$$B = ah + \frac{c\, D_0\, \tau\, l}{l - h}$$

Substituting for τ its value from the first equation, we find,

$$D = D_0 \left(\frac{l}{l - h} \right) \left(\frac{B}{B - ah} \right)$$

Thus, D is expressed as a function of the height of the fluid in the sympiesometer and of the height of the barometer. Let us put

$$B = B_0 + \beta$$

B_0 being the mean height of the barometer, and β its small changes. Then, developing to the first power of β, we have,

$$\frac{B}{B - ah} = \frac{B_0}{B_0 - ah} - \frac{ah\beta}{(B_0 - ah)^2}$$

To estimate the value of the last term of this equation we remark that

The value of a is, roughly, about - - - - - - - -	$\frac{1}{8}$
The value of β seldom exceeds, during fine weather, -	± 0.4 inch.
The value of h rarely exceeds - - - - - - - - -	8 inches.
While we may put B_0 - - - - - - - - - - - - - -	$= 30.15$

Consequently, the last term of the equation will seldom amount to $\frac{1}{2000}$, and may usually be neglected. We therefore have

$$D = \frac{B_0\, l\, D_0}{(B_0 - ah)\, (l - h)}$$

in which the density of the air is expressed as a function of the observed height of the sympiesometer, and of determinable constants.

As it is doubtful whether the invariability of a and D_0 can be relied on for long intervals of time, it has been deemed best not to attempt the direct determination of D, but to find the value of the sympiesometer scale by comparison with the results obtained from the thermometer and barometer. A scale is attached to the sympiesometer, the reading of which gives approximately the logarithm of the density of the air, the density at 29 inches and 100° being unity; and a table of corrections to this scale is deduced from comparisons with the barometer and thermometer at various densities of the air.

USE OF THE TRANSIT CIRCLE.

Position of Axis.—The plan of work with the instrument is based on the assumption of its reversal at the beginning of each calendar year, and the use of a single circle in an invariable position, with a single set of four microscopes during each year. The circle used is always so set that the polar distances of the stars observed depend on different circle divisions in different years. During the year 1871 the clamp end of the axis was toward the west.

Adjustment for Focus.—The wires in the field of view of the eye-piece of the telescope are placed in the principal focus of the object-glass by means of a cap made for the purpose. This cap fits over the object-glass, and contains a lenticularly-shaped opening bounded by the arcs of two circles, each having a radius equal to half the clear aperture of the object-glass, and each passing through the center of the other. As one of these arcs coincides with the outer margin of the object-glass, the other necessarily passes through its center, and the whole opening is on one side of that center. The lenticular shape was chosen in order to reduce the effect of diffraction to a minimum. The telescope being pointed to the nadir, this cap is put upon it with its opening to the north, and the micrometer reading for coincidence of the mean wire with its image is found as in determining a zenith-point correction. The cap is then turned around 180°, so as to bring its opening to the south, and the reading for coincidence is again found. When the telescope is correctly focused these two readings must be identical, and the eye-piece is shifted till such is the case. Care is taken to make this adjustment at a time when the temperature of the observing-room is standing steadily at about 54° Fahrenheit, that being the mean annual temperature at Washington.

Magnifying Power.—The Transit Circle is provided with five positive eye-pieces, magnifying respectively 135, 158, 186, 279, and 395 diameters. That magnifying 186 diameters is the one habitually used.

Arrangement of Work.—As a general rule, one observer is charged with all the observations to be made during a definite twenty-four hours, which is considered the "observing-day," and usually begins at 9 a. m.; but when a special observation is to be made at an earlier hour in the morning, the observers are permitted to arrange among themselves to have the tour of duty commence sooner. An isolated observation occurring at an inconvenient hour for the regular observer of the day is occasionally assigned to another. An observer who has been on duty till 1 a. m. is always excused from attendance at the Observatory for the next 30 hours.

The usual observing hours are from 9 a. m. to 3 p. m., and from 9 p. m. to 1 a. m.; but it is often found necessary to vary them. If the weather permits, the moon is always observed at her meridian passage, and when this occurs later than 1 a. m. the observer is allowed considerable latitude in the time of doing his night's work. On Sundays the only observations regularly made are those of the moon, with the accompanying determinations of time and instrumental constants. Whenever special observations are required, the necessary orders are given by the officer in charge of the instrument.

In fine weather two groups of observations are made during each observing-day;

the mean of one group occurring about noon, the mean of the other about 11 p. m.; and the interval between the two being not far from twelve hours. When the moon crosses the meridian later than 1 p. m., the mean of the night group occurs later than 11 p. m., unless, indeed, there are two night groups, which is sometimes the case. In order to obtain right ascensions of the close circumpolar stars, it is necessary to consider the azimuth as invariable during the whole of each observing-day; but the collimation, level, and zenith-point corrections are habitually determined as nearly as possible at the middle of every group of observations. Thus, with the exception of the azimuth, none of the instrumental constants are trusted for more than about three hours on each side of the instant at which they are actually determined.

As many as eighty-six observations have been made by a single observer in less than twenty-four hours; but such a feat is entirely exceptional, and in this climate half that amount of work, done habitually, would soon destroy the health of the strongest man. However, experience has shown that each observer should make not less than 25 observations of celestial objects, if it is clear during the whole 24 hours that he is on duty, or not less than 20 observations if it is only clear during the evening. Reflection observations are counted double. As the average cloudiness at Washington is fifty per cent. and the instrument is worked whenever the weather permits, this gives a total of from 3 500 to 4 000 observations per year.

Mode of Observing.—A galvanic current from the Kessels clock works the chronograph pen, and all observations of time are made by the aid of its beats. Hence, when an observer comes on duty, his first care is to see that the Kessels and counting clocks are together, and that their beats coincide. If they are not in that condition he puts them so by adjusting the pendulum of the counting clock. The use of this latter clock is twofold, viz: 1, it serves to indicate the second corresponding to each beat of the chronograph pen;[1] and, 2, when included in the galvanic circuit it records the beginning of each minute on the chronograph sheet by causing the pen to omit the mark corresponding to 0 seconds.

The general principle adopted in using the Transit Circle is to bring the proper division of circle B as accurately as possible under the zero of its micrometer microscopes, and then to measure with the zenith-distance micrometer of the telescope the space between its zero point and the position actually occupied in the field of view by the image of the object observed. The subdivision of the intervals between consecutive graduations on circle B is thus thrown entirely on the zenith-distance micrometer of the telescope, and as the arc measured by the micrometer microscopes rarely exceeds 10″ their errors of run are neglected. The graduation of circle B is so much better than that of circle A, that it only is employed in measures of zenith distance; and in order to make these measures depend upon different divisions in different years, the position of circle B upon the axis of the instrument is changed at the beginning of each alternate year. Circle A is used only to indicate the degrees and minutes of zenith distances, and its position upon the axis is never changed. If a collimating eyepiece is applied to the telescope, its zenith-distance micrometer set at 35 revolutions, and the whole instrument turned until the micrometer wires cover their own images reflected from a basin of mercury, the reading of the horizontal microscope of circle A is always 179° 56′, and some division of circle B is always very nearly under the zero of its micrometer microscopes.

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[1] All observations are made in time of the Kessels clock, but, as it is in a different room from the observer, the latter cannot see its face, and only hears its beats as repeated by the chronograph.

Let

R = reading of horizontal microscope of circle A when the telescope points to the zenith.
φ = latitude of transit circle.
δ = declination of object to be observed.
r = refraction of object to be observed.

Then, when the clamp is west, the telescope must be so set that the horizontal microscope of circle A reads:

For a direct observation, - - - - - $R - \varphi + \delta \pm r$
For a reflection observation, - - - - $180^\circ + R + \varphi - \delta \mp r$

If the clamp is east, the settings will be,

For a direct observation, - - - - - $R + \varphi - \delta \mp r$
For a reflection observation, - - - - $180^\circ + R - \varphi + \delta \pm r$

If the true value of φ were substituted in these formulæ, whenever the computed setting was not exactly an even minute, it would be necessary to set on the *nearest* even minute. In practice it is found much more convenient always to set on the *next less* even minute; and, in order to do so without causing the zenith-distance micrometer to measure more than half the distance between two consecutive divisions of circle B, a fictitious value of the latitude, differing from the true value by half the distance in question, is used. The fictitious latitude is 1′ greater than the true one for a reflection observation with clamp west, or for a direct observation with clamp east; and it is 1′ less than the true one for a direct observation with clamp west, or for a reflection observation with clamp east. The formulæ actually employed for computing the settings are, therefore,

For a direct observation, clamp west, - - - - - - $321^\circ\ 3'.4 + \delta \pm r$
For a reflection observation, clamp west, - - - - $218^\circ\ 50'.6 - \delta \mp r$
For a direct observation, clamp east, - - - - - - $38^\circ\ 50'.6 - \delta \mp r$
For a reflection observation, clamp east, - - - - - $141^\circ\ 3'.4 + \delta \pm r$

in which r must be taken with the upper sign for an object south, and with the lower sign for an object north of the zenith. For the moon, r must be made equal to the sum of the refraction and parallax. For an object below the pole, $180^\circ - \delta$ must be substituted instead of δ.

For faint objects it is necessary to know not only the reading at which the circle must be set, but also the exact reading of the zenith-distance micrometer for the point at which the object will enter the field of view. No matter whether the clamp is east or west, this is computed by means of the formula,

$$\text{Micrometer Reading} = 39 \text{ revolutions} - \frac{\varepsilon}{R}$$

in which ε is the excess of the computed circle reading above the next less even minute, and R is the value of one revolution of the micrometer screw. If the computed circle reading is exactly an even minute, the object will enter the field of view at 39 revolutions of the micrometer.

In the following paragraphs it is frequently stated that a star or planet, or the limb of the sun or moon, is bisected by the zenith-distance micrometer of the telescope. This form of expression is not quite accurate, and is only used for the sake of brevity. The idea intended to be conveyed is, that the zenith-distance micrometer is moved until the space included between its middle pair of wires is bisected by the image of the star or planet, or by the image of the limb of the sun or moon. Some of the observers find it difficult to see the images of very faint objects between the middle pair of wires, and prefer to bisect them with wire A or wire B. These latter wires are also used to avoid running the micrometer screw over inconveniently long distances, when observing two objects having nearly the same right ascension, but differing from two to five minutes in declination. Special care is taken to make all bisections by moving the micrometer wires away from the head, and thus causing the screw to act against the opposing springs. The same precaution is observed in reading the micrometer microscopes of the circles. The readings of the zenith-distance micrometer are taken from the self-registering indexes after the completion of each observation.[1]

To make a complete observation of all four limbs of the sun requires three persons, and the process is as follows: The observer on duty for the day extracts from the almanac the right ascension and declination of the sun's center for the time of its transit, and also its apparent semi-diameter. With these elements he computes the readings at which circle A must be set, in order to point the telescope respectively to the north and south limbs of the sun, and having recorded them on a slip of paper, he hands it to the assistant who is to be stationed at the horizontal microscope of circle A. A paste-board cap, with an aperture three inches in diameter, is placed over the object-glass of the telescope; a shade-glass is placed on the eye-piece; the chronograph is started; the telescope is set to the proper position for observing the sun's center; and the observer, with the chronograph key in his hand, stations himself at its eye-end. The two assistants are now standing at the shutter ropes, and at the instant the clock indicates two minutes before the time of transit of the sun's center, they open the shutters, and then take their stations, one at the horizontal microscope of circle A, the other at the micrometer microscopes of circle B. The preceding limb of the sun is now well into the field of view, and its transit over the wires B_1 to D_3 is observed by tapping on the chronograph key. Next, the assistant at circle A points the telescope to one of the horizontal limbs of the sun, clamps, and, by means of the tangent screw, brings the proper division of circle B as nearly as possible under the zero of its micrometer microscopes. The limb is then bisected with the zenith-distance micrometer of the telescope at wire I, and again at wire II, and, while that is being done, the assistant at circle B reads its four micrometer microscopes. Then the assistant at circle A unclamps, points the telescope to the other horizontal limb of the sun, clamps again, and, by means of the tangent screw, brings the proper division of circle B as nearly as possible under the zero of its micrometer microscopes. This limb is then bisected with the zenith-distance micrometer of the telescope at wire VI, and again at wire VII; and while that is being done, the assistant at circle B reads its four micrometer microscopes. Finally, the assistant at circle A again unclamps, and the observer himself points the telescope to the sun's center, and observes the transit of its following limb over the eleven wires from B$_1$ to D$_3$. The shutters are then closed, and the observation completed by reading the sympiesometer, external thermometer, barometer, and attached thermometer. It will be noticed that particular care is taken to expose the instrument to the direct rays of the sun for as short a time as possible, and even then the circles are always completely shaded by the platform and steps used for ascending to the eye-piece of the telescope, when the nadir point is to be observed.

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[1] Washington Observations for 1865. Description of Transit Circle, § 30.

Observations of the moon are made in two ways. If the first limb is the full one, the observer takes the time of transit of the center from the almanac, and, going to the telescope about three minutes before that time, he sets the zenith-distance micrometer to read 34 revolutions, and then sweeps for the moon's limb. Having found it, he observes its transit over the wires B$_1$ to D$_3$. Then, as rapidly as possible, he turns the telescope till the full limb (north or south) is bisected by the zenith-distance micrometer; goes to the clamp-screw; clamps, looks into the horizontal microscope of circle A, and turns the tangent screw until the division of circle B nearest the zero of its microscopes is brought approximately under them; resumes his place at the telescope, and with the zenith distance micrometer bisects the limb at wires III, IV, and V, or sometimes at wires II, III, IV, V, and VI. Finally, the observation is finished by reading the micrometer microscopes of circle B, and the degrees and minutes indicated by the horizontal microscope of circle A. Sometimes the telescope is not so set as to bring any division of circle B approximately under the zero of its microscopes, and in such cases the divisions lying nearest on each side of the zero are read.

If the second limb of the moon is the full one, the observer takes the time of transit of the center from the almanac as before, and, in addition, computes the reading at which circle A must be set in order to point the telescope to the north or south limb, whichever happens to be full. Five minutes before the time of transit, he sets the telescope in the computed position, clamps, and reads the micrometer microscopes of circle B. When the moon comes into the field of view, he observes it with the zenith-distance micrometer, in the manner already explained; and then unclamps, points to the moon's center, and finishes by observing the transit of its second limb over the wires from B$_1$ to D$_3$.

The larger planets are observed in the following manner: The right ascension and declination of the planet's center are taken from the almanac, the reading of circle A, at which the telescope must be set, is computed, and the instrument is clamped in that position. When the planet enters the field of view, its northern limb is bisected with the zenith-distance micrometer at wire I, and its southern limb at wire II. The transit of its preceding limb is observed over wires B$_1$, B$_2$, B$_3$, D$_1$, D$_2$, D$_3$; and the transit of its following limb, over wires C$_1$, C$_2$, C$_3$, C$_4$, C$_5$. The observation is finished by again bisecting the southern limb with the zenith-distance micrometer at wire VI, and the northern limb at wire VII. Thus, both the horizontal and vertical diameters are measured, and the observations of each limb are perfectly symmetrical with respect to the middle wire.

Planets which do not present a well-defined disk are observed in the same manner as fixed stars.

Fixed stars are observed in different ways, the mode adopted depending upon circumstances:

α. If the star is within 5° of the pole, its transit is observed by eye and ear over the wires of set C, and it is bisected with the zenith-distance micrometer at wires C_2, C_3, C_4; or sometimes at each of the wires from C_1 to C_5.

β. If the star is situated between 5° and 20° of polar distance, its transit is observed by the chronographic method over the wires of set C; and it is bisected with the zenith-distance micrometer at any two of the wires B_1, B_3, D_1, D_3; preference being given to the combinations B_3, D_1, or B_1, D_3; which make the observation symmetrical with respect to the middle wire.

γ. If the polar distance of the star exceeds 20°, its transit is observed by the chronographic method over all the wires from B_1 to D_3; and it is bisected with the zenith-distance micrometer at any two of the wires I, II, VI, VII; preference being given to the combinations II, VI, or I, VII, which make the observation symmetrical with respect to the middle wire. Sometimes stars are bisected at each of the wires I, II, VI, VII.

δ. In the case of double stars, the right ascension of one component is observed over the wires B_1, B_2, B_3, D_1, D_2, D_3, and that of the other, over the wires C_1 to C_5. Bisections with the zenith-distance micrometer are made, of one component at wires I and II, and of the other component at wires VI and VII. The observations of right ascension are therefore symmetrical, and those of zenith distance unsymmetrical, with respect to the middle wire.

ε. Sometimes on account of clouds, or other untoward circumstances, observations are unavoidably made unsymmetrical with respect to the middle wire, both in right ascension and zenith distance.

In observing transits by eye and ear, care is taken to use the beat of the chronograph pen, and not the tick of the counting clock. Whenever it is necessary to stop the chronograph, it is done about 1 second, and the hour and minute corresponding to the preceding 0 seconds is recorded on the sheet from the face of the counting-clock. As there is generally only a single record in each case, errors of a second, or of a minute, sometimes occur. It will be noticed that the method of observing all objects more than 5° from the pole is such as to occupy the observer's attention with the determination of but one co-ordinate at a time.

Wire intervals.—The equatorial intervals of the fixed vertical wires in the eye-piece of the telescope were determined from observations made between August 2 and August 18, 1871. Sixteen stars were employed, all situated within 20° of the pole, and the total number of sets of transits observed was twenty. The results are as follows:

TABLE II.

	s.	
s.	$C_1 = + 4.095$	s.
$B_1 = + 12.240$	$C_2 = + 2.023$	$D_1 = - 8.167$
$B_2 = + 9.706$	$C_3 = + 0.012$	$D_2 = - 9.704$
$B_3 = + 8.191$	$C_4 = - 2.049$	$D_3 = - 12.260$
	$C_5 = - 4.088$	

As already explained, the transits of objects more than 20° from the pole are observed over all these wires, but, in reading off the chronograph sheets, C_1 and C_5 are rejected. The remaining nine wires are considered the standard set, and the numbers given above are the equatorial intervals of each wire from the mean of the standard set.

Zenith-distance Micrometer Screw.—The value of a revolution of the zenith-distance micrometer screw was determined in 1872, in the following manner: The telescope being pointed toward one of the collimators, the micrometer was set at 25.25 revolutions, and then, by means of the tangent screw, the telescope was moved till the center of the space between the middle pair of micrometer wires coincided as accurately as possible with the image of the horizontal wire of the collimator. This being done, five readings of the micrometer were made upon the collimator wire, and at the same time the circle was read by two assistants; one reading microscopes V and VI, the other, microscopes VII and VIII. As in general the circle divisions did not fall exactly under the zeros of the microscopes, the divisions lying nearest on each side of these zeros were read in order to eliminate errors of runs. Then the micrometer was set at 30.25 revolutions, and the process just described was repeated; and so on, at every fifth revolution, up to 45.25. Finally, in order to eliminate any possible small change in the position of the collimator while these operations were in progress, the measures were repeated in reverse order, beginning at 45.25 revolutions and ending at 25.25 revolutions. The observations are given in Table III. Throughout the whole series the telescope micrometer was read by Professor Harkness; microscopes VII and VIII by Professor Eastman; and microscopes V and VI by Assistant Observer Frisby.

TABLE III.

January 6, 1872.—*Temperature*, 42° F.

Reference Number.	Observed Circle Reading.			Corrected Circle Reading.	Interval by Circle.	Mean of Micrometer Readings.	Interval by Micrometer.	One Revolution of Screw.
	°	′	″	″	″	r.	r.	″
1	89	49	29.54	29.55	74.65	25.313	4.933	15.133
2		50	44.10	44.20	76.33	30.246	5.016	15.217
3		52	0.30	0.53	78.94	35.262	5.141	15.355
4		53	19.30	19.47	74.15	40.393	4.863	15.253
5		54	33.71	33.62		45.256		
6		54	33.36	33.45	73.63	45.241	4.788	15.377
7		53	19.65	19.82	79.73	40.453	5.211	15.297
8		51	59.86	60.09	77.09	35.242	5.002	15.412
9		50	42.90	43.00	77.00	30.240	5.023	15.303
10	89	49	25.99	26.00		25.217		

January 8, 1872.—*Temperature*, 32°.5 F.

Reference Number.	Observed Circle Reading.			Corrected Circle Reading.	Interval by Circle.	Mean of Micrometer Readings.	Interval by Micrometer.	One Revolution of Screw.
1	89	54	31.72	31.81	73.94	45.254	4.797	15.414
2		53	17.70	17.87	80.53	40.457	5.205	15.473
3		51	57.11	57.34	77.11	35.252	5.015	15.376
4		50	40.14	40.23	76.51	30.237	4.995	15.317
5		49	23.71	23.72		25.242		
6		49	23.54	23.55	76.13	25.239	5.022	15.159
7		50	39.58	39.68	76.41	30.261	4.986	15.325
8		51	55.86	56.09	80.45	35.247	5.219	15.415
9		53	16.37	16.54	72.28	40.466	4.765	15.169
10	89	54	28.73	28.82		45.231		

January 10, 1872.—*Temperature*, 40°.0 F.

Reference Number.	Observed Circle Reading.			Corrected Circle Reading.	Interval by Circle.	Mean of Micrometer Readings.	Interval by Micrometer.	One Revolution of Screw.
1	89	49	26.09	26.10	75.46	25.293	4.994	15.111
2		50	41.46	41.56	76.09	30.287	4.954	15.359
3		51	57.42	57.65	79.42	35.241	5.198	15.279
4		53	16.90	17.07	73.02	40.439	4.788	15.251
5		54	29.99	30.09		45.227		
6		54	30.26	30.36	73.96	45.295	4.864	15.213
7		53	16.21	16.40	79.39	40.431	5.136	15.457
8		51	56.78	57.01	77.12	35.295	5.028	15.338
9		50	39.71	39.89	76.28	30.267	5.006	15.248
10	89	49	23 61	23.61		25.261		

TABLE III—Continued.

Reference Number.	Observed Circle Reading.			Corrected Circle Reading.	Interval by Circle.	Mean of Micrometer Readings.	Interval by Micrometer.	One Revolution of Screw.
January 11, 1872.—*Temperature*, 40°.0 F.								
	°	′	″	″	″	r.	r.	″
1	89	53	50.26	50.41	74.29	45.251	4.768	15.581
2		52	35.92	36.12	80.32	40.483	5.228	15.363
3		51	15.65	15.80	76.74	35.255	4.999	15.351
4		49	59.05	59.06	76.87	30.256	4.980	15.436
5		48	42.19	42.19		25.276		
6		48	41.96	41.96	75.90	25.254	4.990	15.210
7		49	57.85	57.86	76.52	30.244	5.001	15.302
8		51	14.23	14.38	79.26	35.245	5.182	15.295
9		52	33.44	33.64	74.94	40.427	4.882	15 346
10	89	53	48.43	48.58		45.309		
January 12, 1872.—*Temperature*, 45°.0 F.								
1	89	48	44.63	44.63	76.06	25.270	4.988	15.249
2		50	0.68	0.69	76.62	30.258	5.015	15.278
3		51	17.16	17.31	80.02	35.273	5.194	15.406
4		52	37.13	37.53	73.11	40.467	4.780	15.294
5		53	50.29	50.44		45.247		
6		53	50.46	50.61	74.48	45.265	4.799	15.520
7		52	35.93	36.13	80.15	40.466	5.229	15.326
8		51	15.83	15.98	76.22	35.237	5.006	15.226
9		49	59.75	59.76	76.05	30.231	4.963	15.324
10	89	48	43.71	43.71		25.268		

In Table III, the column "*Observed Circle Reading*" contains the observed circle readings, corrected only for error of runs. As already stated, whenever the circle divisions did not fall within 15″ of the zeros of the micrometer microscopes, the divisions lying nearest on each side of these zeros were read. For example, in the first circle reading given above the division 89° 48′ fell on one side, and 89° 50′ on the other side, of the zero of the horizontal microscope of circle A. Therefore the micrometer microscopes of circle B were read twice; first, on the divisions corresponding to 89° 48′, and then on those corresponding to 89° 50′. These double readings served primarily for determining the error of runs, but they were also used for finding the errors of graduation. In the example just cited the mean of the four microscopes was, for the first reading, 11 revolutions, 0″.52, and for the second reading, 7 revolutions, 0″.40. The difference between these readings, 4 revolutions, 0″.12 = 4.0040 revolutions, is evidently the distance between the divisions in question. In the same manner every circle reading made upon two sets of divisions furnished one value of the interval between these divisions. The results are given in Table IV.

TABLE IV.

89° 48′ to 89° 50′	89° 50′ to 89° 52′	89° 52′ to 89° 54′	89° 54′ to 89° 56′
r.	r.	r.	r.
4.0040	3.9840	3.9817	3.9910
3.9767	4.0013	3.9640	3.9760
3.9773	4.0010	3.9857	3.9850
3.9867	4.0040	3.9850	3.9933
3.9800	3.9690	4.0023	3.9853
3.9743	3.9783	3.9967	3.9850
4.0050	4.0000	3.9767	
3.9920	4.0010	3.9833	
4.0043	4.0193	3.9813	
3.9993	4.0067	3.9857	
		3.9967	
		3.9860	
		3.9933	
		3.9850	
3.9900	3.9965	3.9862	3.9853
″	″	″	″
120.02	120.21	119.90	119.87

At the foot of each column in Table IV is given the mean of the numbers contained in it. Adding these four means together, and dividing the sum by 480, (the number of seconds between 89° 48′ and 89° 56′), we obtain 0.033246 revolutions as the true value of 1″, upon the assumption that the divisions 89° 48′ and 89° 56′ are precisely 8′ apart. Dividing each mean by this quantity gives the numbers in the last line of Table IV, which are adopted as the true intervals between the divisions in question. The actual positions of these divisions are therefore

89° 48′ 0″.00
50′ 0″.02
52′ 0″.23
54′ 0″.13
56′ 0″.00

Reverting to Table III, and correcting the numbers in the column "*Observed Circle Reading*" for these errors of graduation, we get the numbers in the column "*Corrected Circle Reading.*" The differences between these latter numbers are the "*Intervals by Circle.*" The column "*Mean of Micrometer Readings*" contains the means of the readings made with the micrometer upon the horizontal wire of the collimator. The differences between these means are the "*Intervals by Micrometer.*" As the intervals by circle and the intervals by micrometer are both measures of the same space, dividing the former by the latter gives the values of one revolution of the screw; which values are contained in the column so headed

For convenience of reference an abstract of the results of the observations contained in Table III is given in Table V.

TABLE V.—*Values of One Revolution of the Zenith-Distance Micrometer-Screw of the Transit Circle, as found from Observations made on different parts of the Screw.*

Date.	$25\frac{1}{4}^{r}$ to $30\frac{1}{4}^{r}$	$30\frac{1}{4}^{r}$ to $35\frac{1}{4}^{r}$	$35\frac{1}{4}^{r}$ to $40\frac{1}{4}^{r}$	$40\frac{1}{4}^{r}$ to $45\frac{1}{4}^{r}$
1873.	"	"	"	"
January 6	15.218	15.314	15.326	15.315
8	15.238	15.350	15.444	15.292
10	15.180	15.349	15.368	15.232
11	15.324	15.326	15.329	15.463
12	15.286	15.352	15.366	15.407
Mean . .	15.249	15.338	15.367	15.342

The mean values contained in the last line of this table were accepted as final, and in order to deduce from them the value of each revolution of the screw they were plotted upon a piece of squared paper, and a smooth curve was passed through them; or rather, to speak more accurately, it was passed a very little above them, so as to make the mean values of the ordinates of the curve, taken between the limits $25\frac{1}{4}^{r}$ to $30\frac{1}{4}^{r}$, $30\frac{1}{4}^{r}$ to $35\frac{1}{4}^{r}$, &c., identical with the mean values of the table. The value of the screw at every revolution throughout the part used was then read from the curve, and these values have been employed in the reduction of all observations made during the year. They are given in the following table:

TABLE VI.—*Value of each Revolution of the Zenith-Distance Micrometer-Screw of the Transit Circle, as used during the Year* 1871.

NOTE.—If any revolution in this table is designated as n, then the number found opposite that revolution is the value of the screw from $n - \frac{1}{2}$ to $n + \frac{1}{2}$ revolutions.

Rev.	Value.	Rev.	Value.	Rev.	Value.
	"		"		"
25	15.193	32	15.333	39	15.368
26	15.217	33	15.346	40	15.363
27	15.239	34	15.355	41	15.357
28	15.261	35	15.362	42	15.349
29	15.282	36	15.367	43	15.339
30	15.301	37	15.369	44	15.327
31	15.318	38	15.369	45	15.314

It may be remarked that when the middle pair of micrometer wires occupies the center of the space between the fixed horizontal wires, the reading of the screw is 40 revolutions, and it increases as the wires move from the micrometer head.

Right-Ascension Micrometer Screw.—The pitch of this screw is sensibly the same as that of the zenith-distance micrometer. Its value was determined by measuring with it the distance between the vertical wires B_1 and D_3, which was found to be 23.935 revolutions. Table II gives for the same space, 24.50 seconds of time. Hence

$$\text{One revolution of the screw} = 1^s.024$$

Inclination of Wires.—The zenith-distance micrometer is constructed with its movable wires as nearly as possible at right angles to the fixed vertical wires; and as the latter are set by adjustment truly vertical, the former are of course very nearly horizontal; but, owing to unavoidable imperfections of workmanship, they are seldom accurately so. This is of no consequence when the bisections of an object with the zenith-distance micrometer are made symmetrically with respect to wire IV; but if they are not so made, it affects the resulting zenith distance, and a correction must be applied for inclination of wires. It is computed by the formula

$$\text{Correction} = \pm \frac{Ri\,(r_{\text{i}} - r_{\text{vii}})}{I} = \pm\, 0.209\, i\,(r_{\text{i}} - r_{\text{vii}})$$

where the upper sign must be taken when the clamp is east, the lower when it is west. R is the value of one revolution of the micrometer screw; i the equatorial interval between the middle wire and the wire at which the correction is required; I, the equatorial interval between wires I and VII; and r_{i} and r_{vii}, the readings of the zenith-distance micrometer on a star at wires I and VII. The sign of i is + for wires I, II, III, and − for wires V, VI, VII.

Error of Collimation.—The collimation constant is determined, without reversing the instrument, by means of the collimators. The south one is designated "collimator A," and its field of view contains a single vertical wire, crossed at its middle point by a single horizontal wire. The north collimator is designated "collimator B," and its field of view is furnished with a pair of cross-wires, movable by means of a micrometer screw. Each of these wires makes an angle of 12° with the vertical, and, consequently, at their intersection they make an angle of 24° with each other.

After removing the covers of the opening through the central cube of the telescope, it is turned in zenith distance until, on looking into its eye-piece, its horizontal wire is seen to coincide with the image of the horizontal wire of collimator A. Then collimator A is moved in azimuth, by means of the screws which act against one of its Ys, until, on looking into its eye-piece, the image of the middle transit wire of the telescope is seen to be a little to one side of the vertical wire. Returning to the telescope, three measures of the small deviation of its middle transit wire from the image of the vertical wire of the collimator are made by means of the right-ascension micrometer. These measures are taken by first setting the micrometer wire so that the mean of it and the middle transit wire coincides with the image of the vertical wire of the collimator, and then moving the micrometer wire till it coincides with the middle transit wire. The required deviation is one-half the space passed over.

The telescope is next pointed toward the zenith, so as to make the two collimators visible from each other through its central cube, and the micrometer of collimator B is moved until the intersection of its cross-wires is exactly upon the image of the vertical wire of collimator A. The telescope is then pointed to collimator B, and four measures of the small deviation of its middle transit wire, from the image of the intersection of the cross-wires of the collimator, are made by means of the right-ascension micrometer as follows: The micrometer wire is placed so that the space between it and the middle transit wire is bisected by the image of the intersection of the cross-wires of the collimator, after which the micrometer is moved till its wire coincides with the middle transit wire. The required deviation is one-half the space passed over.

The telescope being once more pointed toward the zenith, the adjustment of collimator A is deranged, and it is adjusted afresh till its vertical wire is again exactly upon the image of the intersection of the cross-wires of collimator B. Then going to the telescope, another set of measures precisely similar to the first are made. The mean of the first and last set of measures is taken as the true distance of the middle transit wire from the image of the vertical wire of collimator A.

Let

$c_\tau =$ sum of the collimation constant and the constant of diurnal aberration at the temperature τ° Fahrenheit;
$c_0 =$ sum of the same constants at the temperature 0° Fahrenheit;
$M =$ distance, in micrometer revolutions, by which the image of the vertical wire of the south collimator is to the *east* of the middle transit wire;
$M' =$ distance, in micrometer revolutions, by which the image of the intersection of the wires of the north collimator is to the *east* of the middle transit wire;
$R' =$ value, in seconds of time, of one revolution of the micrometer screw $= 1^s.024$;
$\varphi =$ latitude of place of observation;
$\delta i =$ reduction of position of middle transit wire to the mean of the set of nine wires $= +0^s.012$,

Then, if M and M' have been observed at the temperature τ, we have

$$c_\tau = \tfrac{1}{2}(M + M')\,R' - 0^s.021 \cos\varphi - \delta i = 0^s.512\,(M + M') - 0^s.028$$

In the instrument under consideration the collimation varies with the temperature, and from a discussion of many observations, taken at widely different temperatures, it has been found that

$$c_0 = c_\tau \mp 0^s.004\ \tau$$

where the upper sign is to be taken when the clamp is east, the lower when it is west.

The collimators are usually observed every Monday morning, and the value of c_0 is computed. For observations on other days the value of c_0 is interpolated, and from it, and the observed temperature at the time, the actual collimation constant is computed by means of the formula

$$c_\tau = c_0 \pm 0^s.004\ \tau$$

Of course, special care is taken not to make the observations for the determination of c_0 at times when the temperature of the air is changing rapidly.

Error of Level.—The level is of the hanging form. Its tube is three-quarters of an inch in diameter, ten inches long, and has a chamber at one end, so that the size of the bubble is adjustable. It seems to be most sensitive when its length is about one and one-quarter inches. The scale is numbered continuously from end to end, the numbers running from 0 to 90. The length of one division is 0.0895 of an inch, and its value $0^s.058$.

The level tube is closed by glass disks cemented into its ends; but after it had been in use about two years, the ether with which it is filled began to leak through the joints. To remedy this the tube was opened, re-filled, and the ends cemented in afresh. In less than a month it leaked worse than ever, and for a long period it gave much trouble, because we could find no cement that would keep it tight for more than a few weeks at a time. At last, however, we hit upon what we have since learned is the substance ordinarily employed for the purpose. This is common glue dissolved in hot water, as usual, and mixed with one-fifth or one-sixth of its volume of glycerine, the latter substance being added to prevent it from becoming brittle. Level tubes closed with this cement will remain tight for months, and when they do become leaky they are very easily repaired.

In making use of the level it is always reversed twice, thus giving two readings with it direct and two with it reversed.

Let

b = level constant;
W and E = readings of west and east ends of bubble with the level in its first position;
w and e = readings of west and east ends of bubble with the level reversed;
W' and E' = readings of the west and east ends of bubble when the level is returned to its first position;
w' and e' = readings of west and east ends of bubble when the level is reversed a second time.

Then we have

$$b = 0^s.00725\ [(W+E)+(W'+E')-(w+e)-(w'+e')]$$

When the $\left\{\begin{matrix}\text{west}\\ \text{east}\end{matrix}\right\}$ end of the bubble gives the greatest reading the sign of b is $\left\{\begin{matrix}+\\ -\end{matrix}\right.$

For reflection observations the sign of b is the opposite of that here given.

A careful investigation has proved that the pivots of the instrument are sensibly round, and equal in diameter.

Error of Azimuth.—The azimuth constant is determined from the observed time of transit of some one or more of the stars, Polaris, δ Ursæ Minoris, 51 Cephei, λ Ursæ Minoris, by means of the formula

$$a = \frac{\alpha - (T + \Delta T + bB + cC)}{A}$$

in which a, b, and c are the azimuth, level, and collimation constants; A, B, and C, the azimuth, level, and collimation factors; α, the adopted right ascension of the star; T, its time of transit as observed by the face of the clock; and ΔT, a closely approximate value of the clock correction at the time T.

When double transits of any of the stars named above are obtained by one observer, during a single observing-day, the azimuth is generally made to depend upon them alone. If no double transits are available, the adopted azimuth is the mean of the results given by the single transits of so many of the stars in question as may have been observed.

It occasionally happens that a number of observations are got, but, owing to the interference of clouds, no azimuth stars are obtained. In such cases each known star observed is made to furnish an equation of condition, involving as unknown quantities the clock correction and the azimuth constant, and from all the equations thus formed these quantities are determined by the method of least squares.

Zenith-Point Correction.—This constant is determined by observations of the nadir point, made over a trough of mercury, with a Bohnenberger collimating eye-piece, in the following manner:

1. The telescope is pointed vertically downward over a trough of mercury, and then it is clamped, and set by the tangent screw, so that the circle reading is as nearly as possible 179° 56′.

2. Circle B is read by means of its four micrometer microscopes.

3. Two readings of the telescope zenith-distance micrometer are taken by placing its close pair of declination wires so that they are separated from their images by a space equal to the distance between the two wires, the wires and their images exhibiting four parallel lines with three equal spaces between them, and the micrometer reading of the wires being less than that of their images.

4. Four readings of the micrometer are taken precisely as described in paragraph 3, except that the places of the wires and their images are interchanged, the reading of the wires being now greater than that of their images.

5. Two more readings of the micrometer are taken exactly as described in paragraph 3.

6. Circle B is again read.

If we imagine a mean wire bisecting the space between the close pair of declination wires, it is evident that the mean of the eight micrometer readings, made as described in paragraphs 3, 4, and 5, will be identical with the reading which would have been obtained by causing this imaginary mean wire to cover its own image. The two circle readings serve as a check on each other, and prevent the possibility of any undetected shift of the telescope while the zenith-distance micrometer readings are in progress.

The observations are reduced by means of the formula.

$$\text{Zenith Point Correction} = + \left\{ \begin{array}{l} 180^\circ + \text{Division Correction for Circle B} \\ \qquad + \text{Correction for Flexure of Circle B} \\ \qquad + \text{Correction for Flexure of Telescope} \\ \qquad - \text{Constant added to Reduction to Meridian.} \end{array} \right\}$$

$$- \left\{ \begin{array}{l} 179^\circ\ 56' \pm 10 \text{ Revolutions of Micrometer Microscopes} \\ \qquad \mp \text{Observed Reading of Micrometer Microscopes} \\ \qquad + \text{Micrometer Equivalent corresponding to (Observed Reading of Zenith-Distance Micrometer} + 0^{r}.250). \end{array} \right\}$$

The values of the division and flexure corrections are found by means of the formulæ given for reflection observations in Tables XII, XIII, XIV, and XVIII. The constant added to the reduction to the meridian is + 1″.80. In the terms relating to the micrometer microscopes the upper signs are to be taken when the clamp is east and the lower when it is west.

The value of the first term in the expression for the zenith-point correction is a constant, and may be computed for the year 1871 thus: During that year the position of the instrument was clamp west; circle B was used, and when the telescope pointed to the zenith, the horizontal microscope of that circle read 0°.0, which is the value of R_0. The distance of the nadir point from the reflected pole is 51°.1, which is the value of Δ. With these data, Table XIII gives 0° as the argument with which to enter Table XII in order to obtain the division-correction, and the division-correction itself is thus found to be — 0″.30. With the same data Table XIV gives the correction for circle flexure, —1″.20 sin 134°.3 = — 0″.86; and Table XVIII gives the correction for flexure of telescope + 1″.10 sin 15°.3 = + 0″.29. Collecting our results, we have

	180°	0′	0″.00
Correction for Errors of Division, . . .		—	0″.30
Correction for Flexure of Circle, . . .		—	0″.86
Correction for Flexure of Telescope, . .		+	0″.29
Constant added to Reduction to Meridian,		—	1″.80
Sum, - - - - - - - - -	179°	59′	57″.33

which is the value of the first term of the zenith-point correction. The second term is simply the concluded circle-reading when the clamp is east, or the concluded circle-reading plus a constant when the clamp is west; the correction + $0^{r}.250$ to the observed reading of the zenith-distance micrometer being due to the fact that the head of that micrometer has four indexes, and the one used in the nadir observation reads one-quarter of a revolution less than that employed when celestial objects are observed.

The observations of nadir point made during the year, together with the resulting zenith-point corrections, may be found in Table E at the end of this introduction. The first column gives the mean day and tenth of a day, and the second column gives the nearest sidereal hour; thus defining the time of observation within thirty minutes. The third column contains the observer's initial. The fourth, fifth, sixth, and seventh columns contain the readings of the micrometer microscopes when the telescope was pointed to the nadir; the divisions of circle B, upon which the readings were actually made, being as follows:

Microscope V, - - - - - - - - - -	135°	0′
Microscope VI, - - - - - - - - - -	225°	0′
Microscope VII, - - - - - - - - -	315°	0′
Microscope VIII, - - - - - - - - -	45°	0′

As already explained, the degrees and minutes of the circle-reading are referred to the horizontal microscope of circle A, which reads 179° 56′ when the telescope points to the nadir. The whole revolutions of microscope V are not usually recorded, because the circle is habitually so set as to make them as nearly as possible 10. If they differ more than about 10″ from that quantity they are carefully noted.

The eighth column contains the readings of the telescope zenith-distance micrometer for coincidence of each wire of its close pair with the image of the adjoining wire; or, in other words, for coincidence of the imaginary mean wire with its image. Each of the numbers here recorded is the mean of eight readings taken in the manner described above. The ninth column gives the concluded circle readings for the nadir point. The tenth column contains the resulting zenith-point corrections, which should have been obtained by subtracting the concluded circle readings from the constant 179° 59′ 57″.33. By mistake, the constant actually employed was 179° 59′ 57″.04. Therefore, all the zenith-point corrections are too small by 0″.29, and the polar distances obtained from direct observations are too small, and those obtained from reflection observations are too great, by the same quantity. This error has been allowed for in computing the final systematic corrections to the observed north polar distances.

EXPLANATION OF THE PRINTED OBSERVATIONS WITH THE TRANSIT CIRCLE.

These observations are contained on pages 1 to 45, and, in printing them, the rule has been adopted to give everything exactly as recorded by the observer, without alteration in any case whatever, and without addition, except in very rare cases, which are noted at the foot of the page. When a record seems erroneous, the error is pointed out by a foot-note if necessary. Where there is no reasonable doubt of the nature of an error, a corresponding correction is introduced at such stage of the reductions as is most convenient, but it has not been found practicable to adhere to any invariable rule respecting the point of introduction of such corrections.

Beginning with the left-hand pages, on which are printed the observations of right ascension,

The column "*Date*" contains the astronomical date, which is always about twelve hours behind the civil date. The day is supposed to commence with the transit of the sun.

The column "*Number*" contains the number for convenience of reference.

The column "*Object*" contains the name of the object. In the case of the sun, moon, and planets the part observed is always specified; I and II indicating respectively the preceding and following limbs; N. and S. the north and south limbs; N. C. and S. C. the north and south cusps; and C. the center. The latter is observed only when a planet is so small and round that the edges of its disk cannot be bisected with accuracy. When but one component of a double star is observed, it is always the brighter of the two unless otherwise stated.

The column "*Observer*" contains the initial of the observer, as follows:

Ha.—Professor William Harkness.
H.—Professor A. Hall.
E.—Professor J. R. Eastman.
F.—Assistant Observer Edgar Frisby.
S.—Assistant Observer Ormond Stone.

The nine columns under the head "*Seconds of Transit over Wires*" contain the seconds and tenths of the observed time of transit over each wire. Objects observed over the standard set of nine wires, viz, set B, C_2 to C_4, and set D, are recorded in the columns I to IX; those observed only over set C are recorded in the columns III to VII; those observed only over sets B and D, in the columns I to III and VII to IX; those observed only over sets B and C, in the columns I to VIII; and those observed only over sets C and D, in the columns II to IX. In the case of irregular observations, the wires can generally be identified by means of the intervals between the times of transit. Transits below the pole are recorded in an order the reverse of that actually observed, so that each wire occupies the same column it would have done if the transit had been above the pole.

The column "*Mean Wire*" contains the time of transit over an imaginary wire whose position is the mean of the standard set of nine wires. When an object has been observed over all the wires of the standard set, their mean is, of course, its time of transit over the imaginary wire. For objects not so observed the method of reduction is as follows:

Let

$T_0 =$ time of transit of object over imaginary mean wire;
$T =$ observed time of transit of object over any wire;
$i =$ equatorial interval between that wire and the imaginary mean wire;
$\delta =$ geocentric declination of object;
$\Delta\alpha =$ number of seconds of time which the sun, or a planet, changes its right ascension while passing over the space between two terrestrial meridians separated from each other by one hour of longitude, or, in other words, its change of right ascension in one hour of longitude;
$D\alpha =$ number of minutes by which the moon increases her mean time of meridian passage in one hour of terrestrial longitude;
$z =$ geocentric zenith distance of object;
$z' =$ apparent zenith distance of object.

Then, for a star

$$T_0 = T + i \sec \delta$$

or, if i is large and the star very near the pole,

$$T_0 = T + i \sec \delta \times k$$

$$k = \frac{I \sin 15''}{\sin I}$$

$$\sin I = \sin i \sec \delta$$

The values of log k are as follows:

TABLE VII.—*Values of Log k.*

I.	Log (*i* sec *δ*).	Log *k.*	*I.*	Log (*i* sec *δ*).	Log *k.*
m.			*m.*		
1	1.778	0.00000	16	2.982	0.00035
2	2.079	0.00001	17	3.008	0.00040
3	2.255	0.00001	18	3.033	0.00045
4	2.380	0.00002	19	3.056	0.00050
5	2.477	0.00003	20	3.079	0.00055
6	2.556	0.00005	21	3.100	0.00061
7	2.623	0.00007	22	3.120	0.00067
8	2.681	0.00009	23	3.139	0.00073
9	2.732	0.00011	24	3.158	0.00080
10	2.778	0.00014	25	3.175	0.00086
11	2.819	0.00017	26	3.192	0.00093
12	2.857	0.00020	27	3.209	0.00101
13	2.892	0.00023	28	3.224	0.00108
14	2.924	0.00027	29	3.239	0.00116
15	2.954	0.00031	30	3.254	0.00124

For the sun, or a planet,

$$T_0 = T + i \sec \delta \times E$$

$$\log E = 0.00012\ \Delta\alpha$$

For the sun it is always sufficiently accurate to take $\log E = 0.0012$.

For the moon the following formula, founded on that of Sir G. B. Airy, is employed:

$$T_0 = T + i \sec \delta \times F \times G$$

$$F = \frac{1.00274\ (60 + D\alpha)}{60}$$

$$G = \frac{\sin z}{\sin z'} = 1 - \rho \sin \pi \cos (\varphi' - \delta)$$

in which φ' is the geocentric latitude of the transit circle $= 38° \ 42' \ 24''.3$; ρ its geocentric distance, $\log \rho = 9.9994302$; π, the moon's equatorial horizontal parallax; and 1.00274, the factor for converting mean into sidereal time. To facilitate the application of this formula the following tables have been computed:

TABLE VIII.—*Logarithms of the Factor F for reducing Imperfect Transits of the Moon.*

[ARGUMENT.—Change of Moon's mean time of transit in one hour of terrestrial longitude.]

Dα	Log *G.*	*Dα*	Log *G.*	*Dα*	Log *G.*	*Dα*	Log *G.*
m.		m.		m.		m.	
1.60	0.01262	1.90	0.01473	2.20	0.01683	2.50	0.01891
1.62	.01276	1.92	.01487	2.22	.01697	2.52	.01905
1.64	.01290	1.94	.01501	2.24	.01711	2.54	.01919
1.66	.01305	1.96	.01515	2.26	.01725	2.56	.01933
1.68	.01319	1.98	.01529	2.28	.01738	2.58	.01947
1.70	0.01333	2.00	0.01543	2.30	0.01752	2.60	0.01961
1.72	.01347	2.02	.01557	2.32	.01766	2.62	.01975
1.74	.01361	2.04	.01571	2.34	.01780	2.64	.01989
1.76	.01375	2.06	.01585	2.36	.01794	2.66	.02002
1.78	.01389	2.08	.01599	2.38	.01806	2.68	.02016
1.80	0.01403	2.10	0.01613	2.40	0.01822	2.70	0.02030
1.82	.01417	2.12	.01627	2.42	.01836	2.72	.02044
1.84	.01431	2.14	.01641	2.44	.01850	2.74	.02058
1.86	.01445	2.16	.01655	2.46	.01863	2.76	.02072
1.88	.01459	2.18	.01669	2.48	.01877	2.78	.02086

TABLE IX.—*Logarithms of the Factor G for reducing Imperfect Transits of the Moon.*

Moon's Geocentric N. P. D.	Moon's Equatorial Horizontal Parallax.									Moon's Geocentric Declination.
	54′	55′	56′	57′	58′	59′	60′	61′	62′	
°										°
62	9.99325	9.99313	9.99301	9.99288	9.99275	9.99262	9.99249	9.99236	9.99224	+ 28
63	.99327	.99316	.99304	.99290	.99278	.99265	.99252	.99239	.99227	27
64	.99330	.99318	.99306	.99293	.99280	.99267	.99255	.99242	.99230	26
65	.99333	.99321	.99309	.99296	.99283	.99271	.99258	.99245	.99233	25
66	9.99336	9.99323	9.99311	9.99299	9.99286	9.99274	9.99261	9.99249	9.99237	+ 24
67	.99340	.99327	.99315	.99303	.99290	.99278	.99265	.99253	.99241	23
68	.99343	.99331	.99318	.99306	.99294	.99282	.99269	.99257	.99245	22
69	.99347	.99335	.99322	.99310	.99298	.99286	.99273	.99262	.99249	21
70	.99351	.99339	.99326	.99314	.99302	.99290	.99278	.99266	.99254	20
71	9.99355	9.99343	9.99330	9.99318	9.99306	9.99295	9.99282	9.99271	9.99258	+ 19
72	.99359	.99347	.99335	.99323	.99311	.99299	.99287	.99275	.99263	18
73	.99364	.99352	.99339	.99328	.99316	.99304	.99292	.99280	.99269	17
74	.99368	.99356	.99344	.99332	.99321	.99309	.99297	.99284	.99274	16
75	.99373	.99361	.99349	.99338	.99326	.99315	.99302	.99290	.99279	15
76	9.99378	9.99366	9.99355	9.99343	9.99332	9.99320	9.99308	9.99296	9.99285	+ 14
77	.99383	.99372	.99360	.99349	.99338	.99327	.99314	.99302	.99291	13
78	.99389	.99378	.99366	.99355	.99344	.99333	.99321	.99309	.99298	12
79	.99395	.99384	.99372	.99361	.99350	.99339	.99327	.99315	.99304	11
80	.99401	.99390	.99378	.99367	.99356	.99345	.99333	.99322	.99311	10
81	9.99407	9.99396	9.99384	9.99373	9.99362	9.99351	9.99340	9.99329	9.99318	+ 9
82	.99413	.99402	.99391	.99380	.99369	.99358	.99347	.99336	.99325	8
83	.99419	.99408	.99397	.99386	.99376	.99365	.99354	.99343	.99332	7
84	.99425	.99414	.99404	.99393	.99383	.99372	.99361	.99350	.99339	6
85	.99431	.99421	.99411	.99400	.99390	.99379	.99368	.99358	.99347	5
86	9.99438	9.99428	9.99418	9.99407	9.99397	9.99387	9.99376	9.99365	9.99355	+ 4
87	.99445	.99435	.99425	.99414	.99405	.99394	.99384	.99373	.99363	3
88	.99453	.99443	.99433	.99422	.99412	.99402	.99392	.99381	.99371	2
89	.99460	.99450	.99440	.99430	.99420	.99410	.99400	.99389	.99380	+ 1
90	.99468	.99458	.99448	.99438	.99428	.99418	.99408	.99398	.99388	0
91	9.99475	9.99466	9.99456	9.99446	9.99436	9.99426	9.99417	9.99407	9.99397	− 1
92	.99483	.99474	.99464	.99454	.99445	.99435	.99425	.99416	.99406	2
93	.99491	.99482	.99472	.99462	.99454	.99444	.99434	.99425	.99415	3
94	.99499	.99490	.99480	.99471	.99462	.99453	.99443	.99434	.99425	4
95	.99507	.99499	.99489	.99480	.99471	.99462	.99453	.99444	.99434	5
96	9.99516	9.99507	9.99498	9.99489	9.99480	9.99471	9.99462	9.99453	9.99444	− 6
97	.99525	.99516	.99507	.99498	.99490	.99481	.99472	.99463	.99454	7
98	.99534	.99525	.99517	.99508	.99500	.99491	.99482	.99473	.99464	8
99	.99542	.99534	.99526	.99517	.99510	.99501	.99492	.99484	.99474	9
100	.99552	.99544	.99536	.99527	.99519	.99511	.99502	.99494	.99485	10
101	9.99561	9.99553	9.99545	9.99537	9.99529	9.99521	9.99513	9.99505	9.99496	− 11
102	.99571	.99563	.99555	.99547	.99539	.99531	.99523	.99515	.99506	12
103	.99580	.99573	.99565	.99557	.99550	.99542	.99534	.99526	.99518	13
104	.99590	.99583	.99575	.99568	.99560	.99552	.99544	.99537	.99529	14
105	.99600	.99593	.99585	.99578	.99570	.99563	.99555	.99548	.99540	15
106	9.99610	9.99603	9.99596	9.99589	9.99581	9.99574	9.99566	9.99559	9.99552	− 16
107	.99620	.99613	.99606	.99600	.99592	.99585	.99577	.99571	.99563	17
108	.99630	.99624	.99617	.99610	.99603	.99596	.99589	.99582	.99575	18
109	.99640	.99635	.99627	.99621	.99614	.99608	.99600	.99594	.99587	19
110	.99651	.99645	.99638	.99632	.99625	.99619	.99612	.99606	.99599	20
111	9.99661	9.99656	9.99648	9.99642	9.99636	9.99630	9.99624	9.99618	9.99611	− 21
112	.99672	.99666	.99659	.99653	.99647	.99641	.99635	.99629	.99623	22
113	.99682	.99677	.99670	.99664	.99658	.99652	.99647	.99641	.99635	23
114	.99693	.99687	.99681	.99676	.99670	.99664	.99659	.99653	.99647	24
115	.99703	.99698	.99692	.99687	.99682	.99676	.99671	.99665	.99660	25
116	9.99714	9.99709	9.99704	9.99699	9.99694	9.99689	9.99683	9.99678	9.99672	− 26
117	.99725	.99720	.99715	.99710	.99706	.99701	.99695	.99690	.99685	27
118	.99736	.99731	.99727	.99722	.99718	.99713	.99708	.99703	.99698	− 28

Each wire over which an object has been observed thus furnishes one value of its time of transit over the imaginary wire, and the mean of all the values so found is the quantity entered in the column "*Mean Wire.*"

The column "*Inst.,*" under the general head "*Corrections,*" contains the sum of the instrumental corrections; or, in other words, the quantity

$$Aa + Bb + Cc$$

in which a, b, and c are the constants, and A, B, and C the factors, for azimuth, level, and collimation. The methods of finding a, b, and c have been already given. For reflection observations the sign of b is the reverse of that which it is for direct ones. The formulæ for computing A, B, and C are

$$\begin{aligned} A &= \sin(\varphi - \delta) \sec \delta = \sin \varphi - \cos \varphi \tan \delta \\ B &= \cos(\varphi - \delta) \sec \delta = \cos \varphi + \sin \varphi \tan \delta \\ C &= \sec \delta \end{aligned}$$

in which φ is the latitude of the place of observation, and δ the declination of the object observed. For a culmination below the pole, $180° - \delta$ must be substituted instead of δ. The following rules are sometimes convenient for determining the signs of these quantities:

A is positive, except for stars between the zenith and the pole.

B and C are positive, except for stars below the pole.

Table X gives, both for direct and reflection observations, the values of the factors A, B, C, for each degree of north polar distance, to the arguments north polar distance and zenith distance south. The tables actually employed in making the reductions are much more extensive, giving the values of the quantities Aa, Bb, Cc, for each degree of zenith distance, and for each $0^s.01$ of the constants a, b, c, from $0^s.00$ to $0^s.50$.

TABLE X.—*Values of the Factors A, B, C, for reducing Observations of Right Ascension.*

Zenith Distance South.	Zenith Distance South.	*A*	*B*	*C*	North Polar Distance.	North Polar Distance.
°	°				°	°
275	265	+ 1.786	− 0.156	− 1.793	326.1	316.1
276	264	.830	.193	.841	327.1	315.1
277	263	.878	.231	.892	328.1	314.1
278	262	.927	.271	1.947	329.1	313.1
279	261	1.981	.314	2.006	330.1	312.1
280	260	+ 2.036	− 0.359	− 2.069	331.1	311.1
281	259	.097	.406	.137	332.1	310.1
282	258	.160	.460	.210	333.1	309.1
283	257	.230	.515	.289	334.1	308.1
284	256	.301	.574	.375	335.1	307.1
285	255	+ 2.382	− 0.639	− 2.468	336.1	306.1
286	254	.469	.708	.570	337.1	305.1
287	253	.564	.784	.681	338.1	304.1
288	252	.666	.866	.803	339.1	303.1
289	251	.777	0.953	2.938	340.1	302.1
290	250	+ 2.901	− 1.056	− 3.087	341.1	301.1
291	249	3.037	.167	.254	342.1	300.1
292	248	.189	.289	.441	343.1	299.1
293	247	.360	.427	.652	344.1	298.1
294	246	.553	.583	3.891	345.1	297.1
295	245	+ 3.774	− 1.761	− 4.164	346.1	296.1
296	244	4.026	1.965	.481	347.1	295.1
297	243	.322	2.204	4.852	348.1	294.1
298	242	4.670	.486	5.291	349.1	293.1
299	241	5.088	2.822	5.820	350.1	292.1
300	240	+ 5.599	− 3.235	− 6.468	351.1	291.1
301	239	6.239	3.751	7.281	352.1	290.1
302	238	7.062	4.416	8.331	353.1	289.1
303	237	8.163	5.305	9.738	354.1	288.1
304	236	9.717	6.555	11.721	355.1	287.1
305	235	+ 12.062	− 8.446	− 14.725	356.1	286.1
306	234	16.023	11.641	19.806	357.1	285.1
307	233	24.162	18.207	30.255	358.1	284.1
308	232	+ 50.497	− 39.453	− 64.090	359.1	283.1
309	231	−420.509	+340.522	+541.094	0.1	282.1
310	230	− 39.693	+ 33.306	51.826	1.1	281.1
311	229	20.539	17.854	27.186	2.1	280.1
312	228	13.716	12.350	18.455	3.1	279.1
313	227	10.215	9.525	13.957	4.1	278.1
314	226	8.085	7.806	11.236	5.1	277.1
315	225	− 6.648	+ 6.648	+ 9.401	6.1	276.1
316	224	5.613	5.816	8.083	7.1	275.1
317	223	4.834	5.187	7.092	8.1	274.1
318	222	4.226	4.696	6.319	9.1	273.1
319	221	3.737	4.301	5.699	10.1	272.1

TABLE X.—*Values of the Factors A, B, C, &c.*—Continued.

Zenith Distance South.	Zenith Distance South.	*A*	*B*	*C*	North Polar Distance.	North Polar Distance.
°	°				°	°
320	220	− 3.335	+ 3.978	+ 5.191	11.1	271.1
321	219	2.999	.706	4.768	12.1	270.1
322	218	.713	.475	.410	13.1	269.1
323	217	.468	.277	4.103	14.1	268.1
324	216	.255	3.105	3.837	15.1	267.1
325	215	− 2.066	+ 2.953	+ 3.605	16.1	266.1
326	214	1.900	.819	.400	17.1	265.1
327	213	.753	.700	.218	18.1	264.1
328	212	.619	.591	3.055	19.1	263.1
329	211	.498	.494	2.909	20.1	262.1
330	210	− 1.388	+ 2.405	+ 2.777	21.1	261.1
331	209	.288	.324	.657	22.1	260.1
332	208	.196	.249	.548	23.1	259.1
333	207	.111	.181	.448	24.1	258.1
334	206	1.033	.118	.357	25.1	257.1
335	205	− 0.960	+ 2.060	+ 2.273	26.1	256.1
336	204	.892	2.005	.195	27.1	255.1
337	203	.830	1.954	.123	28.1	254.1
338	202	.770	.907	2.056	29.1	253.1
339	201	.714	.861	1.994	30.1	252.1
340	200	− 0.662	+ 1.819	+ 1.936	31.1	251.1
341	199	.612	.779	.882	32.1	250.1
342	198	.565	.741	.831	33.1	249.1
343	197	.521	.706	.784	34.1	248.1
344	196	.479	.672	.739	35.1	247.1
345	195	− 0.439	+ 1.639	+ 1.697	36.1	246.1
346	194	.400	.608	.658	37.1	245.1
347	193	.364	.579	.621	38.1	244.1
348	192	.329	.550	.586	39.1	243.1
349	191	.295	.524	.552	40.1	242.1
350	190	− 0.264	+ 1.498	+ 1.521	41.1	241.1
351	189	.233	.473	.492	42.1	240.1
352	188	.204	.449	.464	43.1	239.1
353	187	.175	.426	.437	44.1	238.1
354	186	.147	.403	.412	45.1	237.1
355	185	− 0.120	+ 1.382	+ 1.388	46.1	236.1
356	184	.095	.361	.365	47.1	235.1
357	183	.070	.341	.344	48.1	234.1
358	182	.046	.322	.323	49.1	233.1
359	181	− 0.023	.303	.304	50.1	232.1
0	180	0.000	+ 1.285	+ 1.285	51.1	231.1
1	179	+ 0.022	.267	.267	52.1	230.1
2	178	.044	.250	.250	53.1	229.1
3	177	.065	.233	.234	54.1	228.1
4	176	.085	.216	.219	55.1	227.1

TABLE X.—*Values of the Factors A, B, C, &c.*—Continued.

Zenith Distance South.	Zenith Distance South.	A	B	C	North Polar Distance.	North Polar Distance.
°	°				°	°
5	175	+ 0.105	+ 1.200	+ 1.205	56.1	226.1
6	174	.125	.184	.191	57.1	225.1
7	173	.144	.169	.178	58.1	224.1
8	172	.163	.154	.165	59.1	223.1
9	171	.181	.139	.154	60.1	222.1
10	170	+ 0.199	+ 1.125	+ 1.142	61.1	221.1
11	169	.216	.110	.132	62.1	220.1
12	168	.234	.096	.121	63.1	219.1
13	167	.251	.083	.112	64.1	218.1
14	166	.267	.069	.102	65.1	217.1
15	165	+ 0.283	+ 1.056	+ 1.094	66.1	216.1
16	164	.300	.043	.086	67.1	215.1
17	163	.315	.030	.078	68.1	214.1
18	162	.331	.018	.070	69.1	213.1
19	161	.346	.005	.064	70.1	212.1
20	160	+ 0.362	+ 0.993	+ 1.057	71.1	211.1
21	159	.377	.981	.051	72.1	210.1
22	158	.392	.969	.045	73.1	209.1
23	157	.406	.957	.040	74.1	208.1
24	156	.421	.945	.035	75.1	207.1
25	155	+ 0.436	+ 0.933	+ 1.030	76.1	206.1
26	154	.450	.922	.026	77.1	205.1
27	153	.464	.910	.022	78.1	204.1
28	152	.479	.899	.018	79.1	203.1
29	151	.493	.887	.015	80.1	202.1
30	150	+ 0.507	+ 0.876	+ 1.012	81.1	201.1
31	149	.520	.865	.010	82.1	200.1
32	148	.534	.854	.007	83.1	199.1
33	147	.548	.843	.005	84.1	198.1
34	146	.561	.832	.004	85.1	197.1
35	145	+ 0.575	+ 0.821	+ 1.002	86.1	196.1
36	144	.588	.810	.001	87.1	195.1
37	143	.602	.799	.001	88.1	194.1
38	142	.616	.788	.000	89.1	193.1
39	141	.630	.777	.000	90.1	192.1
40	140	+ 0.643	+ 0.766	+ 1.000	91.1	191.1
41	139	.657	.755	.001	92.1	190.1
42	138	.670	.744	.002	93.1	189.1
43	137	.684	.733	.003	94.1	188.1
44	136	.697	.722	.004	95.1	187.1
45	135	+ 0.711	+ 0.711	+ 1.006	96.1	186.1
46	134	.724	.700	.008	97.1	185.1
47	133	.738	.689	.010	98.1	184.1
48	132	.752	.678	.013	99.1	183.1
49	131	.766	.666	.016	100.1	182.1

TABLE X.—*Values of the Factors A, B, C, &c.*—Continued.

Zenith Distance South.	Zenith Distance South.	*A*	*B*	*C*	North Polar Distance.	North Polar Distance.
°	°				°	°
50	130	+ 0.780	+ 0.655	+ 1.019	101.1	181.1
51	129	.794	.644	.023	102.1	180.1
52	128	.809	.632	.027	103.1	179.1
53	127	.823	.620	.031	104.1	178.1
54	126	.838	.608	.036	105.1	177.1
55	125	+ 0.853	+ 0.597	+ 1.041	106.1	176.1
56	124	.868	.585	.046	107.1	175.1
57	123	.882	.573	.052	108.1	174.1
58	122	.897	.561	.058	109.1	173.1
59	121	.913	.548	.065	110.1	172.1
60	120	+ 0.928	+ 0.536	+ 1.072	111.1	171.1
61	119	.944	.523	.079	112.1	170.1
62	118	.959	.510	.087	113.1	169.1
63	117	.976	.497	.095	114.1	168.1
64	116	.992	.484	.104	115.1	167.1
65	115	+ 1.009	+ 0.470	+ 1.114	116.1	166.1
66	114	.026	.456	.123	117.1	165.1
67	113	.043	.443	.134	118.1	164.1
68	112	.060	.429	.144	119.1	163.1
69	111	.079	.414	.156	120.1	162.1
70	110	+ 1.097	+ 0.399	+ 1.168	121.1	161.1
71	109	.115	.384	.180	122.1	160.1
72	108	.135	.369	.194	123.1	159.1
73	107	.155	.353	.208	124.1	158.1
74	106	.175	.337	.222	125.1	157.1
75	105	+ 1.195	+ 0.320	+ 1.238	126.1	156.1
76	104	.216	.303	.254	127.1	155.1
77	103	.238	.286	.271	128.1	154.1
78	102	.260	.267	.289	129.1	153.1
79	101	.283	.249	.307	130.1	152.1
80	100	+ 1.306	+ 0.230	+ 1.327	131.1	151.1
81	99	.331	.210	.348	132.1	150.1
82	98	.356	.190	.370	133.1	149.1
83	97	.382	.169	.392	134.1	148.1
84	96	.408	.148	.417	135.1	147.1
85	95	1.436	0.126	1.442	136.1	146.1

Table B, at the end of this introduction, contains the adopted values of the instrumental constants for all occasions on which observations were made. The first and second columns give the mean date to the nearest tenth of a day. When the tenth is 0, it is to be understood that the day begins with the observer's tour of duty, generally about three hours earlier than the commencement of the astronomical day. The constants for the *n*th date at 21^h mean time are therefore placed opposite the $(n+1)$th date. The column "τ" gives, in Fahrenheit degrees, the approximate mean temperature of the instrument during the time the observations were in progress.

It is employed for computing the collimation from the absolute determinations contained in Table A. The columns *c*, *b*, and *a* contain, respectively, the adopted values of the collimation, level, and azimuth constants.

The column "*Clock Appar'nt*," under the general head "*Corrections*," contains the apparent clock corrections given by direct observations of stars of the American Ephemeris situated within 40° of the equator. The adopted apparent right ascensions of these stars are obtained by applying the corrections given in Table C to the apparent right ascensions given in the American Ephemeris. From the adopted right ascensions thus found, the sums of the numbers in the columns "*Mean Wire*" and "*Inst.*" are subtracted, and the results are the apparent clock corrections. Reflection observations are not used for finding clock corrections.

On pages 41–43 of Appendix III to the Washington Observations for 1867, Professor Newcomb has given a catalogue of "Mean positions for 1870.0 of Stars of the American Ephemeris, deduced from Observations with the Transit Instrument and the Transit Circle during the years 1862–'67." This has been adopted as the fundamental catalogue, except that its right ascensions have been diminished by $0^s.03$ in order to free them from a somewhat doubtful correction to the position of the equinox. The numbers given in Table C are, therefore, the corrections necessary to reduce the right ascensions of the American Ephemeris to those of the fundamental catalogue, after the latter have been diminished by $0^s.03$.

The column "*Clock Adopted*," under the general head "*Corrections*," contains the adopted clock correction for each star, computed from the data given in Table D.

Table D is constructed upon the assumption that for each observing-day the mean of all the apparent clock corrections obtained by a single person corresponds to the mean of the times at which they were observed. Accordingly, for each observing-day during which observations were actually made, the column "*Mean Day and Sidereal Hour*" contains the mean date, together with the sidereal hour and tenth of an hour corresponding to the mean of the right ascensions of all the clock-stars which were observed; while the corresponding means of the apparent clock corrections given by the same stars are contained in the column "*Clock Correction from Mean of Observations.*" The initials of the person who made the observations are contained in the column "*Observer.*" When clock corrections are determined by two or more persons during a single observing-day, the results are given separately for each person.

Occasionally two or more of the observers are directed to determine independent values of the clock correction for a given instant, and from a comparison of the results their personal equations are deduced. The best mode of getting the simultaneous clock corrections is for the observers to note the transits of alternate time-stars, one of them taking the first star, the other the next, and so on till each has observed six stars, which may generally be accomplished in less than two hours. The probable errors of the resulting clock corrections will be about $0^s.01$. Sometimes it is more convenient for one of the observers to get all his stars first, and for the other to get his subsequently; but in such cases, to avoid too great dependence upon the clock-rate, the interval between the mean of the right ascensions of the stars taken by the first observer and the mean of the right ascensions of the stars taken by the second observer should not exceed six hours. If the first method is employed, the clock corrections found by the two observers will belong to instants so nearly identical that the clock-rate may be neglected unless it is very large, and the difference between the two corrections will be the difference of personal equation. If the second method is used, the two corrections may belong to widely different instants, and must be reduced to a common epoch, by means of the clock-rate, before the personal equation can be inferred.

No observations for personal equation were made during the year 1871, and it has therefore been necessary to employ those obtained in 1870 and 1872. From them it results that the corrections which must be applied to the clock corrections obtained by different observers in order to reduce them to a uniform standard are

	s.
Ha.	−0.10
E.	+0.08
F.	+0.03
S.	−0.01

Accordingly, applying these quantities to the numbers contained in the column of Table D headed "*Clock Correction from Mean of Observations,*" there results the numbers contained in the column "*Clock Correction Corrected for Personal Equation.*" Dividing the differences between the latter quantities by the intervals elapsing between the times at which they were determined gives the daily rates contained in the column "*Apparent Rate Between Groups.*" Finally, the "*Adopted Daily Rate*" for each observing-day is obtained by taking the mean of the apparent rates for the two intervals, one of which precedes and the other follows the epoch of the clock correction. In doing this, however, more weight is given to apparent rates depending upon an interval of one day than to those depending on either greater or less intervals.

Returning to the consideration of the observations of right ascensions, the numbers in the column "*Clock Adopted*" are obtained for each object by using the "*Adopted Daily Rate*" to reduce the "*Clock Corrections from Mean of Observations*" to the instant at which the object was observed. In the rare cases where clock corrections are required for the reduction of isolated observations, they are obtained by interpolating between the "*Clock Corrections Corrected for Personal Equation*" on the nearest preceding and following dates, and applying personal equation to the interpolated value. Usually the same individual observes both the clock-stars and the objects whose right ascensions are required, and then personal equation affects only the clock-rates and very accurate values of it are not essential.

The column "*Apparent Right Ascension*" contains the apparent right ascension of each object, found by adding together its time of transit over the imaginary mean wire, the sum of the instrumental corrections, and the adopted clock correction. The result is therefore in all cases the right ascension of that part of the object which was actually observed.

The column "*Miscellan'us Corrections*" contains

α. For stars whose apparent positions are stated in the American Ephemeris; the correction given by the observation to the right ascension of the Ephemeris.

β. For other stars; the reduction to their mean position for the fictitious epoch 1871.0. This reduction is computed with the constants of the American Ephemeris, and no proper motion is applied.

γ. For the sun, when only one limb has been observed; the sidereal time of its semi-diameter passing the meridian, obtained by correcting the value given in the American Ephemeris, by means of Table XXIV, for the personal equation of the observer to whose work it is to be applied.

δ. For the moon or a planet, when only one limb has been observed; the sidereal time of the semi-diameter passing the meridian, as given in the American Ephemeris.

Passing now to the consideration of the right-hand pages, on which are printed the observations of north polar distance,

The column "*Number*" contains the reference number.

The column "*Circle Division*" contains the degrees and minutes indicated by the horizontal microscope of circle A. Designating them by Ω, the divisions of circle B, actually read by means of its micrometer microscopes, were

For Microscope V, - - - - - - - - - - - - $314^\circ\ 56' - \Omega$
For Microscope VI, - - - - - - - - - - - - $44\ \ 56 - \Omega$
For Microscope VII, - - - - - - - - - - - - $134\ \ 56 - \Omega$
For Microscope VIII, - - - - - - - - - - - - $224\ \ 56 - \Omega$

Under the general head "*Microscope Microm's*" the columns V, VI, VII, VIII, contain the readings of the microscope micrometers of circle B. The Roman numbers at the heads of the columns correspond to those upon the microscopes which were used during the year. As it is always intended to set the circle so that the reading of these microscopes shall be, as nearly as possible, 10 revolutions, the whole revolutions are not generally recorded unless the readings differ more than 10″ from that quantity. Owing to imperfect adjustment, the whole revolutions given for microscope V do not always apply to all the others; but this can occasion no ambiguity.

Under the general head "*Telescope Micrometer*," the column "*Rev.*" contains for each object the whole revolutions of the zenith-distance micrometer as indicated upon its scale by the close pair of movable declination wires at the first bisection of the object. The center of the field, as marked by the double fixed wires, corresponds to 40 revolutions. The columns 1, 2, 3, 4, 5, contain the corresponding thousandths of a revolution of the micrometer screw as read from its head for each bisection of the object. The vertical wires at which the bisections were made are indicated as follows: For objects within 5° of the pole the columns 1 to 5 refer to the wires C_1 to C_5; but for objects whose polar distance exceeds 5° they refer to the wires I, II, IV, VI, VII. Whenever it is necessary to depart from this rule a foot-note is appended explaining how the bisections were made. The foot-note "Bisections at sets B and D" signifies that for the object to which it is appended the columns 1 to 5 refer to the wires B_1, B_3, C_3, D_1, D_3.

The usual practice is to reduce all the objects in each group of observations by means of the zenith-point correction determined in connection with them. Accordingly, the numbers in the column "*Zenith Point Correction*" have generally been taken without change from the last column of Table E, at the end of this introduction; but in the rare cases where there is a considerable change in the zenith-point correction during an observing-day its value for each object has been obtained from the observed values by interpolation. The construction of Table E has been already explained.

It sometimes happens that a group of observations is made, but, on account of unsteadiness of the mercury or other causes, no nadir point is determined with it. Under such circumstances the requisite zenith-point correction is obtained from the stars in the group by reducing them as if the zenith-point correction were zero, and at the end of the year comparing their mean north polar distances so found with their mean north polar distances resulting from all the other observations made on them during the year. Each star which has been observed on other nights thus furnishes one value of the zenith-point correction, and the mean of all the values so obtained is employed for the final reduction of the whole group. With a sufficient number of stars, this process gives nearly as good results as a zenith-point correction determined in the usual manner.

The column "*Apparent Zenith Distance South*" contains for each object its apparent zenith distance, measured continuously from the zenith toward, or through, the south, to the object. It is the sum of the following quantities:

1. The approximate zenith distance south. When the clamp is east this is equal to the reading of the horizontal microscope of circle A, minus the excess of the mean of the readings of the micrometer microscopes of circle B above ten revolutions. When the clamp is west it is equal to 359° 52′, minus the reading of the horizontal microscope of circle A, plus the excess of the mean of the readings of the micrometer microscopes of circle B above ten revolutions.

2. The micrometer equivalent, or, in other words, the correction in arc for the mean of the readings of the zenith-distance micrometer, computed by means of the formula

$$2' \quad 0''.0 + R\,(40.000 - r.)$$

if the clamp is east; or by means of the formula

$$4' \quad 0''.0 - R\,(40.000 - r.)$$

if the clamp is west. In these formula r is the mean of the readings of the zenith-distance micrometer expressed in revolutions and parts of a revolution, R the mean value of one revolution of the screw between the limits r revolutions and 40 revolutions, and the numerical term is a constant added in order to make the zenith-point correction always positive.

In practice the value of this expression is taken from a table, which, when the clamp is east, is constructed as follows: Upon a sheet of paper of convenient size lines are ruled dividing it into seven vertical columns. In the left-hand one the numbers 0, 1, 2, 3, &c., to 60, are written and marked as seconds of arc. At the head of the fourth column, opposite 0″ is written 40.000 revolutions; from this is subtracted the fraction of a micrometer revolution corresponding to 1″, and the remainder is written in the same column opposite 1″; from that remainder the fraction of a revolution corresponding to 1″ is again subtracted, and the remainder written opposite 2″; and by continuing this process the whole table is filled up. Of course, in filling the second and third columns continual additions of the fraction of a revolution corresponding to 1″ are employed instead of subtractions. The table so constructed extends from 47 revolutions, at the head of the second column, to 24 revolutions, at the foot of the seventh column; and the numbers in each column correspond to a range of 1′. The seconds corresponding to each number are fixed, but as yet the minutes have been left indeterminate, and, as they are entirely arbitrary,[1] it is convenient so to assume them as to make the zenith-point correction always positive. For that purpose a nadir observation must be reduced, and thus the minutes necessary to be attributed to its micrometer equivalent to bring the zenith-point correction between the limits + 30″ and + 90″ become known. That number of minutes is written at the head of the column in which the mean of the zenith-distance micrometer readings of the nadir observation in question is found, and the table is completed by writing the consecutive minutes at the heads of the other columns. It is scarcely necessary to add that in the table thus formed the minutes and seconds corresponding to 40.000 revolutions are the constant in the formula for the micrometer equivalent.

When the clamp is west the table is constructed in the manner just described, with the following exceptions: 40 revolutions is written at the head of the sixth column opposite 0″, and the numbers from thence to the foot of the seventh column are obtained by continual additions of the fraction of a micrometer revolution corresponding to 1″. The second, third, fourth, and fifth columns are filled by continual subtractions of the same quantity, and the table thus formed extends from 24 revolutions at the head of the second column to 47 revolutions at the foot of the seventh column.

3. The reduction to the meridian on account of the deviation of the path of the object from a great circle; computed by means of the formula

$$\begin{aligned}\mu &= -\ 112.5 \sin 1'' \, i^2 \tan \delta + 1''.80\\ &= -\ [6.73676] \, i^2 \tan \delta + 1''.80\end{aligned}$$

in which μ is the reduction to the meridian, in seconds of arc; i, the equatorial interval, in seconds of time, between the middle vertical wire and the wire at which the bisection of the object with the zenith-distance micrometer was made; δ, the declination of the object; and 1″.80, a constant added for the purpose of making μ generally positive. In order to save computation, the values of μ have been tabulated for all the vertical wires, and for each degree of declination from one horizon to the other.

Occasionally objects are bisected with the zenith-distance micrometer when they are not at any vertical wire. In such cases the clock-time is noted at the instant of bisection, and the reduction to the meridian is computed by means of the formula

$$\begin{aligned}\mu &= -\ 56.25 \sin 1'' \, I^2 \sin 2\,\delta + 1''.80\\ &= -\ [6.4357] \, I^2 \sin 2\delta + 1''.80\end{aligned}$$

in which I is the distance of the object from the meridian at the time the bisection was made, expressed in seconds of time; and the other letters retain the same signification as above.

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[1] This is evident when it is remembered that the corrected circle reading is the sum of the observed circle reading and the micrometer equivalent; and also that the apparent zenith distance south is only affected by the difference between the corrected circle reading for the object and that for the nadir point. Hence, so far as the zenith-distance micrometer is concerned, the quantity entering the apparent zenith distance is the difference of two micrometer equivalents, and this difference will remain the same no matter what constant is added to each equivalent.

4. In the case of unsymmetrical observations, the corrections for inclination of wires and motion of object.

The correction for inclination is determined from time to time by means of the formula given on page XXXVII, care being taken to employ a sufficient number of stars to furnish a reliable mean value of $r_{\text{i}} - r_{\text{vii.}}$ The correction was sensibly constant during the year. Its amount for each of the vertical wires from I to VII is given on page 3 of the observations.

The correction for motion of object is computed by means of the formula

$$\varDelta'\delta = -\frac{\varDelta\delta}{3600}\,i \sec\delta = -\,[6.4437]\,\varDelta\delta\, i \sec\delta$$

in which $\varDelta'\delta$ is the correction for motion of object, and $\varDelta\delta$ the hourly motion of the object in declination, both expressed in seconds of arc; i is the equatorial interval, in seconds of time, between the middle wire and the wire at which the object was bisected; and δ is the declination of the object.

5. For those observations in which wire A or B is used, the correction for the distance of the wire employed from the center of the space between the close pair of declination wires. The amount of this correction at each of the vertical wires from I to VII is given on page 3 of the observations.

6. The zenith-point correction, taken from the preceding column.

The corrections for flexure and division errors are omitted from the reductions, and applied once for all to the concluded mean places of the stars, and to the apparent places of the sun, moon, and planets.

The column "*Sympiesometer*" is intended to contain the observed readings of that instrument, but it was not used during the year.

The column "*Refraction*" contains the correction for refraction, computed by means of Bessel's formula, using only four places of decimals in the logarithms, and employing the tables given in the Appendix to the Washington Observations for 1845.

The numbers in the column "*Apparent North Polar Distance*" were formed for each object by correcting its apparent zenith distance south for refraction, and then adding it to the co-latitude in the case of a direct observation, or subtracting it in the case of a reflection one. The adopted co-latitude is $+\,51^\circ\ 6'\ 21''.2$.

The column "*Miscellan'us Corrections*" contains.

α. For stars whose apparent positions are stated in the American Ephemeris; the correction given by the observation to the north polar distance of the Ephemeris.

β. For other stars; the reduction to their mean position for the fictitious epoch 1871.0. This reduction is computed with the constants of the American Ephemeris, and no proper motion is applied.

γ. For the asteroids; the correction for parallax, computed by means of the formula

$$p = \frac{8''.85 \times 0.9987}{\varDelta} \sin(\zeta' - d\varphi) = -\,\frac{8''.837}{\varDelta} \sin(\zeta' - d\varphi)$$

in which p is the correction for parallax; $\varDelta$, the distance between the centers of the earth and asteroid, expressed in terms of the earth's mean distance from the sun as unity; ζ', the apparent zenith distance of the asteroid, corrected for refraction; $d\varphi$, the angle of the vertical, which is 11′ 14″.5 at Washington; 8″.85, the adopted value of the sun's mean equatorial horizontal parallax; and 0.9987, the distance from the transit circle to the center of the earth. The values of Δ are taken from the Berliner Jahrbuch.

For the sun, moon, and planets other than the asteroids, the corrections for parallax, semi-diameter, and defective illumination are given at the foot of the pages containing the observations.

All corrections for parallax, except those of the asteroids, are computed from the data contained in the American Ephemeris; using for the sun and planets, the formula

$$p = [9.9994]\ \pi \sin (\zeta' - d\varphi)$$

and for the moon, the formulæ

$$\sin p' = [9.999430] \sin \pi \sin (\zeta' - d\varphi)$$

$$\delta p = \frac{p \mp s}{2} \sin p \sin s$$

$$p = p' \mp \delta p$$

in which the upper signs must be taken for the upper limb, and the lower signs for the lower limb. π is the moon's equatorial horizontal parallax; s, the moon's apparent semi-diameter; and [9.999430], the logarithm of the distance between the transit circle and the earth's center. The other letters have the same signification as above. Table XI gives the values of δp to the arguments π and p.

TABLE XI.—*Values of* δp.

p	Upper Limb Observed.			Lower Limb Observed.		
	Value of π.			Value of π.		
	54′	58′	62′	54′	58′	62′
′	″	″	″	″	″	″
0	+ 0.02	+ 0.02	+ 0.02	0.00	0.00	0.00
10	.00	.00	+ .01	+ .01	+ .01	+ .01
15	.00	.00	.00	.02	.02	.02
20	.00	.00	.00	.03	.03	.03
25	− .01	− .01	− .01	.04	.04	.04
30	.02	.02	.02	.05	.05	.06
35	.03	.03	.03	.06	.07	.08
40	.04	.04	.04	.08	.09	.10
45	.05	.05	.05	.10	.11	.12
50	− 0.07	− 0.07	− 0.07	+ 0.12	+ 0.13	+ 0.14

When both limbs of an object have been observed, half the difference between their apparent north polar distances is the correction for semi-diameter; but when only a single limb has been observed, the correction is taken from the American Ephemeris. In the case of the sun, however, the semi-diameters taken from the Ephemeris are corrected by means of Table XXIV for the personal equation of the observer to whose work they are to be applied.

The corrections for defective illumination are computed from the data of the American Ephemeris by means of formulæ given in a subsequent part of this introduction.

CORRECTIONS TO THE RIGHT ASCENSIONS AND NORTH POLAR DISTANCES OF THE AMERICAN EPHEMERIS, GIVEN BY INDIVIDUAL OBSERVATIONS OF STARS WITH THE TRANSIT CIRCLE.

The tables containing these corrections are to be found on pages 119 to 130, and exhibit (1) the date of each observation and (2) the initial of the observer, the latter being given to facilitate any discussion of personal peculiarities.

Next follows the correction to the right ascension, which is copied, without change, from the last column of the left-hand page of the observations. In the case of clock-stars, it is not put down unless it depends either on three other clock-stars, or on one or two stars distant more than six hours in right ascension. In this and the following column, an interrogation-mark signifies that the result is doubtful; an *r*, that it is rejected on account of discordance.

The next column contains the correction to the polar distance, also copied from the last column of the observations, without change, except for erroneous micrometer revolutions.

The mean polar distances thus found still require the following corrections, which have not been applied in the reductions:

1. For error of division.
2. For flexure.
3. For possible constant error in zenith point.
4. For possible error of assumed latitude.

The corrections for errors of division were determined in November and December, 1865. They are given in the following table,[1] which contains for each circle the correction to be applied to the mean of the readings of its own four micrometer microscopes, in order to free this mean from the effect of errors of division. The argument for entering the table is the reading of the horizontal microscope belonging to the circle for which the correction is desired. If this reading exceeds 90° it must be brought into the first quadrant by subtracting from it 90°, 180°, or 270°, as may be necessary.

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[1] Extracted from the Washington Observations for 1865, Description of Transit Circle, § 72.

TABLE XII.—*Correction which must be applied to the Mean of the Readings of the Four Micrometer Microscopes, in order to free that Mean from the effect of Errors of Division.*

[Argument.—Reading of Horizontal Microscope belonging to Circle for which correction is required.]

Arg.	Circle A.	Circle B.	Arg.	Circle A.	Circle B.	Arg.	Circle A.	Circle B.
°	″	″	°	″	″	°	″	″
0	+ 0.12	+ 0.30	30	−0 .16	+ 0.27	60	− 0.05	+ 0.22
1	+ 0.06	+ 0.23	31	−0. 23	+ 0.24	61	+ 0.05	+ 0.26
2	0.00	+ 0.18	32	−0. 29	+ 0.22	62	+ 0.05	+ 0.28
3	− 0.05	+ 0.18	33	− 0.32	+ 0.19	63	+ 0.05	+ 0.27
4	− 0.11	+ 0.22	34	− 0.35	+ 0.15	64	+ 0.02	+ 0.25
5	− 0.17	+ 0.27	35	− 0.37	+ 0.11	65	0.00	+ 0.22
6	− 0.10	+ 0.27	36	− 0.36	+ 0.12	66	+ 0.02	+ 0.22
7	− 0.02	+ 0.26	37	− 0.36	+ 0.15	67	+ 0.09	+ 0.22
8	0.00	+ 0.26	38	− 0.36	+ 0.14	68	+ 0.15	+ 0.22
9	+ 0.04	+ 0.27	39	− 0.29	+ 0.08	69	+ 0.14	+ 0.23
10	+ 0.07	+ 0.29	40	− 0.22	+ 0.02	70	+ 0.08	+ 0.24
11	+ 0.08	+ 0.29	41	− 0.17	− 0.07	71	− 0.03	+ 0.25
12	+ 0.10	+ 0.29	42	− 0.12	− 0.12	72	− 0.12	+ 0.27
13	+ 0.13	+ 0.36	43	− 0.06	− 0.13	73	− 0.12	+ 0.28
14	+ 0.20	+ 0.44	44	− 0.02	− 0.07	74	− 0.05	+ 0.31
15	+ 0.28	+ 0.52	45	+ 0.02	− 0.01	75	+ 0.04	+ 0.35
16	+ 0.27	+ 0.56	46	0.00	0.00	76	+ 0.04	+ 0.40
17	+ 0.24	+ 0.57	47	− 0.02	0.00	77	+ 0.02	+ 0.45
18	+ 0.23	+ 0.57	48	− 0.04	0.00	78	0.00	+ 0.46
19	+ 0.20	+ 0.52	49	− 0.04	+ 0.06	79	+ 0.01	+ 0.45
20	+ 0.18	+ 0.48	50	− 0.04	+ 0.12	80	+ 0.12	+ 0.44
21	+ 0.17	+ 0.49	51	− 0.08	+ 0.12	81	+ 0.16	+ 0.41
22	+ 0.16	+ 0.52	52	− 0.22	+ 0.12	82	+ 0.17	+ 0.38
23	+ 0.10	+ 0.53	53	− 0.20	+ 0.13	83	+ 0.18	+ 0.36
24	− 0.02	+ 0.50	54	− 0.16	+ 0.14	84	+ 0.19	+ 0.36
25	− 0.14	+ 0.46	55	− 0.12	+ 0.15	85	+ 0.20	+ 0.36
26	− 0.18	+ 0.44	56	− 0.12	+ 0.16	86	+ 0.23	+ 0.40
27	− 0.22	+ 0.42	57	− 0.12	+ 0.17	87	+ 0.25	+ 0.44
28	− 0.24	+ 0.40	58	− 0.12	+ 0.19	88	+ 0.25	+ 0.44
29	− 0.20	+ 0.34	59	− 0.12	+ 0.20	89	+ 0.19	+ 0.37
						90	+ 0.12	+ 0.30

This table was formed from observations taken with the micrometer microscopes in their normal positions; that is, at the extremities of two diameters which intersect each other at right angles, and each of which makes an angle of 45° with the vertical. If, from any cause, they are ever differently arranged, the table as here given will no longer be applicable.

Let

R_0 = reading shown, when the telescope is pointed to the zenith, by the horizontal microscope belonging to the circle with which an object was observed.

Δ = observed north polar distance of that object. For objects below the pole, $360^\circ - \Delta$ must be substituted instead of Δ. For objects observed by reflection, the numerical value of Δ is the same as if they had been observed directly.

Then Table XIII furnishes for all possible cases, 1st, the argument with which to enter Table XII in order to find the correction which must be applied to the observed north polar distance to free it from the effect of errors of division; and, 2d, the sign of that correction; the words "same" and "changed" indicating respectively that it is the same as, or the opposite to, that given in Table XII. m is a whole number so taken as to bring the argument into the first quadrant.

TABLE XIII.

Clamp.	Circle.	Observation.	Argument.	Sign of Correction.
West.	A.	Direct.	$R_0 + 51^\circ.1 - \Delta - m \times 90^\circ$	Changed.
		Reflection.	$R_0 + 38.9 + \Delta - m \times 90$	Same.
	B.	Direct.	$R_0 + 38.9 + \Delta - m \times 90$	Same.
		Reflection.	$R_0 + 51.1 - \Delta - m \times 90$	Changed.
East.	A.	Direct.	$R_0 + 38.9 + \Delta - m \times 90$	Same.
		Reflection.	$R_0 + 51.1 - \Delta - m \times 90$	Changed.
	B.	Direct.	$R_0 + 51.1 - \Delta - m \times 90$	Changed.
		Reflection.	$R_0 + 38.9 + \Delta - m \times 90$	Same.

The correction to an observed circle reading for flexure of circle is,[1] for circle A

$$+ 0''.37 \sin R - 0''.01 \cos R$$

and for circle B

$$+ 0''.84 \sin R - 0''.86 \cos R$$

where R is the reading given, when the telescope is pointed to the object, by the horizontal microscope belonging to the circle for which the flexure is required. When R_0 is known R can readily be found for any object whose polar distance is given, if the following facts are borne in mind: When the transit circle has the clamp end of its axis to the west, turning the telescope from the zenith toward the southern horizon diminishes the reading of circle A, and increases the reading of circle B. When the clamp end of the axis is to the east, turning the telescope from the zenith toward the southern horizon increases the reading of circle A, and diminishes the reading of circle B.

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[1] Washington Observations for 1865. Description of the Transit Circle, § 61.

However, it will generally be more convenient to have the formula so arranged as to give the correction which must be applied to an observed north polar distance in order to free it from the effect of circle flexure, and to have this correction itself expressed as a function of the north polar distance. For that purpose the correction to circle A may be written

$$+0''.37 \sin (R - 1^\circ\ 33')$$

and that to circle B

$$+1''.20 \sin (R - 45^\circ\ 40')$$

Substituting for R its value, and making the changes of sign indicated in Table XIII, we obtain the desired expressions, which are given for all possible cases in the following table:

TABLE XIV.—*Formulæ for computing the Correction which must be applied to an Observed North Polar Distance in order to free it from the effect of Flexure of Circle.*

Clamp.	Circle.	Observation.	Formula.
			$''$ $\circ$
West.	A.	Direct.	$-0.37 \sin (R_0 + 49.6 - \Delta)$
		Reflection.	$+0.37 \sin (R_0 + 127.4 + \Delta)$
	B.	Direct.	$+1.20 \sin (R_0 + 263.2 + \Delta)$
		Reflection.	$-1.20 \sin (R_0 + 185.4 - \Delta)$
East.	A.	Direct.	$+0.37 \sin (R_0 + 307.4 + \Delta)$
		Reflection.	$-0.37 \sin (R_0 + 229.6 - \Delta)$
	B.	Direct.	$-1.20 \sin (R_0 + 5.4 - \Delta)$
		Reflection.	$+1.20 \sin (R_0 + 83.2 + \Delta)$

In the latter part of 1872 and the beginning of 1873 a series of observations were made to determine the constant for sine-flexure of the telescope. The process employed was as follows: The caps which close the openings through the central cube of the telescope having been removed, so that the collimators might be visible from each other, the telescope was clamped at a zenith distance of 90° south, and the close pair of wires of its zenith-distance micrometer were set at 35 revolutions. Then the south collimator, to which the telescope was thus directed, was adjusted in altitude till its horizontal wire bisected the space between the close pair of wires of the zenith-distance micrometer. Things being thus arranged, three careful pointings were made with the micrometer upon the horizontal wire of the collimator, and while this was being done two assistants read the micrometer microscopes of circle B. The telescope was then unclamped and pointed to the zenith, and the two collimators being thus rendered intervisible, the micrometer of the north one was turned until the intersection of its cross-wires accurately covered the horizontal wire of the south one. To make this possible the north collimator was previously rotated 90° in its Ys, thus placing its micrometer screw vertically. Then the telescope was pointed to the north collimator, and a set of readings was taken as described above. After that the telescope was again pointed to the zenith; the adjustment of the south collimator was deranged, and it was adjusted afresh upon the north one, and another set of readings was taken with the telescope micrometer; and so on until a sufficient number of sets of readings were obtained, always taking special care before observing a collimator to derange it and to adjust it afresh upon the one which was last observed.

The observations made in the manner just described are contained in Table XV. Throughout the whole series the collimators were pointed upon each other, and the zenith-distance micrometer of the telescope was read by Professor Harkness. The microscopes of circle B were read by Professor Eastman and Mr. Frisby.

TABLE XV.—*Observations to Determine the Constant for Sine-Flexure of the Telescope of the Transit Circle.*

Collimator.	Circle A.	Circle B.	Telescope Micrometer.	Micrometer Equivalent.	Observed Z. D. South.	Δ
October 24, 1872.						
	° ′	″	r.	′ ″	° ′ ″	″
S.	269 56	27.42	36.393	3 4.57	89 59 1.99	+ 0.56
N.	89 56	10.60	35.572	2 51.95	269 59 2.55	
S.	269 56	5.10	35.918	2 57.26	89 59 2.36	− 0.25
N.	89 56	5.42	35.880	2 56.69	269 59 2.11	
S.	269 56	27.68	36.397	3 4.63	89 59 2.31	+ 0.06
N.	89 56	20.58	36.862	3 11.79	269 59 2.37	
S.	269 56	5.90	35.800	2 55.46	89 59 1.36	+ 0.48
N.	89 56	2.55	36.050	2 59.29	269 59 1.84	
S.	269 56	8.45	35.660	2 53.31	89 59 1.76	− 0.62
N.	89 56	6.88	35.722	2 54.26	269 59 1.14	
S.	269 56	7.15	35.720	2 54.23	89 59 1.38	− 0.23
N.	89 56	5.15	35.835	2 56.00	269 59 1.15	
S.	269 56	10.50	35.488	2 50.66	89 59 1.16	− 0.37
N.	89 56	10.02	35.495	2 50.77	269 59 0.79	
S.	269 56	9.88	35.525	2 51.23	89 59 1.11	− 0.56
N.	89 56	8.60	35.572	2 51.95	269 59 0.55	
S.	269 56	8.80	35.565	2 51.84	89 59 0.64	+ 0.40
N.	89 56	8.58	35.605	2 52.46	269 59 1.04	
S.	269 56	8.00	35.652	2 53.18	89 59 1.18	− 1.06
N.	89 56	6.12	35.705	2 54.00	269 59 0.12	
November 27, 1872.						
N.	89 56	3.32	34.903	2 41.68	269 58 45.00	− 1.16
S.	269 56	3.85	34.945	2 42.31	89 58 46.16	
N.	89 56	3.40	34.937	2 42.18	269 58 45.58	− 0.38
S.	269 56	4.30	34.902	2 41.66	89 58 45.96	
N.	89 56	2.25	35.002	2 43.18	269 58 45.43	+ 0.37
S.	269 56	3.38	34.903	2 41.68	89 58 45.06	
N.	89 56	2.78	34.915	2 41.86	269 58 44.64	− 0.37
S.	269 56	4.10	34.853	2 40.91	89 58 45.01	
N.	89 56	2.65	34.912	2 41.81	269 58 44.46	− 0.10
S.	269 56	2.58	34.923	2 41.98	89 58 44.56	
N.	89 56	2.65	34.858	2 40.98	269 58 43.63	− 0.41
S.	269 56	3.90	34.803	2 40.14	89 58 44.04	
N.	89 56	1.38	34.910	2 41.79	269 58 43.17	− 0.73
S.	269 56	2.58	34.880	2 41.32	89 58 43.90	
N.	89 56	1.12	34.910	2 41.79	269 58 42.91	+ 0.02
S.	269 56	2.98	34.788	2 39.91	89 58 42.89	
N.	89 56	3.08	34.828	2 40.52	269 58 43.60	+ 0.95
S.	269 56	2.82	34.783	2 39.83	89 58 42.65	
N.	89 56	3.35	34.793	2 39.98	269 58 43.33	+ 0.72
S.	269 56	3.32	34.748	2 39.29	89 58 42.61	

TABLE XV.—*Observations to Determine the Constant for Sine-Flexure, &c.*—Continued.

Collimator.	Circle A.	Circle B.	Telescope Micrometer.	Micrometer Equivalent.	Observed Z. D. South.	Δ
	May 7, 1873.					
	° ′	″	r.	′ ″	° ′ ″	″
N.	269 56	0.35	34.951	3 17.31	269 59 16.96	+ 1.37
S.	89 56	29.75	35.080	3 15.34	89 59 15.59	
N.	269 56	27.05	35.147	3 14.31	269 59 17.26	− 0.11
S.	89 56	4.95	34.624	3 22.32	89 59 17.37	
N.	269 56	4.52	34.580	3 23.00	269 59 18.48	+ 1.37
S.	89 56	2.35	34.811	3 19.46	89 59 17.11	
N.	269 56	29.05	34.971	3 17.00	269 59 17.95	+ 0.59
S.	89 56	0.95	34.886	3 18.31	89 59 17.36	
N.	269 56	28.72	34.980	3 16.87	269 59 18.15	+ 0.30
S.	89 56	29.58	34.943	3 17.43	89 59 17.85	
	May 19, 1873.					
S.	89 56	2.32	34.410	3 25.60	89 59 23.28	+ 0.79
N.	269 56	2.68	34.335	3 26.75	269 59 24.07	
S.	89 56	2.98	34.287	3 27.47	89 59 24.49	+ 1.65
N.	269 56	2.78	34.193	3 28.92	269 59 26.14	
S.	89 56	0.48	34.410	3 25.60	89 59 25.12	+ 0.03
N.	269 56	2.05	34.305	3 27.20	269 59 25.15	
S.	89 56	1.80	34.378	3 26.09	89 59 24.29	+ 1.15
N.	269 56	0.70	34.375	3 26.14	269 59 25.44	
S.	89 56	2.02	34.315	3 27.05	89 59 25.03	+ 0.09
N.	269 56	2.72	34.263	3 27.84	269 59 25.12	
S.	89 56	1.82	34.328	3 26.86	89 59 25.04	+ 0.42
N.	269 56	3.00	34.223	3 28.46	269 59 25.46	

In the first column of Table XV the letters N and S indicate the collimator to which the telescope was directed; N indicating the north one, S the south one. The column "*Circle A*" contains the reading of the horizontal microscope of circle A. The column "*Circle B*" contains the mean of the readings of the four micrometer microscopes of circle B. The column "*Telescope Micrometer*" contains the mean of the three readings of the telescope micrometer upon the horizontal wire of the collimator. The column "*Micrometer Equivalent*" contains the micrometer equivalent corresponding to the reading of the telescope micrometer given in the preceding column. The column "*Observed Z. D. South*" contains the observed zenith distance south of the horizontal wire of the collimator, to which the telescope was pointed. For the observations made in 1872 it is equal to 359° 52′, minus the reading of the horizontal microscope of circle A, plus the excess of the mean of the readings of the micrometer microscopes of circle B above ten revolutions, plus the micrometer equivalent; and for the observations made in 1873 it is equal to the reading of the horizontal microscope of circle A, minus the excess of the mean of the readings of the micrometer microscopes of circle B above ten revolutions, plus the micrometer equivalent. The numbers in the column "Δ" are explained below.

Let

Z = observed zenith distance of any object counted from the zenith around by the south.

F_t = correction necessary to free Z from the effects of sine flexure of the telescope.

F_c = correction for flexure of circle B at 141°.1 of north polar distance.

Δ = observed zenith distance south of the horizontal wire of the north collimator, minus observed zenith distance south of the horizontal wire of the south collimator, minus 180°; as given in Table XV.

Then

$$F_t = \sin Z\,(\tfrac{1}{2}\Delta - F_c)$$

During 1872 the position of the transit circle was clamp west, and when the telescope pointed to the zenith the horizontal microscope of circle B read 0°. With these arguments Table XIV gives

$$F_c = +\,1''.20 \sin 44^\circ.3 = +\,0''.839$$

During 1873 the clamp was east, and when the telescope pointed to the zenith the horizontal microscope of circle B read 42°.8. With these arguments Table XIV gives

$$F_c = -\,1''.20 \sin 267^\circ.1 = +\,1''.199$$

Taking the mean of the values of Δ in each of the series of observations given in Table XV, and collecting our results, we have

TABLE XVI.

Date.	$\frac{1}{2}\Delta$	F_c	$\frac{1}{2}\Delta - F_c$
1872.	″ ″	″	″
Oct. 24	− 0.080 ± 0.06	+ 0.839	− 0.919
Nov. 27	− 0.055 ± 0.07	0.839	0.894
May 7	+ 0.352 ± 0.10	1.199	0.934
19	+ 0.344 ± 0.09	+ 1.199	− 0.855

With regard to the observations of May 7, it should be remarked that the point of the wires of the north collimator actually observed upon appeared in the field of view of the transit circle telescope midway between wires III and IV; while the point of the wires of the south collimator actually observed upon appeared midway between wires IV and V. Consequently the value of $\frac{1}{2}\Delta$ given in Table XVI requires a correction of $-\,0''.087$ on account of inclination of wires. This correction has been applied in computing the value of $\frac{1}{2}\Delta - F_c$. The quantities after the sign ±, in the column "$\frac{1}{2}\Delta$," are probable errors. Giving each value of $\frac{1}{2}\Delta - F_c$ a weight inversely proportional to the square of the probable error of $\frac{1}{2}\Delta$, and then taking the mean, we obtain finally

$$\tfrac{1}{2}\Delta - F_c = -\,0''.90 \pm 0''.010$$

and

$$F_t = -\,0''.90 \sin Z$$

The most accurate method of investigating the cosine flexure of the telescope is that of comparing the zenith distances found for the same stars with the instrument in opposite positions. Such a comparison of the results for 1866 and 1867, indicated that the telescope tube itself, or, more precisely, the line joining the center of the object-glass and the fixed horizontal wires, is sensibly free from cosine flexure. This result is probably very nearly correct; and further, its error, if any exist, will be eliminated from the mean of two consecutive years' work with the instrument.

On May 10, 1873, a series of observations were made to determine the correction which must be applied to an observed zenith distance south in order to free it from the effect of gravity in changing the position of the declination micrometer-slide relatively to the fixed plates of the eye-piece. The process employed was as follows: The telescope was set at 0° zenith distance; the zenith-distance micrometer was moved till the space between its close pair of wires was bisected by one of the fixed horizontal wires; and the micrometer was read. Then the telescope was set at 10° zenith distance, and the micrometer was again read in the manner just described; and so on at every ten degrees, throughout the circle. The observations, together with their reduction, are given in Table XVII.

TABLE XVII.

Z. D. South.	Micrometer Read. I.	Z. D. South.	Micrometer Read. II.	II−I=σ	Sin Z. D. S.	Cos Z. D. S.	σ Sin Z. D. South.	σ Cos Z. D. South.
°	r.	°	r.	r.			r.	r.
0	39.745	180	39.775	+ 0.030	0.000	+ 1.000	0.000	+ 0.030
10	.735	190	.775	.040	+ 0.174	0.985	+ 0.007	.039
20	.740	200	.780	.040	.342	.940	.014	.038
30	.730	210	.785	.055	.500	.866	.028	.048
40	.730	220	.780	.050	.643	.766	.032	.038
50	.725	230	.785	.060	.766	.643	.046	.039
60	.730	240	.780	.050	.866	.500	.043	.025
70	.730	250	.780	.050	.940	.342	.047	.017
80	.730	260	.780	.050	0.985	+ 0.174	.049	+ 0.009
90	.740	270	.780	.040	1.000	0.000	.040	0.000
100	.740	280	.780	.040	0.985	− 0.174	.039	− 0.007
110	.740	290	.775	.035	.940	.342	.033	.012
120	.750	300	.770	+ 0.020	.866	.500	+ 0.017	− 0.010
130	.760	310	.760	0.000	.766	.643	0.000	0.000
140	.765	320	.755	− 0.010	.643	.766	− 0.006	+ 0.008
150	.765	330	.745	.020	.500	.866	.010	.017
160	.765	340	.735	.030	.342	.940	.010	.028
170	39.770	350	39.740	− 0.030	+ 0.174	− 0.985	− 0.005	+ 0.030
							+ 0.395	+ 0.366
							− 0.031	− 0.029
						Sums	+ 0.364	+ 0.337

The different columns of this table are sufficiently explained by their headings.

Let

Z = observed zenith distance of any object counted from the zenith around by the south;

F_m = correction, in seconds of arc, necessary to free Z from the effect of gravity in changing the position of the declination-micrometer slide relatively to the fixed plates of the eye-piece;

n = number of equidistant zenith distances at which the micrometer was read, in this case 36;

$r_0 = 15''.3$, which is the mean value of one revolution of the micrometer screw.

Then

$$F_m = -\sin Z\, r_0 \frac{\Sigma(\sigma \sin Z)}{\frac{1}{2} n} \pm \cos Z\, r_0 \frac{\Sigma(\sigma \cos Z)}{\frac{1}{2} n}$$

Substituting for the letters their values from Table XVII, we obtain

$$F_m = -0''.31 \sin Z \pm 0''.29 \cos Z$$

where the upper sign of the cosine term is to be taken when the clamp is west, and the lower sign when the clamp is east. The probable error of this expression is

$$\pm 0''.007$$

As there is no sensible cosine flexure of the telescope tube, the total correction which must be applied to an observed zenith distance south, or to an observed north polar distance, in order to free it from the effect of gravity on the telescope tube and micrometer, is $F_t + F_m$. But, from the manner in which these quantities were determined, the sine term in the expression for F_m is already included in the expression for F_t.

Hence,

$$F_t + F_m = -0''.90 \sin Z \pm 0''.29 \cos Z$$

where the upper sign of the cosine term is to be taken when the head of the zenith-distance micrometer is below the screw when the telescope looks south—that is, when the clamp is west; and the lower sign is to be taken when the micrometer head is above the screw when the telescope looks south—that is, when the clamp is east. The probable error of this expression is

$$\pm 0''.012$$

When an object is observed by reflection, the surface of the mercury is usually about eight feet from the axis of the instrument. Hence, owing to the convexity of a level surface, the zenith distance obtained is too small by $0''.16 \sin Z$. Allowing for this in the expression given above, the correction for flexure of telescope and curvature of level to be applied to a north polar distance found from a reflection observation is

$$+1''.06 \sin Z \pm 0''.29 \cos Z$$

where Z is measured from the reflected zenith point.

These expressions may be written thus:

For a direct observation, clamp west - - $-0''.95 \sin (Z - 17^\circ\ 50')$
For a reflection observation, clamp west - $+1''.10 \sin (Z + 15^\circ\ 20')$
For a direct observation, clamp east - - $-0''.95 \sin (Z + 17^\circ\ 50')$
For a reflection observation, clamp east - $+1''.10 \sin (Z - 15^\circ\ 20')$

Substituting for Z its value, $\Delta - 51^\circ.1$, we obtain formulæ very convenient for use, which are given in the following table:

TABLE XVIII.—*Formulæ for computing the Correction which must be applied to an Observed North Polar Distance in order to free it from the effect of Flexure of Telescope and Curvature of Level.*

Clamp.	Observation.	Formula.
West	Direct	$-\ 0''.95 \sin (\Delta - 68^\circ.9)$
	Reflection	$+\ 1''.10 \sin (\Delta - 35^\circ.8)$
East	Direct	$-\ 0''.95 \sin (\Delta - 33^\circ.3)$
	Reflection	$+\ 1''.10 \sin (\Delta - 66^\circ.4)$

The correction for constant error in the zenith point is obtained from a comparison of the direct and reflection observations, assuming that the true polar distance of any star is the mean of the values resulting from these two methods of observation.

If D and R represent the north polar distance of any star as found respectively from direct and reflection observations, corrected for errors of graduation and flexure; and if ΔZ represents the zenith-point correction, then

$$2\,\Delta Z = D - R$$

Thus, each star which has been observed, both directly and by reflection, furnishes one equation of condition for determining the value of ΔZ, and from all the equations thus formed the final value of ΔZ is obtained. But before this can be done, weights must be introduced, because, in general, the number of observations will vary from star to star. Giving to a single observation the weight unity, it has been assumed that for n observations

$$\text{Weight} = \frac{12\,n}{n + 11}$$

which amounts to supposing that each star is affected with a probable constant error nearly one-third as great as the accidental error of an individual observation. But if p' and p'' are respectively the weights of two quantities, the weight of the sum or difference of these quantities is

$$\frac{p'\,p''}{p' + p''}$$

Hence, if there are m direct and n reflection observations of any star, and p is the weight to be given to the zenith-point correction derived from it, then

$$p = \frac{12mn}{2mn + 11\,(m + n)}$$

Our equations of condition therefore take the form

$$2p\,\Delta Z = p\,(D - R)$$

and we have finally

$$\Delta Z = \frac{\Sigma\{\,p\,(D - R)\}}{2\Sigma p}$$

where Σ is the sign of summation. The correction to the observed north polar distances on account of error in the assumed zenith point is therefore

To direct observations, $-\Delta Z$
To reflection observations, $+\Delta Z$

The correction for error of assumed latitude is derived from stars observed both above and below the pole, upon the assumption that the polar distances obtained in these two positions must be identical. The process employed is similar to that used in finding the correction for constant error in the zenith point.

Let $\Delta\varphi$ represent the correction to the assumed latitude, and let U and L represent the north polar distance of any star as found respectively from observations made above and below the pole, corrected for errors of graduation, flexure, and assumed zenith point. Then that star furnishes the equation of condition

$$2\Delta\varphi = U + L - 360^\circ$$

where L is measured from the pole through the zenith and nadir to the star. If the star has been observed m times above and n times below the pole, the weight p of this equation is

$$\frac{12mn}{2mn + 11\,(m + n)}$$

and the weighted equation is

$$2p\,\Delta\varphi = p\,(U + L - 360^\circ)$$

As each star observed both above and below the pole furnishes an equation of condition of this form, we have finally

$$\Delta\varphi = \frac{\Sigma\{\,p\,(U + L - 360^\circ)\}}{2\Sigma p}$$

where Σ is the sign of summation. Hence, if φ is the assumed latitude, the true latitude is $\varphi + \Delta\varphi$; and the correction to the observed north polar distances on account of error in the assumed latitude is $-\Delta\varphi$, the sign being the same for reflection observations as for direct ones.

As observations were made only during the last five months of 1871, the instrument was not reversed at the beginning of 1872, but was allowed to remain in the same position from July, 1871, till January 1, 1873. Therefore only one set of systematic corrections has been determined for the whole of that period.

During the years 1871 and 1872 the transit circle stood with the clamp end of its axis toward the west, and polar distances were measured by means of circle B, whose horizontal microscope read $0^\circ\ 0'\ 0''$ when the telescope pointed to the zenith. With these data the systematic corrections to the observed north polar distances were obtained as follows:

Table XIII gives $38^\circ.9+\Delta-m\times 90^\circ$ for direct, and $51^\circ.1-\Delta-m\times 90^\circ$ for reflection observations, as the arguments with which to enter Table XII in order to find the corrections for errors in the graduation of the circle. The results for each degree of north polar distance are given in the column "*Division Correction*" of Table XXII.

Table XIV gives $+1''.20 \sin(263^\circ.2+\Delta)$ for direct, and $-1''.20 \sin(185^\circ.4-\Delta)$ for reflection observations, as the formulæ for computing the corrections for flexure of circle B. Table XVIII gives $-0''.95 \sin(\Delta-68^\circ.9)$ for direct, and $+1''.10 \sin(\Delta-35^\circ.8)$ for reflection observations, as the formulæ for computing the corrections for flexure of telescope and curvature of level. After a simple reduction the sums of these formulæ become, for direct observations, $-0''.57 \sin(\Delta+32^\circ.0)$, and for reflection ones, $-0''.61 \sin(\Delta+60^\circ.5)$, by means of which expressions the quantities contained in the column "*Flexure*" of Table XXII were computed.

The computation of the correction for constant error in the zenith point is given in Table XIX. The first column contains the names of all stars observed, both directly and by reflection, during the years 1871 and 1872. These stars are divided into two groups, one embracing those which culminated north, the other those which culminated south of the zenith. The second column contains the mean values of the north polar distances given by direct observations; and the third column, the seconds of the mean values of the north polar distances given by reflection observations. The small subscript figures indicate the number of observations made on each star. The fourth column contains the excess of the seconds in the second column over those in the third column. The fifth column contains the corrections which must be applied to the numbers in the fourth column to free them from the effects of errors of graduation, flexure of telescope and circle, and erroneous value of zenith point.[1] Each of these corrections is the sum of the following quantities taken from Table XXII, namely:

Division and Flexure Corrections for Direct Observations — Division and Flexure Corrections for Reflection Observation $+0''.58$

The sixth column contains the sums of the quantities in the fourth and fifth columns; or, in other words, the values of twice the correction for constant error in the zenith point. The seventh column contains the weights of the values of $2\varDelta Z$ given in the sixth column. The eighth column contains the values of $2p\varDelta Z$. The final results are

---

[1] It has been already explained that the zenith-point corrections used during 1871 and 1872 were all too small by $0''.29$.

From observations north of the zenith - - - - - $\varDelta Z = +1''.31$
From observations south of the zenith - - - - - $\varDelta Z = -0''.14$

Thus it appears that somewhere near the zenith this correction changes its value to the enormous amount of $1''.45$, which cannot but be regarded as a very suspicious circumstance.

TABLE XIX.—*Computation of the Value of $\varDelta Z$ from the Observations made in the Years* 1871 *and* 1872.

Name of Star.	Observed North Polar Distance.				$D-R$	Corr. to $D-R$	$2\,\Delta Z$	Weight $=p$	$2\,p\,\Delta Z$
	Direct.			Reflection.					
NORTHERN STARS.	°	′	″	″	″	″	″		″
ε Ursæ Minoris. .	7	45	16.38_6	16.26_1	+ 0.12	+ 0.66	+ 0.78	0.80	+ 0.62
4 Draconis . . .	11	40	0.84_3	59.81_1	1.03	0.93	1.96	0.72	1.41
79 Draconis . . .	16	54	28.76_5	27.54_2	1.22	1.04	2.26	1.25	2.82
β Cephei	20	0	19.60_5	17.75_3	1.85	1.17	3.02	1.52	4.59
ι Cassiopeæ . . .	23	10	46.94_4	44.72_1	2.22	1.40	3.62	0.76	2.75
9 Camelopardalis .	23	52	51.30_1	50.10_1	1.20	1.41	2.61	0.50	1.30
ι Cephei	24	28	40.39_4	38.39_1	2.00	1.40	3.40	0.76	2.58
α Cephei	27	57	40.25_8	39.90_2	0.35	1.44	1.79	1.35	2.42
α Cassiopeæ . . .	34	10	15.65_1	12.15_1	3.50	1.20	4.70	0.50	2.35
α Cygni	45	10	46.90_{14}	45.09_2	+ 1.81	+ 1.24	+ 3.05	1.45	+ 4.42
SOUTHERN STARS.									
α Andromedæ . .	61	37	18.52_{19}	22.08_2	− 3.56	+ 1.26	− 2.30	1.48	− 3.40
ε Bootis	62	22	50.96_{21}	50.81_1	+ 0.15	1.26	+ 1.41	0.88	+ 1.24
α Arietis	67	8	55.52_{29}	57.14_1	− 1.62	1.37	− 0.25	0.90	− 0.22
β Arietis	69	49	24.79_{21}	26.04_3	1.25	1.20	0.05	1.94	0.10
α Pegasi	75	29	18.19_{28}	20.56_1	− 2.37	1.18	− 1.19	0.90	− 1.07
γ Pegasi	75	32	1.51_{17}	1.03_1	+ 0.48	1.18	+ 1.66	0.88	+ 1.46
ε Delphini . . .	79	8	0.57_{14}	2.56_3	− 1.99	1.13	− 0.86	1.86	− 1.60
γ Aquilæ	79	41	57.49_{30}	57.65_1	0.16	1.08	+ 0.92	0.90	+ 0.83
ε Pegasi	80	42	54.93_{20}	56.40_2	1.47	0.96	− 0.51	1.49	− 0.76
α Orionis. . . .	82	37	10.14_{18}	10.72_1	0.58	0.86	+ 0.28	0.88	+ 0.25
α Canis Minoris. .	84	26	47.37_{31}	48.35_1	0.98	0.76	− 0.22	0.90	− 0.20
ζ Virginis . . .	89	56	7.78_{19}	8.87_1	1.09	0.62	0.47	0.88	0.41
α Aquarii. . . .	90	56	44.43_9	45.67_2	− 1.24	0.55	− 0.69	1.37	− 0.95
β Orionis. . . .	98	21	9.98_{23}	9.72_1	+ 0.26	+ 0.23	+ 0.49	0.89	+ 0.44

The computation of the correction for error in the assumed value of the latitude is given in Table XX, whose construction is so analogous to that of Table XIX, that it does not require description. The letters and symbols at the heads of the columns have the same signification as in the preceding general formula. The final result is

$$\text{Correction to Assumed Latitude} = -\ 1''.00$$

It is absolutely certain that the assumed latitude is not in error to any such extent. In order to discover where the difficulty lies, we employ the formula given on page LXXVIII, by means of which we find

$$\begin{aligned}\text{Latitude from Direct Observations} &= +\ 38^\circ\ 53'\ 39''.11\\ \text{Latitude from Reflection Observations} &= +\ 38^\circ\ 53'\ 36''.49\end{aligned}$$

This, taken in connection with the values found above for $\varDelta Z$, renders it almost certain that there is something abnormal in the reflection observations. As a final test, Table XXI has been prepared.

TABLE XX.—*Computation of the Value of $\varDelta\varphi$ from the Observations made in the Years 1871 and 1872.*

Name of Star.	Observed North Polar Distance.				$U+L$ -360°	Corr. to $U+L$ -360°	$2\,\Delta\phi$	Weight $= p$	$2p\,\Delta\phi$
	Upper Culmination.			L. C.					
	°	′	″	″	″	″	″		″
λ Ursæ Minoris .	1	4	46.25	14.27_{20}	+ 0.52	− 2.48	− 1.96	3.90	− 7.64
Polaris . . .	1	22	41.70_{58}	17.87_{68}	− 0.43	2.50	2.93	5.11	14.97
51 Cephei . . .	2	45	41.16_{12}	19.58_{17}	+ 0.74	2.61	1.87	3.36	6.28
δ Ursæ Minoris .	3	23	37.29_{26}	22.55_{19}	− 0.16	2.65	2.81	3.99	11.21
32^2 Camelopardalis .	5	53	9.94_{14}	51.72_{4}	+ 1.66	2.47	0.81	1.60	1.30
ε Ursæ Minoris .	7	45	16.38_{6}	43.04_{2}	− 0.58	2.41	2.99	1.29	3.86
1 Draconis . . .	8	6	25.70_{4}	34.25_{2}	− 0.05	2.40	2.45	1.17	2.87
12-Year Cat. 1879	9	55	58.92_{1}	59.28_{2}	− 1.80	2.23	4.03	0.65	2.62
4 Draconis . . .	11	40	0.84_{3}	59.44_{2}	+ 0.28	2.08	1.80	1.08	1.94
48 Cephei . . .	12	44	36.44_{6}	24.61_{3}	+ 1.05	2.08	1.03	1.60	1.65
79 Draconis . . .	16	55	28.76_{5}	30.51_{2}	− 0.73	1.94	− 2.67	1.25	− 3.34
50 Cassiopeæ . .	18	12	19.85_{3}	43.00_{2}	+ 2.85	1.95	+ 0.90	1.08	+ 0.97
δ Draconis . . .	22	33	55.33_{7}	5.33_{1}	+ 0.66	1.76	− 1.10	0.82	− 0.90
ο Cephei . . .	22	35	39.04_{1}	19.86_{2}	− 1.10	1.75	2.85	0.65	1.85
ι Cassiopeæ . .	23	10	46.94_{5}	12.91_{3}	− 0.15	1.76	1.91	1.52	2.90
5 Ursæ Minoris .	23	43	50.19_{3}	10.80_{5}	+ 0.99	1.80	− 0.81	1.52	− 1.23
9 Camelopardalis .	23	52	51.30_{1}	10.60_{1}	+ 1.90	1.81	+ 0.09	0.50	+ 0.04
32 Ursæ Majoris .	24	14	59.16_{4}	0.29_{1}	− 0.55	1.83	− 2.38	0.65	− 1.55
ι Cephei . . .	24	28	40.39_{4}	19.96_{2}	+ 0.35	1.86	1.51	1.17	1.77
α Draconis . . .	25	0	25.59_{6}	34.54_{1}	+ 0.13	1.91	1.78	0.80	1.42
Groombridge 3241	27	54	20.87_{3}	39.98_{2}	+ 0.85	− 2.06	− 1.21	1.08	− 1.31

TABLE XXI.—*Comparison of the Standard Places of certain Stars, with their Places obtained from Direct and from Reflection Observations made in the Years* 1871 *and* 1872.

Name of Star.	Standard Correction to Amer. Ephem.	Observed Correction to Amer. Ephemeris.		C − O.	
		Direct.	Reflection.	Direct.	Reflection.
NORTHERN STARS.	″	″	″	″	″
ε Ursæ Minoris . .	− 0.25	− 0.17	− 0.95	− 0.08	+ 0.70
4 Draconis	1.90	1.56	3.53	0.34	1.63
79 Draconis	0.96	0.17	2.43	0.79	1.47
β Cephei	0.93	0.88	3.91	− 0.05	2.98
ι Cassiopeæ . . .	− 0.74	− 0.98	4.61	+ 0.24	3.87
9 Camelopardalis . .	+ 0.44	+ 1.38	1.23	− 0.94	1.67
ι Cephei	− 0.50	0.07	3.34	0.57	+ 2.84
α Cephei	0.93	1.06	0.73	1.99	− 0.20
α Cassiopeæ . . .	− 0.08	1.25	3.46	− 1.33	+ 3.38
α Cygni	+ 0.48	+ 0.09	− 2.96	+ 0.39	+ 2.48
SOUTHERN STARS.					
α Andromedæ . . .	+ 1.26	+ 0.29	+ 2.59	+ 0.97	− 1.33
ε Bootis	1.35	0.85	− 0.56	0.50	+ 1.91
α Arietis	0,86	0.56	+ 0.81	0.30	0.05
β Arietis	1.91	0.52	0.57	1.39	+ 1.34
α Pegasi	1.81	1.15	+ 2.34	0.66	− 0.53
γ Pegasi	1.46	0.80	− 0.84	0.66	+ 2.30
ε Delphini	1.23	0.05	+ 0.92	1.18	0.31
γ Aquilæ	1.68	0.35	− 0.56	1.33	2.24
ε Pegasi	1.58	0.38	− 1.01	1.20	2.59
α Orionis	1.61	+ 0.61	+ 0.33	1.00	1.28
α Canis Minoris . .	1.09	− 0.34	− 0.12	1.43	1.21
ζ Virginis	1.59	+ 0.70	+ 1.18	0.89	+ 0.41
α Aquarii	1.17	0.65	+ 1.33	0.52	− 0.16
β Orionis	+ 1.13	+ 0.10	− 0.21	+ 1.03	+ 1.34

The first column of this table contains the names of certain Nautical Almanac stars, which are the same as those contained in the corresponding column of Table XIX. The second column contains the corrections which must be applied to the places given for these stars by the American Ephemeris in order to reduce them to the standard places given in Professor Newcomb's catalogue on pages 41 to 43 of Appendix III, to the Washington observations for 1867. The third and fourth columns contain the corrections to the places given in the American Ephemeris, deduced respectively from the direct, and from the reflection observations, made during the years 1871 and 1872. The latitude used in obtaining these corrections is that given by the direct observations, namely $+ 38^\circ\ 53'\ 39''.11$. The fifth and sixth columns contain, for direct and for reflection observations, the values of the computed minus the observed corrections; the standard corrections being regarded as the computed ones. Taking the means of the values of C — O, we have

For northern stars observed directly - - - $C - O = -0''.55$
For northern stars observed by reflection - - $C - O = +2\;.08$
For southern stars observed directly - - - $C - O = +0\;.93$
For southern stars observed by reflection - - $C - O = +0\;.93$

It thus appears that south of the zenith the direct and reflection observations give identical results, while north of the zenith they give results discordant to the amount of $2''.63$. The only possible inference is that the reflection observations north of the zenith were subject to a large constant error. To discover how that error originated would be most desirable, but thus far it has baffled all our efforts. The suggestion has been thrown out that the radiant heat from the persons of the observers may have produced some flexure of the telescope tube, but it is scarcely possible that this source of error could have been sensible. The reflection observations were made with even greater care than the direct ones, and there was no difference in the mode of working on the two sides of the zenith. Under these circumstances it has been thought best to reject all the reflection observations made during the two years in question.

Collecting our results; if the reflection observations had been retained, the total systematic correction to be applied to a north polar distance observed during the years 1871 and 1872 would have been

For objects north of the zenith:

Observed directly - - Div. Cor. $-\,0''.57 \sin(\Delta + 32.^\circ0) + 0''.29 - 1''.31 + 1''.00$
Observed by reflection Div. Cor. $-\,0''.61 \sin(\Delta + 60^\circ.5) - 0''.29 + 1''.31 + 1''.00$

For objects south of the zenith:

Observed directly - - Div. Cor. $-\,0''.57 \sin(\Delta + 32^\circ.0) + 0''.29 + 0''.14 + 1''.00$
Observed by reflection Div. Cor. $-\,0''.61 \sin(\Delta + 60^\circ.5) - 0''.29 - 0''.14 + 1''.00$

Rejecting the reflection observations, ΔZ disappears, $\Delta\varphi$ becomes $+\,0''.31$ instead of $-\,1''.00$. Making these changes in the formula just given, we obtain as the final value of the total systematic correction to be applied to any north polar distance observed directly during the years 1871 and 1872

$$\text{Division Correction} - 0''.57 \sin(\Delta + 32^\circ.0) + 0''.29 - 0''.31$$

The numerical values of this expression are given in Table XXII to the argument north polar distance. As the total corrections are made up of three very different classes of quantities, it has been thought best to tabulate the individual components as well as their sums. Accordingly, the column "*Division Correction*" contains the corrections for errors in the division of circle B. The column "*Flexure*" contains the sums of the corrections for flexure of circle B, flexure of telescope, effect of gravity on the movable parts of the zenith-distance micrometer, and, in the case of reflection observations, curvature of a level surface. The column "*Latitude, Zenith Point, &c.,*" contains the sums of the corrections for error in the assumed value of the latitude, and erroneous constant used in computing the zenith-point corrections from the nadir observations. Finally, the column "*Total*" contains the sums of the quantities in the three preceding columns, and these sums are the corrections to the observed north polar distances given on the lines "*Div., Flex., etc.,*" on pages 119 to 135. Table XXII also gives the division and flexure corrections for those stars which were observed by reflection, but no use has been made of them.

TABLE XXII.—*Systematic Corrections to be applied to the Reduced North Polar Distances of Objects observed in the Years* 1871–'72.

DIRECT OBSERVATIONS.

N. P. D.	Division Correction.	Flexure.	Latitude, Zenith Point, &c.	Total.	N. P. D.	Division Correction.	Flexure.	Latitude, Zenith Point, &c.	Total.
°	″	″	″	″	°	″	″	″	″
0	+ 0.09	− 0.30	− 0.02	− 0.23	40	+ 0.45	− 0.54	− 0.02	− 0.11
1	+ 0.03	.31	.02	.30	41	.44	.54	.02	.12
2	− 0.06	.32	.02	.40	42	.41	.55	.02	.16
3	.12	.33	.02	.47	43	.38	.55	.02	.19
4	.13	.34	.02	.49	44	.36	.55	.02	.21
5	− 0.08	− 0.34	− 0.02	− 0.44	45	+ 0.36	− 0.56	− 0.02	− 0.22
6	− 0.02	.35	.02	.39	46	.36	.56	.02	.22
7	.00	.36	.02	.38	47	.40	.56	.02	.18
8	.00	.37	.02	.39	48	.44	.56	.02	.14
9	.00	.37	.02	.39	49	.44	.56	.02	.14
10	+ 0.05	− 0.38	− 0.02	− 0.35	50	+ 0.38	− 0.56	− 0.02	− 0.20
11	.11	.39	.02	.30	51	.31	.57	.02	.28
12	.12	.40	.02	.30	52	.24	.57	.02	.35
13	.12	.40	.02	.30	53	.18	.57	.02	.41
14	.13	.41	.02	.30	54	.18	.57	.02	.41
15	+ 0.14	− 0.42	− 0.02	− 0.30	55	+ 0.22	− 0.57	− 0.02	− 0.37
16	.15	.42	.02	.29	56	.27	.57	.02	.32
17	.16	.43	.02	.29	57	.27	.57	.02	.32
18	.17	.44	.02	.29	58	.26	.57	.02	.33
19	.19	.44	.02	.27	59	.26	.57	.02	.33
20	+ 0.20	− 0.45	− 0.02	− 0.27	60	+ 0.27	− 0.57	− 0.02	− 0.32
21	.22	.46	.02	.26	61	.29	.57	.02	.30
22	.26	.46	.02	.22	62	.29	.57	.02	.30
23	.28	.47	.02	.21	63	.29	.57	.02	.30
24	.27	.47	.02	.22	64	.35	.57	.02	.24
25	+ 0.25	− 0.48	− 0.02	− 0.25	65	+ 0.43	− 0.57	− 0.02	− 0.16
26	.22	.48	.02	.28	66	.51	.56	.02	.07
27	.22	.49	.02	.29	67	.56	.56	.02	.02
28	.22	.49	.02	.29	68	.57	.56	.02	.01
29	.22	.50	.02	.30	69	.57	.56	.02	.01
30	+ 0.23	− 0.50	− 0.02	− 0.29	70	+ 0.42	− 0.56	− 0.02	− 0.16
31	.24	.51	.02	.29	71	.48	.56	.02	.10
32	.25	.51	.02	.28	72	.49	.55	.02	.08
33	.27	.52	.02	.27	73	.52	.55	.02	.05
34	.28	.52	.02	.26	74	.53	.55	.02	.04
35	+ 0.31	− 0.52	− 0.02	− 0.23	75	+ 0.50	− 0.54	− 0.02	− 0.06
36	.35	.53	.02	.20	76	.46	.54	.02	.10
37	.40	.53	.02	.15	77	.44	.54	.02	.12
38	.45	.54	.02	.11	78	.42	.54	.02	.14
39	.46	.54	.02	.10	79	.40	.53	.02	.15

TABLE XXII.—*Systematic Corrections, &c.*—Continued.

DIRECT OBSERVATIONS.

N. P. D.	Division Correction.	Flexure.	Latitude, Zenith Point, &c.	Total.
°	"	"	"	"
80	+ 0.35	− 0.53	− 0.02	− 0.20
81	.28	.53	.02	.27
82	.24	.52	.02	.30
83	.22	.52	.02	.32
84	.19	.51	.02	.34
85	+ 0.15	− 0.51	− 0.02	− 0.38
86	.11	.50	.02	.41
87	.12	.50	.02	.40
88	.15	.49	.02	.36
89	.14	.49	.02	.37
90	+ 0.09	− 0.48	− 0.02	− 0.41
91	+ 0.03	.48	.02	.47
92	− 0.06	.47	.02	.55
93	.12	.47	.02	.61
94	.13	.46	.02	.61
95	− 0.08	− 0.46	− 0.02	− 0.56
96	− 0.02	.45	.02	.49
97	.00	.44	.02	.46
98	.00	.44	.02	.46
99	.00	.43	.02	.45
100	+ 0.05	− 0.42	− 0.02	− 0.39
101	.11	.42	.02	.33
102	.12	.41	.02	.31
103	.12	.40	.02	.30
104	.13	.40	.02	.29
105	+ 0.14	− 0.39	− 0.02	− 0.27
106	.15	.38	.02	.25
107	.16	.37	.02	.23
108	.17	.37	.02	.22
109	.19	.36	.02	.19
110	+ 0.20	− 0.35	− 0.02	− 0.17
111	.22	.34	.02	.14
112	.26	.34	.02	.10
113	.28	.33	.02	.07
114	.27	.32	.02	.07
115	+ 0.25	− 0.31	− 0.02	− 0.08
116	.22	.30	.02	.10
117	.22	.29	.02	.09
118	.22	.28	.02	.08
119	.22	.28	.02	.08

N. P. D.	Division Correction.	Flexure.	Latitude, Zenith Point, &c.	Total.
°	"	"	"	"
120	+ 0.23	− 0.27	− 0.02	− 0.06
121	.24	.26	.02	− 0.04
122	.25	.25	.02	− 0.02
123	.27	.24	.02	+ 0.01
124	.28	.23	.02	.03
125	+ 0.31	− 0.22	− 0.02	+ 0.07
126	.35	.21	.02	.12
127	.40	.20	.02	.18
128	.45	.20	.02	.23
129	.46	.19	.02	.25
130	.45	.18	.02	.25
330	+ 0.27	− 0.02	− 0.02	+ 0.23
331	.29	.03	.02	.24
332	.29	.04	.02	.23
333	.29	.05	.02	.22
334	.35	.06	.02	.27
335	+ 0.43	− 0.07	− 0.02	+ 0.34
336	.51	.08	.02	.41
337	.56	.09	.02	.45
338	.57	.10	.02	.45
339	.57	.11	.02	.44
340	+ 0.52	− 0.12	− 0.02	+ 0.38
341	.48	.13	.02	.33
342	.49	.14	.02	.33
343	.52	.15	.02	.35
344	.53	.16	.02	.35
345	+ 0.50	− 0.17	− 0.02	+ 0.31
346	.46	.18	.02	.26
347	.44	.19	.02	.23
348	.42	.20	.02	.20
349	.40	.20	.02	.18
350	+ 0.35	− 0.21	− 0.02	+ 0.12
351	.28	.22	.02	+ 0.04
352	.24	.23	.02	− 0.01
353	.22	.24	.02	.04
354	.19	.25	.02	.08
355	+ 0.15	− 0.26	− 0.02	− 0.13
356	.11	.27	.02	.18
357	.12	.28	.02	.18
358	.15	.28	.02	.15
359	.14	.29	.02	.17
360	.09	.30	.02	.23

TABLE XXII.—*Systematic Corrections, &c.*—Continued.

REFLECTION OBSERVATIONS.

Name of Star.	Division Correction.	Flexure.	Latitude, Zenith Point, &c.	Total.
	″	″	″	″
α Andromedæ . .	− 0.44	− 0.52		
γ Pegasi	.22	.42		
α Cassiopeæ . . .	.25	.61		
β Arietis	.26	.47		
α Arietis	.31	.48		
ι Cassiopeæ . . .	− 0.40	− 0.61		
9 Camelopardalis .	− .42	.61		
β Orionis	+ .13	.22		
α Orionis	− .20	.37		
α Canis Minoris . .	− .17	.35		
4 Draconis . . .	− 0.05	− 0.58		
ζ Virginis	− .12	.30		
ε Bootis	− .45	.51		
ε Ursæ Minoris . .	+ .11	.56		
γ Aquilæ	− .27	.39		
ε Delphini . . .	− 0.28	− 0.40		
α Cygni	.27	.59		
α Cephei	.52	.61		
β Cephei	.24	.60		
ε Pegasi	.24	.38		
79 Draconis . . .	− 0.14	− 0.59		
α Aquarii	.12	.30		
ι Cephei	.43	.61		
α Pegasi	.22	.44		

The assumed value of the latitude being $+ 38^\circ\ 53'\ 38''.8$, the final value given by any year's work is $+ 38^\circ\ 53'\ 38''.80 + \Delta\varphi$. But the observed north polar distances employed in computing $\Delta\varphi$ had previously been corrected for constant error in the zenith point. Hence, if it is desired to separate the results of the direct observations from those of the reflection ones, we have

Latitude from Direct Observations, - - $= + 38^\circ\ 53'\ 38''.80 + \Delta\varphi + \Delta Z$
Latitude from Reflection Observations - $= + 38^\circ\ 53'\ 38''.80 + \Delta\varphi - \Delta Z$

in which the value of ΔZ is that given by stars culminating north of the zenith, such being the position of those used in computing $\Delta\varphi$. By means of these expressions, the following table has been computed:

TABLE XXIII.—*Latitude of the Transit Circle as given respectively by the Direct and Reflection Observations made during each Year that the Instrument has been in use.*

Year.	Latitude from Direct Observations.	Latitude from Reflection Observations.	Mean.
	° ′ ″	° ′ ″	″
1866	+ 38 53 38.73	+ 38 53 37.67	38.20
1867	39.16	37.48	38.32
1868	38.69	37.73	38.21
1869	38.62	38.90	38.76
1870	38.71	39.57	39.14
1871 } 1872 }	39.11	36.49	37.80

It thus appears that while the values given by the direct observations are quite uniform, those given by the reflection ones vary greatly; and this of course tends to throw suspicion upon the latter class of observations, and also upon the latitudes derived from them. However, the concluded values of the north polar distances have always been reduced to what they would have been if measured from a visible pole, and consequently they are independent of any error in the latitude.

It may also be remarked that had the reflection observations been entirely rejected, there would have been no systematic differences between the polar distances of northern objects then deduced and those actually concluded, while the actually concluded polar distances of southern objects would have been changed by the quantity

$$\{-\Delta Z \text{ given by Northern Stars} + \Delta Z \text{ given by Southern Stars}\}$$

the numerical values of which for each year are as follows:

	″
1866, - - - - - - - - - -	—0.47
1867, - - - - - - - - - -	—0.60
1868, - - - - - - - - - -	—0.68
1869, - - - - - - - - - -	—0.18
1870, - - - - - - - - - -	+0.31
1871, } 1872, } - - - - - - - - -	0.00

The application of these corrections to the concluded north polar distances of objects culminating south of the zenith will reduce them to values not differing *systematically* from those which would have been obtained from the direct observations alone.

RIGHT ASCENSIONS, NORTH POLAR DISTANCES, AND SEMI-DIAMETERS OF THE SUN, MOON, AND PLANETS, DEDUCED FROM OBSERVATIONS WITH THE TRANSIT CIRCLE, AND COMPARED WITH THE TABLES.

These results are given on pages 165 to 170, and require very little explanation. When both limbs of an object presenting a fully illuminated disk have been observed, the right ascension of its center is the mean of the values given for the two limbs in that column of the observations which is headed "*Apparent Right Ascension.*" When only one limb has been observed, and that was fully illuminated, the right ascension of the center is derived from that of the limb by applying to it the sidereal time of the semi-diameter passing the meridian, as given in the column "*Miscellan'us Corrections.*"

If one of the limbs observed was defective, the observed difference of right ascension of limbs is multiplied by the computed ratio of this difference to the true semi-diameter, and the observed semi-diameter thus deduced is applied to the right ascension of the full limb to obtain that of the center. The formulæ employed are as follows: Let

i = elongation of earth and sun as seen from planet;
$b = \cos i$;
δ, δ' = declinations of planet and sun;
A = difference of right ascensions of planet and sun;
θ = angle which the line of cusps makes with the meridian;
f, f' = factors by which measured horizontal and vertical diameters must be multiplied to obtain true semi-diameters.

Then, to find f, we have

$$\tan\theta = \frac{\cos\delta \tan\delta'}{\sin A} - \frac{\sin\delta}{\tan A}$$

When the planet is gibbous

$$g = \cos\theta \sqrt{b^2 + \tan^2\theta} = \cos\theta'' \quad \text{when } \sin\theta'' = \cos\theta \sin i$$

$$g' = \sin\theta \sqrt{b^2 + \cot^2\theta} = \cos\theta' \quad \text{when } \sin\theta' = \sin\theta \sin i$$

$$f = \frac{1}{1+g}$$

$$f' = \frac{1}{1+g'}$$

When the illuminated disk is a crescent,

$$g = \cos\theta; \quad f = \frac{1}{1+g}$$

$$g' = \sin\theta; \quad f' = \frac{1}{1+g'}$$

When the center of light of Mercury has been observed, the reduction to the center of the planet is denoted by ε, and its value is obtained from the empirical formulæ

$$n = \frac{(1-b)(5+b)}{12}$$

In R. A. - - - - - - - - ε = semi-diam. $\times\, n \cos\theta$
In N. P. D. - - - - - - - ε = semi-diam. $\times\, n \sin\theta$

The north polar distances are reduced from the part actually observed to the center in the same way as the right ascensions, and by the formulæ and numbers just given, but the following further corrections are applied to them:

1. The parallax in altitude found at the foot of the pages of observations.
2. The corrections for division, flexure, and latitude, taken from Table XXII.

The semi-diameters of the sun measured in the year 1871 were too few in number to afford any trustworthy results for personality, and therefore the table deduced from the observations of 1870 has been employed. It is as follows:

TABLE XXIV.—*Corrections which must be applied to the Semi-diameters of the Sun given in the American Ephemeris in order to reduce them to the Semi-diameters actually found from the Mean of all the Measures made by each Observer in the Year* 1870.

Observer.	Sidereal Time of Semi-diameter passing the Meridian.	Vertical Semi-diameter.
	s.	″
Harkness . . .	− 0.07	− 1.4
Eastman. . . .	− 0.04	− 0.8
Frisby.	− 0.04	− 0.6
Stone	− 0.07	− 1.1

Whenever only one limb of the sun was observed, the quantity contained in that column of the observations headed "*Miscellan'us Corrections*" is the semi-diameter given in the American Ephemeris corrected by means of the above table.

As the places of the moon for the time of its transit at Washington are not given, either in the American Ephemeris or in the English Nautical Almanac, they are computed from each of these works in the following manner: The observed right ascension of the center, considered as sidereal time, is reduced to Washington mean time, and then increased by $5^h\ 8^m\ 12^s$, which converts it into Greenwich mean time. With this as an argument, the tabular place is interpolated from the hourly ephemeris for Greenwich. When only the polar distance is observed, the Washington mean time of transit of center is taken at once from the "*Moon Culminations*" of the American Ephemeris. The places thus found from the American Ephemeris and from the English Nautical Almanac are respectively those of Peirce's and Hansen's tables.

In the case of the major planets, the numbers in the columns "*Corr'n to Am. Eph.*" are obtained by subtracting from each observed position, or semi-diameter, the corresponding position, or semi-diameter, given in the American Ephemeris for the instant of transit at Washington.

The places of Venus, according to Le Verrier's tables, are obtained by applying to the positions given in the American Ephemeris for the time of transit at Washington, the differences between the positions for Greenwich noon, given respectively in that Ephemeris and in the English Nautical Almanac. As a check, a place is occasionally interpolated directly from the latter work.

The observed positions of the minor planets are compared with the ephemerides of the Berlin Jahrbuch. For that purpose the observed time of transit is converted into Washington mean time, and then increased by $6^h\ 1^m.8$, which reduces it to Berlin mean time. From this is subtracted the "aberration time," $-[0.9148]\,\Delta$, usually given in the Ephemeris, and the result is the Berlin mean time at which the light left the planet. The position of the planet for this instant is interpolated from the ephemeris in the Jahrbuch and compared with the observed place.

TABLE A.—*Absolute Determinations of the Collimation Constant of the Transit Circle, made in the Year* 1871.

NOTE.—From the beginning of August until cold weather set in, the value of c_0 was very unstable. On November 11 it was discovered that this instability arose from the circumstance that the spring which insures the steadiness of the object-glass in its cell was not sufficiently screwed up. It was at once tightened, and from that time the instability disappeared.

Date.	M	M'	$M+M'$	0.512 × $M+M'$	c_τ	τ	$+ 0^{s}.004\tau$	c_0
1871.	r.	r.	r.	s.	s.	°	s.	s.
August 3	0.000	− 0.135	− 0.135	− 0.069	− 0.095	85.5	+ 0.342	+ 0.247
10	− 0.165	+ .089	.076	.039	.065	84.5	.338	.273
21	.258	.187	.071	.036	.062	75.5	.302	.242
29	.271	.146	.125	.064	.090	85.0	.340	.250
September 6	− 0.158	0.000	− 0.158	− 0.081	− 0.107	84.0	+ 0.336	+ 0.229
11	.175	+ 0.110	.065	.033	.059	69.5	.278	.219
19	.284	.194	.090	.046	.072	72.	.288	.216
25	.136	+ .052	.084	.043	.069	70.5	.282	.213
October 2	− 0.047	− 0.148	− 0.195	− 0.100	− 0.126	75.5	+ 0.302	+ 0.176*r*
10	.107	+ .095	− .012	− .006	− .032	73.0	.292	.260
18	.302	.365	+ .063	+ .032	+ .006	55.0	.220	.226
24	.412	.316	− .096	− .049	− .075	66.5	.266	.191
November 6	− 0.250	+ 0.182	− 0.068	− 0.035	− 0.061	52.5	+ 0.210	+ 0.149
7	.288	.200	.088	.045	.071	47.5	.190	.119
11	.354	.219	.135	.069	.095	52.0	.208	.113
13	.308	.224	.084	.043	.069	42.5	.170	.101
20	.234	.136	.098	.050	.076	48.5	.194	.118
27	.250	.074	− .176	− .090	.116	55.5	.222	.106
December 1	− 0.342	+ 0.364	+ 0.022	+ 0.011	− 0.015	30.5	+ 0.122	+ 0.107
19	.288	.298	.010	.005	− .021	35.0	.140	.119
21	.278	.464	+ .186	+ .095	+ .069	14.5	.058	.127
1872. January 4	− 0.308	+ 0.274	− 0.034	− 0.017	− 0.043	42.0	+ 0.168	+ 0.125

TABLE B.—*Adopted Values of the Collimation, Level, and Azimuth Constants of the Transit Circle in the Year* 1871.

NOTE.—An * indicates that the constant to which it is attached is an interpolated value. From August 1 until November 11 the spring which insures the stability of the object-glass in its cell was not sufficiently tense to cause the collimation to vary regularly with the temperature. During the whole of that period it has, therefore, been necessary to adopt such values of *c* as seem to be indicated by the absolute determinations given in Table A.

Date.	τ	*c*	*b*	*a*	Date.	τ	*c*	*b*	*a*
1871.	°	s.	s.	s.	1871.	°	s.	s.	s.
August 1.4		− 0.08	− 0.19	− 0.51	September 7.8		− 0.08	− 0.23	− 0.81
2.0		.08	.17	.80*	8.8		.08	.17	1.08
2.5		.08	.17*	.80	9.5		.08	.18*	0.99
5.4		.08	.13*	.29	21.3		.08	.23	1.21
7.0		.08	.09	.30	22.0		.08	.21*	1.27
8.8		− 0.08	− 0.06	− 0.30	22.4		− 0.08	− 0.20	− 1.27
9.0		.08	.07	.09	23.3		.08	.24	.18
11.0		.08	.10	.32	26.4		.08	.18	.02
11.4		.08	.12*	.44	27.0		.08	.19	.26
12.4		.08	.15	.44	27.4		.08	.28	.26*
14.0		− 0.08	− 0.14	− 0.34	28.0		− 0.08	− 0.17	− 1.24
14.3		.08	.21	.34	28.4		.08	.19	.24
15.0		.08	.20	.32*	29.5		.08	.18	.32
15.3		.08	.15	.32	30.0		.08	.21	.38
16.0		.08	.06	.24*	30.5		.08	.16	.38
16.3		− 0.08	− 0.13	− 0.24	October 2.6		− 0.06	− 0.25	− 1.30
18.4		.08	.26	.51	3.7		.06	.24	.27
19.0		.08	.17	.62*	6.8		.06	.24	.35*
19.4		.08	.19	.62	7.1		.06	.21	.37
21.0		.08	.26	.68	8.9		.06	.25	.33
24.4		− 0.08	− 0.22	− 0.52	10.4		− 0.06	− 0.23	− 1.42*
25.0		.08	.23	.75*	12.5		.06	.15	.52
25.3		.08	.17	.75	13.3		.06	.13	.42
28.4		.08	.13	.58*	14.3		.06	.21	1.52
29.1		.08	.12*	.54	17.3		.06	− .03	0.47
30.1		− 0.08	− 0.11*	− 0.53	18.3		− 0.06	+ 0.05	− 0.44
30.5		.08	.10	.53	19.3		.06	− .06	.84
31.5		.08	.14	.85	20.3		.06	.02	.55
September 2.6		.08	.05	.87	21.3		.06	.14	.92
3.7		.08	.17.	.97*	22.3		.06	.05	.90*
4.1		− 0.08	− 0.19*	− 0.99	27.4		− 0.06	− 0.06	− 0.78
4.7		.08	.20	.99	November 2.7		.06	.07	1.16
5.1		.08	.25	.83	6.4		.06	.08	.38
5.7		.08	.24	.83	7.8		.06	.03	.39
6.7		.08	.27	.82*	10.3		.06	.09	1.23*

Table B.—*Adopted Values of the Collimation, &c.*—Continued.

Date.	τ	c	b	a
1871.		s.	s.	s.
November 10.9		− 0.06	− 0.10*	− 1.23
11.3	44	.07	.10	.28
17.4	38	.04	.08	.34
18.3	36	.03	.10	.26
25.4	40	− .05	.12	.29
29.5	26	+ 0.01	− 0.05	− 1.26
December 5.0	18	+ .04	− .05	.40*
5.8	14	+ .05	+ .10	.40
6.8	32	− .02	− .02	.52
7.8	39	− .05	− .07	.46
8.4	34	− 0.03	− 0.01	− 1.46
9.0	36	.03	.05	.32*
9.5	28	.00	.06*	.32
10.7	33	.02	.08*	.44*
11.3	36	.03	0.10	.50
1871.		s.	s.	s.
December 13.0	44	− 0.06	0.00	− 1.41*
15.4	22	+ .03	.00	.30
16.3	31	− .01	.00	.42
18.3	39	− .04	− .04	.47
20.3	10	+ .07	+ .20	.46
20.9	14	+ 0.06	+ 0.18	− 1.44
21.3	10	+ .07	+ .16	.44
25.5	37	− .03	− .06	1.13
27.0	47	− .07	+ .05	− 0.28
27.5	26	+ .01	.13	.00
27.9	20	+ 0.03	+ 0.20	0.00*

TABLE C.—*Adopted Corrections to the Positions of Clock-Stars, given in the American Ephemeris for the Year* 1871.

	s.		s.		s.
α Andromedæ	+ 0.02	κ Cancri	− 0.01	γ^2 Sagittarii	+ 0.01
γ Pegasi	.00	α Hydræ	− .03	μ^1 Sagittarii	.00
β Ceti	+ .05	ε Leonis	− .06	η Serpentis	+ .06
ε Piscium	+ .02	μ Leonis	− .01	1 Aquilæ	+ .07
θ^1 Ceti	+ .02	α Leonis	− .04	α Lyræ	+ .02
η Piscium	+ 0.07	γ^1 Leonis	− 0.02	β Lyræ	+ 0.03
ο Piscium	− .03	ρ Leonis	− .07	σ Sagittarii	+ .01
β Arietis	+ .02	*l* Leonis	.00	ζ Aquilæ	+ .08
α Arietis	+ .01	δ Leonis	− .06	*d* Sagittarii	+ .02
ξ^1 Ceti	+ .04	δ Crateris	− .02	δ Aquilæ	+ .05
γ Ceti	0.00	τ Leonis	− 0.02	κ Aquilæ	+ 0.04
α Ceti	+ .02	υ Leonis	− .04	γ Aquilæ	+ .03
ζ Arietis	− .04	β Leonis	− .02	α Aquilæ	+ .04
η Tauri	.00	ο Virginis	− .02	β Aquilæ	+ .03
ζ Persei	− .01	η Virginis	− .02	τ Aquilæ	+ .02
γ^1 Eridani	+ 0.04	β Corvi	− 0.04	α^2 Capricorni	+ 0.04
γ Tauri	+ .01	12 Canum Venaticorum	.00	π Capricorni	+ .03
ε Tauri	− .01	θ Virginis	− .04	ε Delphini	+ .05
α Tauri	− .02	α Virginis	− .02	α Cygni	+ .02
ι Aurigæ	− .04	ζ Virginis	.00	μ Aquarii	+ .07
11 Orionis	− 0.07	η Bootis	− 0.05	ν Cygni	+ 0.06
β Orionis	.00	α Bootis	.00	61^1 Cygni	− .04
β Tauri	− .02	ε Bootis	− .02	ζ Cygni	+ .01
δ Orionis	− .03	α^2 Libræ	− .01	1 Pegasi	− .05
α Leporis	− .04	β Libræ	.00	β Aquarii	+ .03
ε Orionis	− 0.01	μ^1 Bootis	− 0.01	ξ Aquarii	+ 0.02
α Columbæ	− .04	α Coronæ Borealis	.00	ε Pegasi	+ .01
α Orionis	− .03	α Serpentis	+ .02	μ Capricorni	+ .03
μ Geminorum	− .04	ε Serpentis	.00	α Aquarii	+ .03
γ Geminorum	− .03	δ Scorpii	+ .01	θ Aquarii	+ .02
α Canis Majoris	− 0.08	β^1 Scorpii	+ 0.03	π Aquarii	+ 0.02
ε Canis Majoris	− .05	δ Ophiuchi	+ .02	η Aquarii	+ .03
δ Canis Majoris	− .05	α Scorpii	− .01	ζ Pegasi	+ .06
δ Geminorum	− .06	ζ Ophiuchi	.00	λ Aquarii	+ .08
α^2 Geminorum	+ .24	η Herculis	+ .01	α Piscis Australis	+ .04
α Canis Minoris	− 0.14	κ Ophiuchi	+ 0.04	α Pegasi	+ 0.03
β Geminorum	− .03	α^1 Herculis	+ .02	θ Piscium	+ .06
φ Geminorum	− .08	*b* Ophiuchi	+ .03	ι Piscium	.00
15 Argus	− .06	α Ophiuchi	+ .03	ω Piscium	+ .01
ε Hydræ	− .04	μ Herculis	.00		

TABLE D.—*Adopted Corrections and Rates of the Kessels Sidereal Clock No.* 1324, *in the Year* 1871.

NOTE.—On August 3 the clock was stopped in order to repair the apparatus which carries the mercury globule. On August 22 it was again stopped in order to lengthen its pendulum, which was done to the extent of ten divisions of the screw. The clock then ran too slow, and on August 24 a weight of forty grains was placed on the pendulum. After that the mean rate was found to be very small, and no further changes were made during the year.

Mean Day and Sidereal Hour.	Observer.	Clock Correction from Mean of Observations.	Clock Correction Corrected for Personal Equation.	Appar'nt Rate between Groups.	Adopted Daily Rate.	Mean Day and Sidereal Hour.	Observer.	Clock Correction from Mean of Observations.	Clock Correction Corrected for Personal Equation.	Appar'nt Rate between Groups.	Adopted Daily Rate.
d. h.		s.	s.	s.	s.	d. h.		s.	s.	s.	s.
Aug. 1 17.3	E.	−11.65	−11.57		−5.03	Sept. 22 21.6	S.	−3.96	−3.97		−0.15
				−5.03						−0.15	
2 20.3	S.	17.22	17.23		5.03	23 19.2	Ha.	3.98	4.08		−0.10
										−0.04	
5 20.8	S.	11.99	12.00		5.31	26 21.6	Ha.	4.11	4.21		0.00
				5.31						+0.23	
6 7.4	E.	19.65	19.57		5.28	27 17.4	F.	4.05	4.02		+0.04
				5.24						−0.10	
8 4.2	F.	29.40	29.37		5.39	28 20.0	S.	4.12	4.13		−0.05
										0.01	
8 8.6	E.	30.74	30.66		5.39	29 0.4	Ha.	4.04	4.14		0.03
				5.41						0.04	
11 18.3	F.	43.54	43.51		5.40	30 20.1	F.	4.20	4.17		0.09
				5.39						0.11	
12 18.3	S.	48.80	48.81		5.27	Oct. 2 2.3	Ha.	4.32	4.42		0.12
				5.15						−0.14	
14 9.4	E.	57.40	57.32		5.17	3 6.2	F.	4.61	4.58		−0.06
				5.19						+0.02	
15 14.5	F.	63.63	63.60		5.36	7 13.9	F.	4.52	4.49		+0.07
				5.52						0.12	
16 13.8	S.	68.94	68.95		5.38	8 9.4	F.	4.30	4.27		0.10
				5.25						+0.08	
18 19.8	E.	80.84	80.76		5.32	10 21.9	F.	4.18	4.15		+0.03
				5.40						−0.03	
19 20.0	F.	86.20	86.17		5.51	12 1.3	F.	4.25	4.22		−0.06
				−5.62						−0.28	
21 14.2	F.	96.04	96.01		−5.62	13 20.6	Ha.	4.34	4.44		0.09
										+0.05	
24 19.1	E.	3.14	3.06		+0.11	14 20.3	F.	4.42	4.39		0.08
				+0.11						−0.06	
25 19.2	F.	2.98	2.95		0.00	17 19.5	F.	4.61	4.58		0.06
				−0.11						−0.19	
28 21.8	F.	3.32	3.29		−0.23	18 20.6	Ha.	4.68	4.78		0.06
				−0.35						+0.09	
30 19.6	F.	3.99	3.96		−0.11	19 19.8	F.	4.72	4.69		0.16
				+0.13						−0.39	
31 23.4	Ha.	3.71	3.81		+0.03	20 21.8	Ha.	5.01	5.11		0.12
				−0.07						+0.18	
Sept. 2 1.9	Ha.	3.86	3.96		−0.04	21 20.6	F.	4.97	4.94		−0.03
				+0.08						−0.21	
3 3.8	F.	3.90	3.87		0.01	22 21.3	Ha.	5.06	5.16		0.00
				−0.13						+0.15	
4 0.7	Ha.	3.88	3.98		0.10	27 1.4	Ha.	4.28	4.38		+0.12
				0.08						+0.09	
5 0.2	F.	4.09	4.06		0.11	Nov. 2 7.9	Ha.	3.69	3.79		0.00
				−0.13						−0.09	
6 5.6	Ha.	4.12	4.22		−0.05	6 23.4	F.	4.15	4.12		−0.15
				+0.06						0.18	
7 5.6	F.	4.19	4.16		+0.03	7 9.4	Ha.	4.28	4.38		0.20
				0.00						−0.25	
8 7.0	Ha.	4.06	4.16		−0.04	10 23.3	F.	5.06	5.03		0.10
				−0.08						+0.04	
9 3.5	F.	4.26	4.23		0.03	11 22.9	Ha.	4.89	4.99		0.10
				+0.03						−0.11	
21 19.1	F.	−3.83	−3.80		−0.06	17 23.0	F.	−5.69	−5.66		−0.16
				−0.15						−0.21	

TABLE D.—*Adopted Corrections and Rates of the Kessels Sidereal Clock, &c.*—Continued.

Mean Day and Sidereal Hour.	Observer.	Clock Correction from Mean of Observations.	Clock Correction Corrected for Personal Equation.	Appar'nt Rate between Groups.	Adopted Daily Rate.	Mean Day and Sidereal Hour.	Observer.	Clock Correction from Mean of Observations.	Clock Correction Corrected for Personal Equation.	Appar'nt Rate between Groups.	Adopted Daily Rate.
d. h.		s.	s.	s.	s.	d. h.		s.	s.	s.	s.
Nov. 18 23.3	E.	− 5.95	− 5.87		− 0.16	Dec. 13 17.9	S.	− 6.94	− 6.95		+ 0.11
				− 0.12						+ 0.08	
25 1.2	E.	6.79	6.71		0.09	15 2.2	E.	6.85	6.77		+ 0.04
				0.05						+ 0.01	
29 4.8	E.	7.00	6.92		0.11	16 0.1	F.	6.79	6.76		− 0.02
				− 0.16						− 0.05	
Dec. 5 12.6	F.	7.94	7.91		− 0.02	18 1.5	Ha.	6.76	6.86		0.02
				+ 0.01						+ 0.02	
6 13.0	E.	7.98	7.90		+ 0.03	20 1.9	F.	6.86	6.83		0.00
				0.04						− 0.03	
7 11.6	H.	7.86	7.86		0.04	21 20.3	S.	6.84	6.85		− 0.03
				0.02						− 0.04	
8 3.6	F.	7.87	7.84		0.25	25 5.8	S.	7.02	7.03		+ 0.09
				0.46						+ 0.22	
9 20.9	S.	7.50	7.51		0.24	27 1.5	E.	6.72	6.64		0.22
				0.14						+ 0.22	
10 11.8	H.	7.29	7.29		0.14	27 16.0	F.	− 6.45	− 6.42		+ 0.22
				0.14							
11 1.6	E.	− 7.29	− 7.21		+ 0.14						
				+ 0.15							

TABLE E.—*Observations of the Nadir-Point, together with the Resulting Zenith-Point Corrections of the Transit Circle, in the Year* 1871.

Mean Day and Sidereal Hour.			Observer.	Readings of Microscope Micrometers.					Telescope Micrometer.	Circle Reading.	Zenith-Point Correction.
				V.		VI.	VII.	VIII.			
										179° 56′	0° 0′
1871.	d.	h.		r.	″	″	″	″	r.	″	″
Aug.	1	18.0	E.	10	27.9	19.2	22.4	23.2	34.458	23.18	59.03
	2	11.5	S.		22.2	15.1	17.6	22.3	34.780	19.30	57.95
	5	17.7	S.		28.4	20.6	21.6	23.0	34.444	23.40	59.03
	7	10.0	E.		29.2	20.4	23.9	25.0	34.324	24.62	59.65
	9	10.0	E.		28.8	15.0	24.0	19.9	34.374	21.92	61.58
	11	10.0	F.		20.0	4.6	15.5	11.8	34.896	12.98	62.49
	11	21.8	F.		19.4	4.5	12.2	9.1	34.958	11.30	63.23
	12	17.7	S.		0.5	. .	24.2	. .	34.294	27.35	57.38
	14	10.5	E.		29.7	15.2	25.2	24.1	34.394	23.55	59.65
	14	19.0	E.	11	2.2	22.0	26.4	21.0	34.235	25.40	60.23
	15	10.2	F.	10	11.4	7.6	6.6	3.3	35.548	4.72	60.74
	15	21.0	F.	11	2.6	18.5	25.5	23.0	34.232	24.90	60.77
	16	9.2	S.		24.3	10.7	18.0	9.9	34.716	15.72	62.52
	16	20.0	S.		28.2	14.3	20.8	16.8	34.519	20.02	61.25
	18	21.0	E.	10	22.0	7.7	15.2	11.4	34.899	14.08	61.35
	19	11.8	F.	10	16.7	1.8	12.7	8.1	35.225	9.82	60.62
	19	19.7	F.		17.8	2.1	9.6	5.5	35.248	8.75	61.32
	21	11.5	F.	10	14.2	28.7	9.3	4.9	35.323	6.78	62.14
	24	20.3	E.		20.8	5.2	13.3	9.9	35.001	12.30	61.57
	25	11.5	F.		21.9	6.8	16.1	11.0	34.846	13.95	62.29
	25	21.2	F.		23.9	8.8	15.4	13.1	34.792	15.30	61.77
	28	22.0	F.		22.0	7.0	9.0	9.8	34.618	11.95	67.80?
	30	0.0	F.		21.0	5.2	12.1	9.2	34.993	11.88	62.11
	31	23.4	Ha.	10	22.6	8.0	15.6	10.0	34.782	14.05	63.18
Sept.	2	0.8	Ha.	10	16.2	1.1	8.7	2.7	35.194	7.18	63.72
	3	4.7	F.		12.9	27.3	4.5	29.1	35.428	3.45	63.85
	4.6		Ha.		17.6	2.2	9.4	9.6	35.109	9.70	62.51
	5	14.7	F.	10	12.6	29.3	7.6	8.6	35.624	7.02	57.27
	5	3.6	F.	10	19.1	7.8	10.6	11.4	35.082	12.22	60.41
	6	6.8	Ha.		13.6	28.3	7.2	7.5	35.374	6.65	61.48
	7	6.0	F.	10	20.1	3.8	11.7	11.5	35.089	11.78	60.74
	8	8.0	Ha.		11.0	25.2	5.0	4.4	35.389	4.15	63.75
	9	20.2	F.	10	19.8	2.0	9.8	11.5	35.088	10.78	61.76
	9	6.8	F.		17.0	1.7	10.2	9.8	35.066	9.68	63.19
	21	15.7	F.	10	18.4	2.2	11.3	13.6	34.891	11.38	64.17
	21	23.5	F.		19.2	1.6	10.8	12.0	34.924	10.90	64.15
	22	12.5	S.		11.8	25.9	4.5	5.3	35.242	4.38	65.78
	22	21.5	S.		14.4	28.1	5.2	6.3	35.194	6.00	64.90
	23	19.7	Ha.		11.8	26.5	2.7	2.0	35.550	3.25	62.18
	26	22.5	Ha.		9.5	3.6	29.4	29.1	35.647	2.90	61.03
	27	13.5	F.		24.0	20.5	17.4	17.5	34.549	19.85	60.96

TABLE E.—*Observations of the Nadir Point, &c.*—Continued.

Mean Day and Sidereal Hour.			Observer.	Readings of Microscope Micrometers					Telescope Micrometer.	Circle Reading.	Zenith-Point Correction.
				V.		VI.	VII.	VIII.			
										179° 55′	0° 0′
1871.	d.	h.		r.	″	″	″	″	r.	″	″
Sept.	27	23.2	F.		21.8	17.8	12.9	14.1	34.748	16.65	61.10
	28	12.7	S.		22.8	20.4	16.3	15.8	34.601	18.82	61.19
	28	23.8	S.		21.0	16.4	12.0	12.6	34.777	75.50	61.80
	29	0.8	Ha.		5.6	1.5	27.1	27.3	35.825	60.38	60.82
	30	12.8	F.		13.2	6.7	4.8	7.3	35.338	68.00	60.69
	30	2.0	F.		17.5	9.5	12.0	12.0	34.859	72.75	63.29
Oct.	2	3.5	Ha.		10.7	5.8	0.4	29.4	35.633	64.08	60.07
	3	6.3	F.		24.4	19.6	14.4	14.4	34.630	78.20	61.36
	7	17.2	F.		24.3	21.7	17.5	18.5	34.509	80.50	60.93
	8	9.2	F.		23.2	19.4	14.8	16.7	34.523	78.52	62.69
	10	22.8	F.		17.5	11.0	11.2	7.0	35.190	71.68	59.28
	12	3.0	F.		16.0	11.0	6.8	8.1	34.978	70.48	63.75
	13	22.5	Ha.		6.4	0.1	26.0	27.6	35.736	60.02	62.54
	14	20.0	F.		13.0	7.0	2.8	4.2	35.391	66.75	61.12
	17	21.2	F.		24.3	20.4	14.3	14.1	34.708	78.28	60.08
	18	21.8	Ha.		10.3	6.8	0.1	0.2	35.539	64.35	61.24
	19	19.4	F.		18.7	14.0	8.9	8.3	35.016	72.48	61.16
	20	22.9	Ha.		12.0	7.9	1.0	1.3	35.536	65.55	60.09
	21	21.3	F.		16.6	12.5	7.0	6.7	35.160	70.70	60.73
	22	22.6	Ha.		11.5	7.4	0.4	0.2	35.576	64.88	60.14
	27	3.4	Ha.		7.6	3.8	25.7	26.1	35.700	60.80	62.32
Nov.	2	8.3	Ha.		11.8	6.6	0.0	1.3	35.378	64.92	63.15
	6	0.5	F.		4.1	28.4	21.2	23.2	35.972	56.72	62.23
	7	10.8	Ha.		14.5	9.4	3.4	3.8	35.098	67.78	64.60
	10	1.7	F.		18.6	12.5	5.6	7.3	34.978	71.00	63.27
	11	0.5	Ha.		11.2	5.4	28.8	29.8	35.477	63.80	62.75
	17	1.5	F.		11.2	4.6	29.2	0.0	35.507	63.75	62.34
	18	0.3	E.		9.0	2.3	26.3	26.0	35.704	60.90	62.16
	25	2.5	E.		9.6	3.2	28.1	28.3	35.576	62.30	62.72
	29	6.5	E.		10.6	5.0	29.3	29.5	35.429	63.60	63.69
Dec.	5	12.5	F.		8.2	1.6	26.8	28.1	35.544	61.08	64.44
	6	13.7	E.	9	27.6	23.6	18.5	21.0	36.133	52.68	63.79
	7	12.1	H.		22.1	15.9	9.9	10.0	36.786	44.48	61.95
	8	5.2	F.	10	1.6	26.6	18.2	19.2	36.159	53.90	62.17
	9	15.5	S.	10	9.1	7.1	28.1	27.8	35.468	63.02	63.67
	9	3.3	S.	10	6.6	2.0	24.9	25.0	35.709	59.62	63.36
	11	2.3	E.	10	10.1	4.4	26.8	27.9	35.583	62.30	62.62
	13	16.7	S.	10	11.5	10.0	2.2	29.9	35.329	65.90	62.92
	15	3.5	E.	10	4.7	1.6	24.1	22.8	35.771	58.30	63.72
	16	1.8	F.	10	2.6	27.9	20.0	20.2	35.924	55.18	64.51
	27	7.2	E.	10	15.8	8.2	23.8	22.7	35.549	62.62	62.82

THE MERIDIAN TRANSIT INSTRUMENT.

During the year this instrument was used for observing stars whose positions in declination had been previously determined by the Mural Circle or the Prime Vertical. Transit Instrument, and for a portion of the year the moon and the larger planets were likewise observed. The method of observation was that used in previous years.

The transit system consists of five groups or tallies of vertical threads, and in addition to these there are three vertical threads, movable by a micrometer-screw, and two stationary horizontal ones. With the clamp-end of the axis to the east, the tallies are named, in the order of the transit of stars above the pole, A, B, C, D, and E.

The tally over which an object has been observed is shown by the inspection of the intervals between the threads. The individual threads of each tally are designated by the numbers 1, 2, 3, 4, 5, for A, C, and E, and 1, 2, and 3 for B and D, respectively. One vertical thread, A_0, is outside of tally A, and another, E_6, is outside of E. These two, with A_5, B_1, C_3, E_3, and E_1, constitute a system over which transits with eye and ear may be conveniently observed.

On the 12th January, Mr. Gardner inserted a new set of threads on a plate scored by Mr. William Wurdeman.

From a number of observations of Polaris, above and below the pole, the equatorial intervals between each thread and the mean of B_1, B_2, B_3, C_1, C_2, C_3, C_4, C_5, D_1, D_2, D_3, were found to be as follows, the rotation corresponding to clamp east:

Equatorial Intervals.

Thread.	Interval.	Thread.	Interval.	Thread.	Interval.	Thread.	Interval.	Thread.	Interval.
	s.		s.		s.	s.	s.		s.
A_1	+37.884	.	. .	C_1	+ 3.171	D_1	−15.160	E_1	−30.011
A_2	+35.996	.	. .	C_2	+ 1.655	D_2	−17.607	E_2	−32.644
A_3	+34.286	B	+19.219	C_3	+ 0.015	D_3	−19.096	E_3	−34.149
A_4	+32.733	B_2	+17.577	C_4	− 1.649	.	. .	E_4	−35.816
A_5	+30.193	B_3	+15.070	C_5	− 3.205	.	. .	E_5	−37.696

$A_0 = +45^s.297$ $\qquad$ $E_6 = -45^s.132$

The times of transit of all objects more than 5° distant from the pole were recorded by the Howard and Davis chronograph.

INSTRUMENTAL ERRORS.

Aided by a collimating eye-piece, the error of level and collimation were obtained by reversing the instrument over a basin of mercury, and measuring with the micrometer-screw of the eye-piece the distance between the central thread and its image seen in the mercury. If we represent by $2\varDelta$ the distance of the central thread west of its image when the clamp-end of the axis is east; by $2\varDelta^1$, the same quantity, when the clamp is west; by p, the excess of the radius of the clamp-pivot divided by the distance between the pivots; and by $-r$ the reduction of the central thread to the mean of the system $B_1, B_2, B_3, C_1, C_2, C_3, C_4, C_5, D_1, D_2, D_3$, and by a the correction for diurnal *aberration* $= -0^s.016$ in this latitude, we have:

$$c = \tfrac{1}{2}(\varDelta - \varDelta^1) - p + r + a, \text{ for clamp east.}$$
$$c = -\tfrac{1}{2}(\varDelta - \varDelta^1) + p - r + a, \text{ for clamp west.}$$
$$b = -\tfrac{1}{2}(\varDelta + \varDelta^1) - p, \text{ for clamp east.}$$
$$b = -\tfrac{1}{2}(\varDelta + \varDelta^1) + p, \text{ for clamp west.}$$

The value of p, as determined in 1864, was $p = +0^s.008$; the numerical value of r for the current year is $r = -0^s.015$. All the observations for determining the errors of collimation and their results are given in the subjoined table, in which r, the value of a revolution of the micrometer, is $1^s.5865$. When great changes occur in the values of c between consecutive dates, they have been caused by adjustment with the collimating screws.

Date.	2 Δ	2 Δ¹	C. E.	C. W.	Date.	2 Δ	2 Δ¹	C. E.	C. W.
1871.	r.	r.	s.	s.	1871.	r.	r.	s.	s.
January 12	+ 0.03	− 0.37	+0.121	−0.153	May 19	+ 0.16	− 0.19	+0.101	−0.133
January 28	+ 0.12	− 0.26	+0.113	−0.145	May 24	+ 0.10	− 0.19	+0.077	−0.109
February 28	+ 0.13	− 0.26	+0.117	−0.149	June 16	− 0.20	− 0.42	+0.049	−0.081
April 4	− 0.04	− 0.43	+0.117	−0.149	July 3	− 0.16	− 0.42	+0.065	−0.097
May 3	− 0.42	− 0.85	+0.133	−0.165					

When observations to determine the value of c are tolerably accordant on successive dates, a mean is adopted for the whole period of such accordance; and where the differences are too great to permit inference that they may be due to errors of observation, the changes are assumed to have been uniformly progressive.

The values used in the reductions are stated at the bottom of each page of the printed observations.

The distance which the line of collimation passes from the pole and the point in which the meridian intercepts the equator are used instead of errors of level and azimuth. When the error of collimation is known, the first distance is directly obtained by observations of stars very near the pole, and may be represented by n. The second distance is determined by combining the value of n with the error of the level. Designating the latter by b, the latitude of the Observatory by φ, and representing this second distance by m, we obviously have,

$$m = -n \tan \varphi + b \sec \varphi$$

and the correction applicable to the observed transit of any star, to reduce it to the meridian, will be obtained by the formula,

$$\text{Correction} = m + n \tan \delta + c \sec \delta$$

in which δ represents the apparent declination of the star.

An approximate clock-error having been first obtained from one or more equatorial stars, the value of *n* was determined generally by comparing the time of transit of Polaris, δ Ursæ Minoris, λ Ursæ Minoris, or 51 Cephei, with the right ascension given in the American Ephemeris and Nautical Almanac for the year 1871.

The value of *n*, found in this manner and used in the reduction of the stars, is published in the table at the bottom of the page of the published observations, under the head of corrections, etc.

It will be readily seen that if *m* is neither large nor subject to great variation, it will be eliminated through the clock-error. It has not been used separately from the clock-error except when the instrument was used for regulating the mean time of the Observatory, or when large enough to affect the reduction of the moon, and is therefore not always published in its usual place.

The clock-error was obtained from the corrected transits of one or more of the standard stars whose mean place for 1871 is given in the American Ephemeris.

The apparent place of these stars for the date was taken from the Ephemeris for 1871.

The clock used in observing was that of Charles Frodsham.

EXPLANATION OF THE PRINTED OBSERVATIONS.

Column 1 contains the date and initial letter of the observer's name, the day commencing at apparent noon.

Column 2 contains the name of the object, or its approximate declination.

The following system of nomenclature was adopted. Stars contained in the Catalogue of the British Association are designated in the order of precedence:

1. By the constellation and Bayer letter there given.
2. By the constellation and Flamsteed number there given.
3. By their number in the catalogue.

Other stars found in published catalogues are designated by the name and number in the catalogue.

Column 3 contains the number for reference.

The following abbreviations occur:

O. Arg. N. for Oeltzen's Catalogue from Argelander's Northern Zones.

O. Arg. S. for Oeltzen's Catalogue from Argelander's Southern Zones.

Weisse (2) for Weisse's Catalogue from Bessel's Zones, from 15 to 25 degrees of north declination.

Some anonymous stars, used in the comparisons of the equatorial, are denominated by a number, followed by the letter W, or the word Washington.

Columns 4 to 14, inclusive, contain the seconds and tenths of the transits over the several threads, as noted by the observer at the time, or as subsequently read from the chronographic record; but as there are twenty-one threads, over each of which observations were taken at different times, the numbers over the columns may not represent the thread at which a star was observed, and this can only become known by comparing the observation with the equatorial intervals.

Column 15 contains the minutes, seconds, and decimals of a second obtained by taking the mean of the preceding times of transits over the threads observed.

Column 16 contains the sum of the corrections necessary to reduce the numbers of the preceding column to the clock-time at which the object crossed the great circle passing through the pole, and the point in which the line of collimation intersects the equator. It consists of two parts:

1. For broken observations of stars, from the mean of the threads B_1, B_2, B_3, C_1, C_2, C_3, C_4, C_5, D_1, D_2, D_3, by the formula

$$R = \text{equatorial interval} \times \sec \delta$$

or, if the star was so near the pole that the difference between the sine and arc of the reduction was sensible,

$$\sin R = \sin \text{equatorial interval} \times \sec \delta$$

In case of the moon, the reduction was computed by Professor Airy's formula, published in the Greenwich Observations,

$$\frac{3600 + I}{3600} \times \frac{\sin \text{☽'s Geo. } Z.\ D.}{\sin \text{☽'s App. } Z.\ D.} \text{ sec. ☽'s Geo. } Z.\ D.$$

in which I represents, in seconds of time, the moon's increase of right ascension in one hour of longitude, as given in the Nautical Almanac.

2. The correction for collimation and polar azimuth computed by the formula,

$$\text{Correction} = n \tan \delta + c \sec \delta$$

of which the method of obtaining the factors n and c has already been stated.

Column 17 contains the correction for clock-errors, obtained as stated, and brought forward to the instant of observation by the rate.

Column 18 contains the apparent right ascension of the object observed, obtained from the sum of the three columns immediately preceding.

Column 19 contains the corrections applicable to the preceding column to reduce the observations of the stars to their mean places, 1870.0, or the instant when the sun's mean longitude was 280°. These were computed from "*Constants for the reduction of fixed stars,*" given in the American Ephemeris and Nautical Almanac. The corrections include no proper motions except those used in the list of time and azimuth stars.

There will be found at the foot of the page the adopted clock and instrumental corrections, observations of the reflected image of the middle thread, position of the clamp E. or W., and such notes as the observations called for. The several observations of each fixed star reduced to its mean place for 1870.0 are collected in pages 141–152.

As a general rule, the results for the fundamental stars are not given when there were less than four observations in the group used for determining clock-errors.

The magnitude of each star, when estimated by the observer at the time of observation, is given in the tables.

The observations of the year with this instrument were made by Professor M. Yarnall, Professor J. R. Eastman, and Mr. Edgar Frisby, Mr. A. N. Skinner, and Mr. Ormond Stone, assistant observers.

The observations were reduced by Professor Yarnall, and the list of mean places found on pages 141–152 was made by Mr. Skinner; and the list of places of the moon and planets, and their comparisons with the tabular places on page 171, was also prepared by Mr. Skinner.

THE MURAL CIRCLE.

During the year 1871 the Mural Circle was employed in observing stars whose right ascensions had been previously determined by the Transit Instrument, and for a portion of the year the moon and larger planets were also observed.

MICROMETER AND TRANSIT THREADS.

The diaphragm inserted in October, 1864, was in use until January 18. The intervals of the threads were as follows:

Thread. .	I.	II.	III.	IV.	1.	2.	3.	4.	5.	VI.	VII.	VIII.	IX.
	s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	s.
Interval .	+53.6	+40.6	+28.8	+15.7	+3.3	+1.6	0.0	−1.7	−3.5	−16.3	−28.8	−40.8	−52.9

The value of the Micrometer-screw used was determined from the following observations made in 1870, the readings being for intervals of five minutes of arc:

	r.	r.	r.
March 22,	21.7081	31.3027	40.8596
April 18,	20.3742	29.9793	39.5384
May 4,	20.4879	30.0818	39.6453
May 6,	20.4637	30.0667	39.6156

These observations being reduced, give the value of r at 30 revolutions, $r = 31''.316$.

From this value tables were made in which the variable value from the nadir to each extreme reading was considered as uniform and allowed for as such.

In February Mr. Wurdeman repaired the telescope micrometer, after which Mr. Gardner inserted new threads in the old scores of the diaphragm, and the proper adjustments in level, collimation, and stellar focus having been made, subsequently observations for equatorial intervals were made with the following result:

Thread. .	I.	II.	III.	IV.	1.	2.	3.	4.	5.	VI.	VII.	VIII.	IX.
	s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	
Interval .	+53.3	+40.9	+29.0	+16.0	+3.2	+1.6	0.0	−1.7	−3.3	−16.1	−28.5	−40.5	−52.7

The value of the Micrometer-screw was again determined from the following observations:

1871.	r.	r.	r.
April 21,	20.612	30.200	39.780
March 16,	20.525	30.096	39.681
April 22,	20.617	30.201	39.776

These observations being reduced, give $r = 31''.314$, which was used for the observations made after January 18.

THE NADIR POINT.

For determination of the nadir point a cap is provided, which fits loosely over any of the eye-pieces of the telescope. Just above the eye-lens the cap has a plate of thin glass inclined at an angle of 45°. This arrangement has the advantage of enabling the observer to collimate without removing the eye-piece used in observation, and thereby avoids the risk of injury to the threads, and prevents the frequent admission of dust by air-currents, &c.

The mode of observation is as follows: The circle telescope is so pointed that when the nadir divisions of the former are accurately under the zeros of the microscopes, the images of the horizontal threads in the field of the latter may be seen at a small distance from the threads themselves. The circle microscopes are read then or at the conclusion of the reflection measures. The micrometer reading for the true nadir being that which corresponds to the coincidence of each thread seen directly with the image of the other seen by reflection, the images were alternately made to measure, on each side of the threads, spaces equal to their distance apart. As the nadir point thus determined always depends upon the same set of divisions of the circle, and is made with the same part of the Micrometer-screw, it is uniformly affected with the errors of those divisions and by any inaccuracy peculiar to that portion of the screw.

METHOD OF OBSERVING.

The method of observing was the same as in previous years, and consisted essentially in transferring the subdivision of the circle from the microscopes to the micrometer eye-piece. The circle was set so that the divisions nearest to the reading for the given declination were as accurately as possible under the zero of the microscopes. The circle microscopes were read either before or after the observation.

The observations of Professor Yarnall were made by bisecting the objects with the southern horizontal thread, while Mr. Frisby observed them at an equal distance from each of the horizontal threads. For bisection observations the nadir reading was corrected by half the distance of the horizontal threads, made from the observations of each night.

EXPLANATION OF THE PRINTED OBSERVATIONS.

Columns 1 to 3 and 7 to 12 need no explanation beyond that given in former years. The magnitudes in column 4 are those estimated by the observer at the time of observation.

Columns 5 and 6 show the number of micrometer readings, generally three for each star, and the transit threads over which these readings were made. When the number of micrometer readings does not correspond to the number of threads included between the limits given in column 6, it is understood that the observations were made at equal intervals between those limits.

Column 13 contains the mean of the six microscope readings.

Column 14 contains the mean of the observed micrometer readings.

Column 15 contains the adopted "nadir correction," expressed in micrometer revolutions. It is formed by subtracting the excess of the micrometer reading above 30 revolutions from the excess of the mean circle reading above 200°, the reading of microscope A when the telescope pointed to the nadir, that excess being first expressed in micrometer revolutions.

Column 16 gives the corrected meridian micrometer reading formed by applying the following corrections to column 14:

1. The nadir correction.

2. The reduction to the meridian. For observations made on any of the vertical wires, the reduction is given by the formula,

$$\Delta m = -\frac{\sin^2 \frac{1}{2} h}{2\, r \sin 1''} \tan \delta$$

h being the equatorial interval in arc of the vertical wire, and r the value of one revolution of the micrometer. Expressing h in seconds of time, and putting for r its value already given, this expression becomes

$$\Delta m = -[5.2405]\, h^2 \tan \delta$$

the value of which, for different wires, is tabulated on pages xxxii and xxxiii of the Introduction to the Washington Observations for 1863.

For stars near the pole, the time having been recorded, this expression becomes

$$\Delta m = -\frac{225 \sin 1''}{4\, r}\,(t - \alpha) \sin 2\,\delta$$

t being the true sidereal time of observations and α the right ascension of the star.

3. The correction of unsymmetrical observations of the sun, moon, and planets, on account of motion in declination. In the case of the moon the correction was computed by the formula,

$$\Delta m = [4.9467]\, hs \sec \delta\, \Delta \delta$$

hs being the equatorial interval in seconds of time of the vertical wire at which the observation is made, and $\Delta\delta$ the change of declination in seconds of arc for one hour of terrestrial longitude.

4. The correction of unsymmetrical observations for inclination of the micrometer-threads to the horizon. This was:

Jan. 1 to Jan. 18, - - - - - - $i = -0^{r}.00028 \times h$
Mar. 4 to April 16, - - - - - - $i = -0^{r}.00007 \times h$
April 16 to May 15, - - - - - - $i = +0^{r}.00007 \times h$
May 17 to July 9, - - - - - - $i = -0^{r}.00007 \times h$

i denoting the correction for inclination in thousandths of a micrometer revolution, and h the equatorial interval in seconds of time, used with its proper algebraic sign.

Columns 18, 19, and 20 contain the reading of the Newman barometer, its attached thermometer, and the external thermometer. The external thermometer is designated No. 3 in the Appendix to the Washington Observations for 1845, page 54. It is placed outside of the north aperture, several inches beyond the wall, and is read by the help of a sextant telescope attached to the window-frame.

Column 21, entitled "*Instrumental Corrections*," contains the micrometer equivalent, or the difference between the corrected micrometer reading and 30 revolutions converted into arc. If the former quantity is denoted by m, the values in this column will be given by the formula,

$$\text{Corr.} = (30 \text{ rev.} - m)\, r$$

Column 22 contains the apparent zenith distance, equal to the sum of columns 13 and 21, diminished by 20° if the sum be greater than 20°, or subtracted from 20° if less. In the former case the result is marked S, as south; in the latter N, as north.

Column 23 contains the correction for refraction corresponding to the apparent zenith distance and the barometer and thermometer readings. This quantity is computed from Bessel's tables, as given in an expanded form in the Appendix to the Washington Observations for 1845. This correction, added to the apparent zenith distance, gives the corrected geocentric zenith distance, which is not printed.

The following corrections are applied to the thermometer readings for irregularities in the bore of the tube:

Corrections of Thermometer.

Ther. scale.	Corr.	Δ log ref.	Ther. scale.	Corr.	Δ log ref.
°	°		°	°	
30	− 0.04	+ .00004	66	+ 0.20	− .00016
32	− .06	+ 5	68	+ .25	− 21
34	− .11	+ 10	70	+ .22	− 18
36	− .08	+ 7	72	+ .12	− 10
38	− .05	+ 4	74	+ .03	− 3
40	− .02	+ 2	76	− .01	+ 1
42	− .01	+ 1	78	− .04	+ 3
44	.00	0	80	− .04	+ 3
46	− .01	+ 1	82	− .01	+ 1
48	− .03	+ 3	84	.00	0
50	− .04	+ 3	86	− .06	+ 5
52	− .03	+ 3	88	− .12	+ 10
54	− .01	+ 1	90	− .14	+ 11
56	− .01	+ 1	92	− .14	+ 11
58	− .03	+ 3	94	− .14	+ 11
60	.00	0	96	− .13	+ 11
62	+ .05	− 4	98	− .12	+ 10
64	+ 0.12	− .00010	100	− 0.12	+ .00010

2. The correction for parallax for observations of the sun, moon, and planets, computed for the first and last, by the formula,

$$p = \pi \sin (z' - 11'.2)$$

For the moon:

$$\sin p' = \sin \pi \sin (z' - 11' \ 14''.54) \ [9.9994302]$$

or,

$$p' = \pi \ (z' - 11' \ 14''.54) \ [9.9994302] \ \frac{\sin \pi}{\text{arc } \pi} \frac{\text{arc } p}{\sin p'}$$

and

$$p = p' \mp \tfrac{1}{2} (p \mp s) \sin p \sin s$$

the upper signs corresponding to observations of the upper limb, and *vice versa.* The quantities

$$\frac{\sin \pi}{\text{arc } \pi} \text{ and } \frac{\text{arc } p}{\sin p}$$

are given in Tables IX and X, and the correction of p' in the last formula is given in Table XI of the Appendix to the Washington Observations for 1845.

In these formulas

z' represents the observed zenith distance, corrected for refraction.

π, the equatorial horizontal parallax, as given in the American Ephemeris.

s, the semi-diameter of the object.

p, the required correction for parallax.

3. In cases when only one limb of an object is observed, the correction for semi-diameter is included under this head. This correction is in all cases taken from the American Ephemeris.

Column 24 contains the declination of the star, using the assumed north latitude, 38° 53′ 39″.25.

Column 25 contains the reduction from the apparent declination at date to the mean declination for 1870.0.

It was computed by Bessel's formulæ, with constants prepared from the logarithms A, B, C, and D of the American Ephemeris and Nautical Almanac; and, in addition to the terms included in that work, it includes also those depending on twice the moon's longitude. Corrections for proper motion have not been applied to any star. The resulting mean places of the stars are collected on pages 155–163.

The right ascensions and declinations of the moon and planets, as determined by the Transit Instrument and Mural Circle, are given on pages 171 and 176.

Column 25 contains the initials of the observer's names:

Y.—Professor M. Yarnall.

F.—Mr. Edgar Frisby.

The observations were reduced by Professor Yarnall, and Mr. A. N. Skinner, assistant observer.

THE EQUATORIAL.

During the year 1871, this instrument was employed in observing comets, the minor planets, and occultations of stars by the moon. Special attention was given to the minor planets, as the large meridian circle was not used during a considerable portion of this year. The results of these observations will be found on pages 105–115. They consist of observations of the four comets, Comet I, 1871, Comet II, 1871, the two periodical comets of Encke and Tuttle, and observations of twenty-nine of the minor planets. Many of the stars of comparison have been observed at the Naval Observatory, but these observations are not yet fully reduced, so that the new positions of the stars have not been used. The observations of Encke's comet were published in a special report, Appendix II, Washington Observations, 1870.

The observations were all made with the filar micrometer in the manner described in previous volumes. The value of a revolution of the micrometer screw was assumed to be 15''.3014. The magnifying power was usually 132, but occasionally 209.

The observations are printed in the form adopted since 1868. The positions of the stars of comparison are those computed from the catalogues. No corrections for parallax have been applied to the right ascensions and declinations.

The observations were made and reduced by Professor Hall.

The observed occultations of the moon will be found on page 116.

In October of this year, Mr. A. N. Skinner was directed to act as assistant on the equatorial at night, his duties during the day being to assist Professor Yarnall in his computations. The following series of observations for determining a value of a revolution of the screw of the micrometer of the equatorial have been made and reduced by Mr. Skinner. The first column gives the date of the observation; the second the star observed; the third the temperature; the fourth the number of revolutions of the screw; a denoting the interval 2—3, and b the interval 3—4; the fifth column gives, first, the number of times the interval was observed and then its value in sidereal time; the sixth and seventh columns give the sidereal time of the observation and its hour angle. In the column with the heading $log\ f$ is given the logarithm of the quantity

$$f = 15\ (\theta' - \theta) \cos \delta$$

k is the correction for refraction computed from the formula

$$k = [6.4449]\, f \sec \psi^2$$

where

$$\tan \psi = \cot n \operatorname{cosec} (N + \delta)$$

and n and N are computed from the formulæ

$$\cos n = \cos \varphi \sin t$$

$$\sin n \sin N = \cos \varphi \cos t$$

$$\sin n \cos N = \sin \varphi$$

φ being the latitude and t the hour angle. The columns R and Wt. give the resulting value for the revolution and its weight. The values of R inclosed in parentheses were rejected.

The intervals of the declination wires during this year were as follows:

$1 - 2 = 16^{\mathrm{r}}.834$
$1 - 3 = 29\ .882$
$1 - 4 = 43\ .264$
$1 - 5 = 60\ .062$

Determination of the Value of a Revolution of the Micrometer Screw, by A. N. Skinner, Assistant Observer.

Date.	Star.	t	m	$\theta' - \theta$	Sidereal Time.	Hour Angle.	Log f.	k	R	Wt.
1871.		°		n. s.	h. m. s.	m. s.		″	″	
Oct. 12	κ Cephei.	57.3	10$^{\mathrm{r}}$	4 45.80	20 30 51	+ 17 40	2.17815	+ 0.04	(15.07)	$\frac{4}{3}$
12	+ 77° 19′ 40″.3	57.3	10	4 46.00	20 31 37	18 26	2.18004	0.04	15.38	$\frac{4}{3}$
17	40″.9	57.3	*b*	4 62.00	21 10 19	57 8	2.30966	0.06	15.28	$\frac{4}{3}$
17	40″.9	57.3	*a*	4 60.30	21 11 20	+ 58 9	2.29759	+ 0.06	15.20	$\frac{4}{3}$
19	41″.0	58.7	*a*	4 60.55	19 56 24	− 16 47	2.29938	− 0.06	15.26	$\frac{4}{3}$
19	41″.0	58.7	*b*	4 62.00	19 57 25	− 15 46	2.30966	− 0.06	15.27	$\frac{4}{3}$
19	41″.0	58.7	*b*	5 61.92	20 13 43	+ 0 32	2.30910	+ 0.06	15.27	$\frac{5}{3}$
19	41″.0	58.7	*a*	5 60.94	20 14 44	1 33	2.30217	0.06	15.36	$\frac{5}{3}$
19	41″.0	58.0	*a*	5 60.66	21 59 41	106 30	2.30017	0.07	15.29	$\frac{5}{3}$
19	41″.0	58.0	*b*	5 62.16	22 0 41	107 30	2.31078	0.07	15.32	$\frac{5}{3}$
19	41″.0	58.0	*b*	5 61.52	22 27 36	134 25	2.30629	0.07	15.16	$\frac{5}{3}$
19	41″.0	58.0	*a*	5 60.92	22 28 37	135 26	2.30203	0.07	15.36	$\frac{5}{3}$
28	41″.4	50.9	*b*	5 61.56	20 59 44	46 34	2.30657	0.07	15.17	$\frac{5}{3}$
28	41″.4	50.9	*a*	5 61.14	21 0 46	47 36	2.30360	0.06	15.40	$\frac{5}{3}$
28	12-Year Cat. 1879.	50.9	*a*	5 77.60	21 32 18	38 57	2.30243	0.06	15.36	$\frac{5}{3}$
28	+ 80° 4′ 26″.2	50.9	*b*	5 78.70	21 33 34	+ 40 13	2.30854	+ 0.06	15.24	$\frac{5}{3}$
Nov. 25	21 Cassiopeæ.	45.0	*b*	4 50.15	0 32 40	− 4 35	2.30898	− 0.06	15.24	$\frac{4}{3}$
25	+ 74° 17′ 22″.7	45.0	*a*	4 49.40	0 33 30	− 3 45	2.30244	− 0.06	15.35	$\frac{4}{3}$
25	22″.7	45.0	*a*	4 49.28	0 50 35	+ 13 20	2.30138	+ 0.06	15.32	$\frac{4}{3}$
25	22″.7	45.0	*b*	4 50.60	0 51 25	14 10	2.31286	0.06	15.39	$\frac{4}{3}$
25	22″.7	45.0	*b*	4 50.25	1 11 0	33 45	2.30985	0.06	15.28	$\frac{4}{3}$
25	22″.7	45.0	*a*	4 49.20	1 11 50	+ 34 35	2.30068	+ 0.06	15.30	$\frac{4}{3}$
Dec. 2	50 Cassiopeæ.	37.0	*a*	4 42.68	1 48 5	− 4 29	2.30089	− 0.06	15.30	$\frac{4}{3}$
2	+71° 48′ 6″.6	37.0	*b*	4 43.58	1 48 48	− 3 46	2.30996	− 0.06	15.28	$\frac{4}{3}$
2	6″.6	37.0	*b*	4 43.45	2 1 0	+ 8 26	2.30866	+ 0.06	15.24	$\frac{4}{3}$
2	6″.6	37.0	*a*	4 43.05	2 1 44	9 10	2.30464	0.06	15.44	$\frac{4}{3}$
2	6″.6	37.0	*a*	4 42.88	2 29 29	36 55	2.30292	0.06	15.38	$\frac{4}{3}$
2	6″.6	37.0	*b*	4 43.88	2 30 13	37 39	2.31294	0.06	15.39	$\frac{4}{3}$
2	6″.6	37.0	*b*	4 43.58	2 48 7	55 33	2.30996	0.06	15.28	$\frac{4}{3}$
2	6″.6	37.0	*a*	4 42.55	2 48 50	56 16	2.29957	0.06	15.26	$\frac{4}{3}$
5	21 Cassiopeæ.	21.9	*a*	3 49.33	0 47 21	10 7	2.30180	0.06	15.34	1
5	+74° 17′ 24″.7	21.9	*b*	2 49.85	0 46 59	9 45	2.30636	0.06	15.16	$\frac{2}{3}$
5	24″.7	21.9	*b*	3 50.00	0 56 24	19 10	2.30766	0.06	15.20	1
5	24″.7	21.9	*a*	3 49.43	0 57 13	20 9	2.30268	0.06	15.37	1
5	24″.7	20.6	*a*	3 48.87	1 21 34	44 20	2.29773	0.06	15.20	1
5	24″.7	20.6	*b*	3 50.07	1 22 23	45 9	2.30827	0.06	15.23	1
5	24″.7	20.6	*b*	3 50.50	1 34 39	57 25	2.31198	0.06	15.36	1
5	24″.7	20.6	*a*	3 49.00	1 35 28	58 14	2.29889	0.06	15.24	1
7	38 Cassiopeæ.	48.0	*a*	3 38.17	1 27 21	5 37	2.29996	0.06	15.28	1
7	+ 69° 36′ 25″.8	48.0	*b*	3 38.90	1 27 59	6 15	2.30819	0.06	15.22	1
7	25″.8	48.0	*b*	3 38.57	1 39 26	17 42	2.30449	0.06	15.10	1
7	25″.8	48.0	*a*	3 38.33	1 40 4	+ 18 20	2.30178	+ 0.06	15.34	1

Determination of the Value of a Revolution of the Micrometer Screw—Continued.

Date.	Star.	t	m	$\theta' - \theta$	Sidereal Time.	Hour Angle.	Log f.	k	R	Wt.
1871.		°		n. s.	h. m. s.	m. s.		″	″	
Dec. 7	38 Cassiopeæ.	46.8	*a*	3 38.00	2 0 10	+ 38 26	2.29802	+ 0.06	15.21	1
7	+ 69° 36′ 25″.8	46.8	*b*	3 39.04	2 0 49	39 5	2.30975	0.06	15.28	1
7	25″.8	46.8	*b*	3 38.97	2 8 29	46 45	2.30897	0.06	15.25	1
7	25″.8	46.8	*a*	3 38.83	2 9 7	+ 47 23	2.30741	+ 0.06	15.54	1
21	21 Cassiopeæ.	21.5	*a*	3 49.00	0 29 44	− 7 29	2.29887	− 0.06	15.23	1
21	+ 74° 17′ 26″.8	21.5	*b*	3 50.17	0 30 33	− 6 40	2.30911	− 0.06	15.24	1
21	26″.8	21.3	*b*	3 50.17	0 39 46	+ 2 33	2.30911	+ 0.06	15.25	1
21	26″.8	21.3	*a*	3 49.00	0 40 36	3 23	2.29887	0.06	15.24	1
21	26″.8	21.3	*a*	3 49.17	1 1 32	24 19	2.30037	0.06	15.30	1
21	26″.8	21.3	*b*	3 50.03	1 2 22	25 9	2.30790	0.06	15.21	1
21	26″.8	20.9	*b*	3 50.43	1 12 52	35 39	2.31136	0.06	15.32	1
21	26″.8	20.9	*a*	3 49.07	1 13 41	+ 36 28	2 29949	+ 0.06	15.26	1
1872.										
Jan. 25	48 Cephei, (H.)	32.6	*a*	3 60.33	3 46 48	+ 42 39	2.29993	+ 0.06	15.27	1
25	+ 77° 15′ 52″.2	32.6	*b*	3 62.17	3 47 49	43 40	2.31298	0.06	15.39	1
25	52″.2	32.6	*b*	3 61.83	3 56 11	52 2	2.31060	0.06	15.30	1
25	52″.2	32.5	*a*	3 60.50	3 57 12	53 3	2.30116	0.06	15.32	1
25	52″.2	32.5	*a*	3 60.60	4 19 38	75 29	2.30187	0.06	15.34	1
25	52″.2	32.5	*b*	3 61.83	4 20 39	76 30	2.31060	0.06	15.30	1
25	52″.2	32.5	*b*	3 61.60	4 30 22	86 13	2.30898	0.06	15.25	1
25	52″.2	32.5	*a*	3 60.73	4 31 24	+ 87 15	2.30280	+ 0.06	15.38	1
Feb. 1	+ 77° 15′ 52″.7	31.4	*a*	3 60.50	3 24 16	+ 20 8	2.30116	+ 0.06	15.32	1
1	52″.7	31.4	*b*	3 62.17	3 25 17	21 9	2.31298	0.06	15.38	1
1	52″.7	31.4	*b*	3 61.83	3 33 25	29 17	2.31060	0.06	15.30	1
1	52″.7	31.4	*a*	3 60.33	3 34 26	30 18	2.29993	0.06	15.27	1
1	52″.7	31.0	*a*	3 61.33	3 49 36	45 28	2.30707	0.06	15.89	1
1	52″.7	31.0	*b*	3 60.83	3 50 37	46 29	2.30352	0.06	(15.06)	1
1	52″.7	31.0	*b*	3 62.00	3 59 33	55 25	2.31179	0.06	15.34	1
1	52″.7	31.0	*a*	3 61.17	4 0 35	56 27	2.30594	0.06	15.49	1
27	Groombridge 966	46.8	*a*	3 51.43	5 37 20	14.42	2.30149	0.06	15.33	1
27	+ 74° 57′ 29″.6	46.8	*b*	3 52.40	5 38 11	15 33	2.30960	0.06	15.27	1
27	29″.6	46.0	*b*	3 51.97	5 48 17	25 39	2.30602	0.06	15.14	1
27	29″.6	46.0	*a*	3 51.67	5 49 9	26 31	2.30351	0.06	15.40	1
27	29″.6	43.0	*a*	3 51.50	6 13 19	50 41	2.30208	0.06	15.35	1
27	29″.6	43.0	*b*	3 52.67	6 13 45	51 7	2.31183	0.06	15.35	1
27	29″.6	43.2	*b*	3 52.50	6 24 16	51 38	2.31043	0.06	15.30	1
27	29″.6	43.2	*a*	3 51.50	6 25 8	+ 62 30	2.30208	+ 0.06	15.35	1
April 4	3 Ursæ Majoris, (H.)	50.3	*a*	3 36.93	8 12 18	+ 12 15	2.30071	+ 0.06	15.30	1
4	+ 68° 51′ 7″.3	50.3	*b*	3 37.83	8 12 55	12 52	2.31117	0.06	15.32	1
4	7″.3	50.3	*b*	3 37.00	8 20 9	20 6	2.30153	0.06	(14.98)	1
4	7″.3	50.3	*a*	3 37.78	8 20 46	20 43	2.31059	0.06	(16.10)	1
4	7″.3	50.3	*a*	3 36.67	8 41 10	41 7	2.29764	0.06	15.20	1
4	7″.3	50.3	*b*	3 38.33	8 41 48	+ 41 45	2.31687	+ 0.06	15.52	1

Determination of the Value of a Revolution of the Micrometer Screw—Continued.

Date.	Star.	t	m	$\theta' - \theta$	Sidereal Time.	Hour Angle	Log f.	k	R	Wt.
1872.		°		n. s.	h. m. s.	m. s.		″	″	
April 30	9 Draconis, (H.)	64.6	*a*	3 56.50	10 22 52	− 1 20	2.30023	− 0.06	15.29	1
30	+ 76° 22′ 32″.5	64.6	*b*	3 57.83	10 23 49	− 0 23	2.31033	− 0.06	15.29	1
30	32″.5	64.6	*b*	4 57.88	10 34 54	+ 10 42	2.31071	+ 0.06	15.30	$\frac{4}{3}$
30	32″.5	64.6	*a*	4 56.62	10 35 52	11 40	2.30115	0.06	15.32	$\frac{4}{3}$
30	32″.5	64.2	*a*	3 56.83	10 58 58	34 46	2.30276	0.06	15.38	1
30	32″.5	64.2	*b*	3 57.67	10 59 55	35 43	2.30913	0.06	15.29	1
30	32″.5	64.2	*b*	3 57.50	11 9 43	45 31	2.30785	0.06	15.20	1
30	32″.5	64.2	*a*	3 56.67	11 10 40	+ 46 28	2.30153	+ 0.06	15.33	1
May 28	4 Draconis, (H.)	69.4	*a*	3 66.33	12 33 14	+ 27 0	2.30367	+ 0.06	15.41	1
28	+ 78° 19′ 54″.1	69.4	*b*	3 67.50	12 34 20	28 6	2.31126	0.06	15.32	1
28	54″.1	69.4	*b*	3 67.33	12 46 59	40 45	2.31017	0.06	15.28	1
28	54″.1	69.4	*a*	3 65.50	12 48 6	+ 41 52	2.29820	+ 0.06	15.22	1
Oct. 3	κ Cephei.	69.5	*a*	3 60.33	20 2 48	− 10 22	2.29773	− 0.06	15.19	1
3	+ 77° 19′ 48″.2	69.5	*b*	3 61.67	20 3 49	− 9 21	2.30727	− 0.06	15.17	1
3	48″.2	69.5	*b*	3 61.83	20 13 25	+ 0 15	2.30840	+ 0.06	15.22	1
3	48″.2	69.5	*a*	3 60.83	20 14 26	1 16	2.30132	0.06	15.33	1
29	12-Year Cat. 1879.	51.3	*a*	2 77.75	20 58 44	5 27	2.30312	0.06	15.39	$\frac{2}{3}$
29	+ 80° 4′ 38″.3	51.3	*b*	2 79.00	21 0 2	6 45	2.31005	0.06	15.28	$\frac{2}{3}$
29	38″.3	51.3	*b*	1 79.00	21 8 48	15 31	2.31005	0.06	15.28	$\frac{1}{3}$
29	38″.3	51.3	*a*	1 78.00	21 10 6	16 49	2.30451	0.06	15.44	$\frac{1}{3}$
29	38″.3	51.3	*a*	2 78.00	21 22 12	28 55	2.30451	0.06	15.44	$\frac{2}{3}$
29	38″.3	51.3	*b*	2 79.00	21 23 31	30 14	2.31005	0.06	15.28	$\frac{2}{3}$
29	38″.3	51.3	*b*	2 79.50	21 29 53	36 36	2.31279	0.06	15.38	$\frac{2}{3}$
29	38″.3	51.3	*a*	2 77.50	21 31 11	+ 37 54	2.30172	+ 0.06	15.34	$\frac{2}{3}$
Nov. 7	+ 80° 4′ 38″.8	52.3	*a*	3 77.17	21 22 53	+ 29 37	2.29986	+ 0.06	15.28	1
7	38″.8	52.3	*b*	3 78.83	21 24 11	30 55	2.30910	0.06	15.25	1
7	38″.8	52.3	*b*	3 78.50	21 33 44	40 28	2.30728	0.06	15.18	1
7	38″.8	52.3	*a*	3 77.00	21 35 1	41 45	2.29890	0.06	15.24	1
7	38″.8	52.3	*a*	3 77.67	21 56 46	63 30	2.30266	0.06	15.37	1
7	38″.8	52.3	*b*	3 79.00	21 58 4	64 48	2.31004	0.06	15.28	1
7	38″.8	52.3	*b*	3 79.00	22 12 39	79 23	2.31004	0.06	15.28	1
7	38″.8	50.3	*a*	3 78.00	22 13 56	+ 80 40	2.30450	+ 0.06	15.44	1
Dec. 3	γ Cephei.	44.3	*a*	3 59.00	23 2 33	− 31 35	2.30142	− 0.06	15.32	1
3	+ 76° 55′ 36″.7	44.3	*b*	3 60.33	23 3 33	30 35	2.31110	0.06	15.31	1
3	36″.7	44.3	*b*	4 59.83	23 14 32	19 36	2.30749	0.06	15.18	$\frac{4}{3}$
3	36″.7	44.3	*a*	4 59.50	23 15 31	− 18 37	2.30509	− 0.06	15.45	$\frac{4}{3}$
3	36″.7	44.3	*a*	3 59.17	23 37 14	+ 3 6	2.30267	+ 0.06	15.38	1
3	36″.7	44.3	*b*	3 60.50	23 33 14	4 6	2.31233	0.06	15.36	1
3	36″.7	44.3	*b*	3 60.50	23 46 3	11 55	2.31233	0.06	15.36	1
3	36″.7	44.3	*a*	3 59.50	23 47 3	+ 12 55	2.30509	+ 0.06	15.46	1
17	21 Cassiopeæ.	42.5	*a*	3 49.33	0 9 2	− 28 15	2.30162	− 0.06	15.34	1
17	+ 74° 17′ 47″.5	42.5	*b*	3 50.67	0 9 52	27 25	2.31326	0.06	15.40	1
17	47″.5	42.5	*b*	3 50.67	0 17 10	20 7	2.31326	0.06	15.40	1
17	47″.5	42.5	*a*	3 49.67	0 18 1	19 16	2.30460	0.06	15.44	1
17	47″.5	42.5	*a*	3 49.50	0 35 58	1 19	2.30312	0.06	15.39	1
17	47″.5	42.5	*b*	3 50.33	0 36 48	− 0 29	2.31034	− 0.06	15.29	1
17	47″.5	42.5	*b*	3 50.50	0 46 32	+ 9 15	2.31180	+ 0.06	15.34	1
17	47″.5	42.5	*a*	3 49.83	0 47 23	+ 10 6	2.30600	+ 0.06	15.49	1

Let us assume as the form of the equation of condition,

$$R - R_0 = \varDelta R_0 + b\,(t - 45^\circ)$$

where,

$R =$ the value of a revolution;
$R_0 =$ the assumed value of $15''.30$;
$b =$ the temperature coefficient.

The general form of the equation of condition is

$$a\,x + b\,y = n.$$

Each of the preceding observations gives an equation of this form, and, solving by least squares, we obtain the following normal equations:

$$\frac{1406}{9}\,x + \frac{1503}{9}\,y = \frac{471}{300}$$

$$\frac{1503}{9}\,x + \frac{236340}{9}\,y = -\frac{4752}{300}$$

Whence,

$$x = +\,0''.010754 \pm 0''.00554$$
$$y = -\,0''.000672 \pm 0''.000427$$

We have, then, as the value of a revolution,

$$R = 15''.31075 \pm 0''.00554 - (0''.000672 \pm 0''.000427)\,(t - 45^\circ)$$

OBSERVATIONS

WITH THE

TRANSIT CIRCLE.

1871.

SUMMARY OF THE PRINCIPAL CONSTANTS USED IN REDUCING OBSERVATIONS MADE WITH THE TRANSIT CIRCLE DURING THE YEAR 1871.

Approximate equatorial interval between any two consecutive wires from I to VII . . . . . 12¼^{s}
One revolution of the microscope micrometers . . . . 30″

The value of one revolution of the zenith distance micrometer varies in different parts of the screw. At 25 revolutions it is 15″.193, from whence it gradually increases to 15″.369 at 37 revolutions, and then again diminishes to 15″.314 at 45 revolutions. The exact value of each turn, from 25 to 45 revolutions, is given in the introduction.

Corrections for Inclination and Distances of the Declination Wires

Vertical Wire.	Inclination of Central Wires.	Correction for Wire A.	Correction for Wire B.
	″	′ ″	′ ″
I	+ 0.08	− 2 35.12	. . .
II	+ 0.05	34.96	. . .
III	+ 0.03	34.79	. . .
IV	0.00	34.63	. . .
V	− 0.03	34.46	. . .
VI	− 0.05	34.30	. . .
VII	− 0.08	− 2 34.13	. . .

Constant { Added to reduction to meridian / Subtracted from zenith point correction } . . . . 1″.80

Adopted latitude of the instrument . . . . 38° 53′ 38″.80

One division of the hanging level . . . . $0^{s}.058$
Position of the instrument . . . . Clamp west.

Circle B, on the east end of the axis, was this year used in observation, the reading of its horizontal microscope being 0° when the telescope was pointed to the zenith.

In reversing the instrument the notation of the transit wires is also reversed, so that the wire first reached by an equatorial star is always called wire I.

DATE.	Number.	OBJECT.	Observer.	SECONDS OF TRANSIT OVER WIRES.										CORRECTIONS.			Apparent Right Ascension.	Miscellan'us Corrections.
				I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	Mean wire.	Inst.	Clock appar'nt.	Clock adopted.		
1871.													m. s.	s.	s.	s.	h. m. s.	s.
Aug. 1	1	κ Ophiuchi	E.	35.0	37.6	39.1	45.4	47.5	49.5	55.6	57.2	59.9	51 47.42	− 0.50	−11.61	−11.56	16 51 35.36	+ 0.09
	2	ε Ursæ Minoris	E.	. .	. .	0.7	16.4	31.8	46.7	2.4	. .	. .	59 31.60	. .	. .	. .	. . . .	. .
	3	a^1 Herculis	E.	46.9	49.6	51.2	57.5	59.7	1.8	8.1	9.7	12.2	8 59.63	− 0.48	−11.58	−11.62	17 8 47.53	− 0.02
	4	α Ophiuchi	E.	58.2	0.7	2.3	8.7	10.7	12.8	19.0	20.6	23.2	29 10.69	− 0.48	−11.70	−11.70	17 28 58.51	+ 0.03
	5	μ Herculis	E.	24.6	27.4	29.2	36.1	38.5	40.8	47.7	49.5	52.4	41 38.47	− 0.41	−11.70	−11.72	17 41 26.34	− 0.02
2	6	Sun I, S.	S.	20.9	23.5	24.8	31.8	34.0	35.8	42.2	44.0	46.8	48 33.76	− 0.55	. .	−14.80	8 48 18.41	. .
	7	Sun II, N.	S.	33.8	36.5	38.0	44.8	46.9	49.1	55.5	57.0	59.7	50 46.81	− 0.55	. .	−14.80	8 50 31.46	. .
	8	κ Aquilæ	S.	4.7	7.1	8.8	14.9	17.0	19.0	25.1	26.7	29.4	30 16.97	− 0.78	−17.01	−17.04	19 29 59.15	+ 0.01
	9	γ Aquilæ	S.	15.0	17.5	19.1	25.3	27.4	29.5	35.7	37.3	39.8	40 27.40	− 0.62	−17.11	−17.08	19 40 9.70	+ 0.06
	10	ε Draconis	S.	20.9	28.3	32.9	50.6	56.9	2.5	20.3	24.9	32.3	48 56.62	+ 0.55	. .	−17.11	19 48 39.66	+ 0.05
	11	λ Ursæ Minoris	S.	. .	. .	. .	. .	42.0	. .	20.0	50.0	. .	54 4.82	. .	. .	. .	. . . .	. .
	12	κ^1 Cephei	S.	. .	. .	14.4	23.9	33.3	42.4	51.5	. .	. .	23 33.10	+ 1.32	. .	−17.21	20 13 17.21	+ 0.56
	13	κ^2 Cephei	S.	. .	. .	16.8	26.1	35.3	44.3	54.0	. .	. .	13 35.30	+ 1.32	. .	−17.21	20 13 19.31	+ 2.65
	14	ε Delphini	S.	. .	. .	18.8	20.9	23.0	25.0	27.2	. .	. .	27 22.98	− 0.61	−17.27	−17.25	20 27 5.12	+ 0.07
	15	μ Aquarii	S.	49.6	52.0	53.8	59.8	2.0	4.1	10.3	11.7	14.3	46 1.96	− 0.80	−17.27	−17.28	20 45 43.88	+ 0.06
	16	ζ Cygni	S.	32.8	35.7	37.4	44.3	46.7	49.1	56.3	58.1	1.1	7 46.83	− 0.42	−17.45	−17.40	21 7 29.01	+ 0.06
5	17	ε Ursæ Minoris	S.	. .	49.5	. .	19.5	50.0	. .	. .	. .	. .	59 19.98	. .	. .	. .	. . . .	. .
	18	B. A. C. 5887	S.	48.0	55.9	1.0	21.0	27.4	34.2	53.9	58.6	6.9	18 27.43	− 0.09	. .	−11.17	17 18 16.19	− 2.34
	19	B. A. C. 6114	S.	. .	10.0	19.6	28.2	37.3	46.6	4.5	11.5	22.9	55 28.32	− 0.02	. .	−11.32	17 55 16.98	− 3.55
	20	B. A. C. 6206	S.	46.6	1.0	9.7	45.2	56.7	9.0	43.8	52.5	7.0	9 56.84	+ 0.07	. .	−11.36	18 9 45.55	− 4.59
	21	B. A. C. 6208	S.	52.9	7.3	16.4	51.9	3.3	15.0	50.6	59.0	2.8	10 3.24	+ 0.07	. .	−11.36	18 9 51.95	− 4.59
	22	B. A. C. 6302	S.	56.4	5.0	10.0	30.6	37.5	44.4	5.3	10.0	18.8	23 37.56	− 0.08	. .	−11.40	18 23 26.08	− 3.23
	23	B. A. C. 6375	S.	17.0	29.3	35.3	4.0	13.1	23.0	51.0	58.2	10.0	36 13.43	− 0.01	. .	−11.44	18 36 1.98	− 4.31
	24	ζ Aquilæ	S.	30.0	32.7	34.2	40.4	42.6	44.7	51.0	52.8	55.3	59 42.63	− 0.33	−11.57	−11.54	18 59 30.76	+ 0.01
	25	d Sagittarii	S.	6.6	9.3	10.8	17.4	19.5	21.7	28.2	29.7	32.4	10 19.51	− 0.41	−11.69	−11.62	19 10 7.48	+ 0.09
	26	τ Draconis	S.	. .	. .	2.6	9.5	16.3	23.4	30.7	. .	. .	18 16.50	− 0.08	. .	−11.65	19 18 4.77	− 0.24
	27	B. A. C. 6702	S.	30.5	41.4	48.3	13.7	22.1	31.3	57.3	3.5	14.8	27 22.54	− 0.03	. .	−11.67	19 27 10.84	− 4.61
	28	B. A. C. 6752	S.	19.2	27.1	32.1	51.2	57.5	3.9	23.0	27.9	35.9	35 57.53	− 0.09	. .	−11.70	19 35 45.76	− 3.72
	29	β Aquilæ	S.	0.5	3.0	. .	10.8	12.9	14.9	. .	22.6	25.0	49 12.81	− 0.35	−11.77	−11.74	19 49 0.72	+ 0.06
	30	Polaris	S.	. .	. .	. .	. .	. .	26.0	51.5	. .	. .	12 1.64	. .	. .	. .	. . . .	. .
	31	η Piscium	S.	36.9	39.5	41.0	47.5	49.7	51.8	58.0	59.6	2.2	24 49.58	− 0.32	−12.93	−12.97	1 24 36.29	+ 0.03
	32	Moon II	S.	24.9	27.5	29.0	35.5	37.4	39.6	45.8	47.3	50.0	34 37.44	− 0.36	. .	−13.00	1 34 24.08	−63.06
6	33	a^2 Geminorum	E.	27.0	30.0	31.8	39.0	41.4	43.9	51.2	53.0	56.0	26 41.48	− 0.28	−19.65	. .	. . . .	. .
7	34	Sun N.	E.	. .	. .	. .	. .	. .	. .	. .	. .	. .	. . .	. .	. .	. .	. . . .	. .
	35	Sun S.	E.	. .	. .	. .	. .	. .	. .	. .	. .	. .	. . .	. .	. .	. .	. . . .	. .
	36	ζ Persei	S.	17.7	20.6	22.4	29.6	32.0	34.5	41.6	43.4	46.4	46 32.02	− 0.20	−29.47	−29.32	3 46 2.47	+ 0.11
	37	γ^1 Eridani	S.	18.3	21.0	22.6	28.9	30.9	33.0	39.3	40.9	43.6	52 30.94	− 0.36	−29.39	−29.34	3 52 1.07	− 0.08
	38	Moon II	S.	11.2	14.0	15.6	22.2	24.4	26.6	33.0	34.6	37.5	58 24.34	− 0.33	. .	−29.36	3 57 54.65	−64.44
8	39	ε Tauri	S.	22.5	25.3	26.8	33.2	35.4	37.7	44.0	45.8	48.4	21 35.46	− 0.25	−29.58	−29.45	4 21 5.69	+ 0.05
	40	α Tauri	S.	48.7	51.4	53.0	59.4	1.4	3.5	9.9	11.6	14.1	29 1.44	− 0.26	−29.53	−29.47	4 28 31.63	− 0.04
	41	ε Canis Majoris	E.	49.4	52.3	54.0	1.0	3.4	5.8	12.7	14.4	17.1	54 3.34	− 0.23	−30.33	−30.36	6 53 32.75	− 0.08
	42	δ Canis Majoris	E.	25.1	28.1	29.7	36.5	38.7	41.1	48.0	49.8	52.4	3 38.82	− 0.22	−30.40	−30.40	7 3 8.20	− 0.05
	43	Jupiter I, S.	E.	56.6	59.5	1.0	. .	. .	. .	18.9	20.5	23.2	15 9.85	− 0.19	. .	−30.45	7 14 39.21	. .
	44	Jupiter II, N.	E.	. .	. .	7.5	9.8	12.0	14.2	16.6	. .	. .	15 12.02	− 0.19	. .	−30.45	7 14 41.38	. .
	45	a^2 Geminorum	E.	37.7	40.8	42.5	49.8	52.3	54.7	1.9	3.7	6.8	26 52.24	− 0.18	−30.47	−30.49	7 26 21.57	+ 0.22
	46	β Geminorum	E.	41.5	44.5	46.3	53.2	55.5	57.8	4.8	6.5	9.5	37 55.51	− 0.18	−30.53	−30.53	7 37 24.80	− 0.03
9	47	Sun I, N.	E.	29.7	32.4	33.9	40.4	42.5	44.6	51.0	52.5	55.2	15 42.47	− 0.19	. .	−30.88	9 15 11.40	+65.92
	48	Mercury N.	E.	. .	. .	. .	. .	. .	. .	. .	. .	. .	. . .	. .	. .	. .	. . . .	. .
	49	δ Leonis	E.	32.8	35.4	37.1	43.8	45.9	48.1	54.6	56.5	59.0	7 45.91	− 0.32	−31.15	−31.10	11 7 14.49	− 0.01
	50	β Leonis	E.	47.4	50.1	51.7	58.0	0.2	2.4	8.7	10.2	13.0	43 0.19	− 0.35	−31.29	−31.23	11 43 28.61	+ 0.04

6, 7. Minutes assumed.
11. Transits observed over wires C_5, D_1, and D_2; bisections at D_1 and D_2.
17. Transits observed over wires B_1, C_3, and D_3.
19–23. Entire second assumed.

Number.	Circle Division.	MICROSCOPE MICROMS.				TELESCOPE MICROMETER.						Zenith Point Correction.	Apparent Zenith Distance, South.	Sympiesometer.	Refraction.	Apparent North Polar Distance.	Miscellan's Corrections.
		V.	VI.	VII.	VIII.	Rev.	1.	2.	3.	4.	5.						
	° ′	r. ″	″	″	″							″	° ′ ″		′ ″	° ′ ″	″
1	330 38	10 24.1	16.6	19.2	19.3	36	190	235	. .	215	230	59.0	29 18 22.6	. .	+ 31.3	80 25 15.1	+ 1.5
2	43 16	10 23.5	17.1	19.2	19.2	32	. .	900	. .	935	. .	59.0	316 39 31.8	. .	− 52.6	7 45 0.4	− 1.1
3	335 36	10 26.2	18.2	18.5	19.4	37	630	615	. .	605	550	59.0	24 20 44.7	. .	+ 25.2	75 27 31.1	+ 0.9
4	333 42	10 23.3	15.3	18.7	18.7	33	. .	695	. .	673	. .	59.0	26 13 42.9	. .	+ 27.5	77 20 31.6	+ 0.9
5	348 50	10 24.5	17.0	20.2	19.8	32	472	. .	. .	520	. .	59.0	11 5 26.1	. .	+ 10.9	62 11 58.2	+ 0.9
6																	
7																	
8	313 44	14.1	6.6	12.5	9.0	30	. .	635	. .	700	. .	57.9	46 11 17.0	. .	+ 58.1	97 18 36.3	+ 0.8
9	331 22	25.9	18.0	20.8	20.2	36	. .	465	. .	475	. .	57.9	28 34 56.8	. .	+ 30.4	79 41 48.4	− 0.5
10	30 58	18.5	10.9	11.7	14.4	34	. .	. .	. .	980	835	57.9	328 57 40.8	. .	− 33.6	20 3 28.4	− 3.7
11	49 56	14.0	6.9	9.7	10.6	33	. .	. .	960	930	. .	57.9	309 59 24.0	. .	− 1 6.6	1 4 38.6	− 2.2
12	38 20	15.4	8.0	10.3	11.7	31	. .	. .	. .	285	320	57.9	321 35 57.8	. .	− 44.3	12 41 34.7	− 2.7
13	38 20	15.4	8.0	10.3	11.7	31	. .	. .	. .	620	. .	57.9	321 35 2.6	. .	− 44.3	12 40 39.5	+ 2.1
14																	
15	311 36	8 11.1 12 11.6	3.8 3.2	4.8 5.2	7.0 5.8	33	. .	250	. .	200	. .	57.9	48 20 22.2	. .	+ 1 2.7	99 27 46.1	− 0.2
16	350 44	12 7.5	29.2	1.2	2.7	29	. .	835	. .	755	. .	57.9	9 11 25.9	. .	+ 9.0	60 17 56.1	− 0.4
17	43 16	17.3	10.3	11.8	13.1	33	. .	. .	390	. .	. .	59.0	316 39 32.4	. .	− 51.5	7 45 2.1	+ 1.1
18	32 58	3.1	26.6	26.4	27.9	35	. .	870	. .	880	. .	59.0	326 58 26.0	. .	− 35.5	18 4 11.7	+15.2
19																	
20	41 0	27.1	20.8	21.3	21.3	32	. .	030	. .	070	. .	59.0	318 55 23.2	. .	− 47.7	10 0 56.7	+13.2
21	41 0	27.1	20.8	21.3	21.3	31	. .	350	. .	440	. .	59.0	318 55 11.5	. .	− 47.7	10 0 45.0	+13.2
22	33 42	21.7	16.0	16.1	16.6	32	. .	815	. .	825	. .	59.0	326 13 28.4	. .	− 36.6	17 19 13.0	+12.9
23	38 28	11 2.7	26.2	27.0	27.8	32	. .	315	. .	290	. .	59.0	321 27 32.5	. .	− 43.3	12 23 10.4	+12.6
24																	
25	301 54	11 6.3	28.0	29.2	1.3	37	. .	580	. .	610	. .	59.0	58 2 55.0	. .	+ 1 27.7	109 10 43.9	+ 3.0
26																	
27	37 20	26.9	19.4	20.8	22.3	34	. .	750	. .	770	. .	59.0	322 36 2.7	. .	− 42.0	13 41 41.9	+ 9.6
28	32 22	27.2	21.5	21.5	22.6	38	. .	310	. .	310	. .	59.0	327 34 59.0	. .	− 34.9	18 40 45.3	+ 9.5
29	327 8	2.1	23.8	25.7	27.2	33	. .	. .	. .	375	. .	59.0	32 47 46.3	. .	+ 35.4	83 54 42.9	+ 1.5
30																	
31																	
32																	
33	353 12	10 29.1	21.7	25.5	25.0	32	. .	. .	. .	132	142	59.6	6 43 26.3	. .	+ 6.5	57 49 54.0	+ 1.1
34	337 44	22.8	17.7	20.2	19.3	32	002	012	. .	. .	. .	59.6	22 11 19.3	. .	+ 21.9	73 18 2.4	
35	337 12	27.8	21.0	23.8	23.6	30	. .	. .	. .	405	388	59.6	22 42 57.8	. .	+ 22.5	73 49 41.5	
36																	
37																	
38																	
39																	
40																	
41	292 16	21.9	8.0	18.0	13.2	31	538	555	. .	550	610	61.6	67 39 8.8	. .	+ 2 12.0	118 47 42.0	− 2.0
42	294 54	27.7	14.7	24.0	20.0	38	145	150	. .	230	260	61.6	65 2 57.0	. .	+ 1 56.8	116 11 15.0	+ 0.7
43	343 26	27.8	13.7	24.1	17.5	33	700	. .	. .	. .	535	61.6	16 29 46.4	. .	+ 16.2	67 36 23.8	
44	343 26	27.8	13.7	24.1	17.5	31	840	. .	. .	. .	795	61.6	16 29 18.6	. .	+ 16.2	67 35 56.0	
45	353 12	28.6	15.6	25.8	20.2	32	120	125	. .	175	180	61.6	6 43 25.7	. .	+ 6.4	57 49 53.3	+ 0.2
46	349 22	29.4	16.0	26.0	19.1	31	789	755	. .	793	765	61.6	10 33 20.0	. .	+ 10.2	61 39 51.4	− 0.3
47	337 10	27.6	13.5	20.9	16.2	34	407	459	. .	. .	. .	61.6	22 45 28.0	. .	+ 22.7	73 52 11.9	
48	328 16	26.8	14.7	24.0	19.5	31	270	. .	. .	. .	. .	61.6	31 39 11.7	. .	+ 33.2	82 46 5.1	
49	342 16	27.0	14.0	23.8	19.1	32	562	592	. .	568	588	61.6	17 39 30.5	. .	+ 17.1	68 46 8.9	+ 1.7
50	336 20	24.7	11.8	20.8	17.0	33	. .	265	. .	268	. .	61.6	23 35 38.6	. .	+ 23.5	74 42 23.3	+ 2.9

No.	Barom.	At. Ther.	Ex. Ther.
	in.	°	°
5	30.036	75.0	72.0
8	30.140	77.0	74.0
11	30.146	76.0	73.0
14	. .	. .	72.7
16	30.082	75.5	72.0
17	29.854	80.0	80.5
19	29.883	80.0	79.0
22	. .	. .	79.0
24	29.890	79.0	79.0
27	. .	. .	78.0
29	29.895	79.0	77.5
30	29.940	77.0	
32	. .	. .	72.0
34	. .	. .	93.6
35	. .	. .	93.6

For summary of the elements of reduction see page 3.

No.	Parallax.	Semi-diam.	Defective Illumination.	Sum.
	′ ″	′ ″	′ ″	′ ″
34	− 3.3	+ 15 49.5	. .	+ 15 46.2
35	− 3.4	− 15 49.5	. .	− 15 52.9
43	− 0.4	− 13.9	. .	− 14.3
44	− 0.4	+ 13.9	. .	+ 13.5
47	− 3.4	+ 15 48.4	. .	+ 15 45.0
48	− 4.1	+ 3.1	. .	− 1.0

DATE.	Number.	OBJECT.	Observer.	SECONDS OF TRANSIT OVER WIRES.										CORRECTIONS.			Apparent Right Ascension.	Miscellan'us Corrections.
				I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	Mean wire.	Inst.	Clock appar'nt.	Clock adopted.		
1871.													m. s.	s.	s.	s.	h. m. s.	s.
Aug. 9	1	Venus I, N. L. .	E.	2.0	4.7	6.1	12.3	14.4	16.5	22.5	24.0	26.6	56 14.34	− 0.45	. .	−31.28	11 55 42.61	+ 1.09
10	2	γ Geminorum . .	S.	43.9	46.5	48.2	54.5	56.7	58.8	5.1	6.7	9.4	30 56.64	− 0.31	−40.83	−40.90	6 30 15.43	− 0.10
	3	δ Canis Majoris. .	F.	. .	. .	. .	. .	. .	. .	. .	. .	. .	. . .	. .	. .	. .	. . . .	. .
	4	α^2 Geminorum . .	F.	. .	. .	. .	. .	. .	. .	. .	. .	. .	. . .	. .	. .	. .	. . . .	. .
	5	β Geminorum . .	F.	52.6	55.2	57.0	4.0	6.2	8.5	15.6	17.2	20.1	38 6.27	− 0.27	−41.16	−41.14	7 38 24.86	− 0.01
11	6	Sun I, N. . . .	F.	16.6	19.4	20.6	27.0	29.1	31.6	37.6	39.4	42.0	23 29.26	− 0.31	. .	−41.53	9 22 47.42	. .
	7	Sun II, S. . . .	F.	30.3	31.8	36.3	38.5	40.6	42.6	44.8	49.1	50.8	25 40.53	− 0.31	. .	−41.53	9 24 58.69	. .
	8	Mercury I, N. . .	F.	46.3	48.9	50.5	56.6	58.6	0.7	7.0	8.5	11.2	0 58.70	− 0.33	. .	−41.90	11 0 16.47	+ 0.21
	9	δ Leonis	F.	43.8	46.3	48.0	54.6	56.8	59.0	5.5	7.2	9.7	7 56.77	− 0.30	−42.03	−41.93	11 7 14.54	+ 0.04
	10	Venus I, N. . .	F.	50.4	53.0	54.5	0.5	2.7	4.8	11.0	12.5	14.9	1 2.70	− 0.36	. .	−42.12	12 0 20.22	+ 1.13
	11	Polaris, S. P. . .	F.	. .	. .	17.0	54.5	30.0	. .	. .	. .	. .	12 54.00	. .	. .	. .	. . . .	. .
	12	α Virginis . . .	F.	54.8	57.4	58.9	5.2	7.3	9.3	15.6	17.2	19.8	19 7.28	− 0.40	−42.59	−42.42	13 18 24.46	+ 0.15
	13	B. A. C. 6510 . .	F.	7.1	14.8	19.5	38.5	45.0	51.4	10.1	15.0	22.8	56 44.91	− 0.18	. .	−43.68	18 56 1.41	− 3.15
	14	d Sagittarii . . .	F.	38.7	41.4	43.0	49.5	51.7	53.8	0.5	1.9	4.5	10 51.67	− 0.51	−43.76	−43.75	19 10 7.43	+ 0.03
	15	B. A. C. 6625 . .	F.	48.0	59.0	5.3	31.5	39.8	48.6	14.1	21.0	32.1	14 39.96	+ 0.38	. .	−43.75	19 13 56.59	− 4.19
	16	B. A. C. 6702 . .	F.	2.4	13.1	19.7	. .	. .	. .	28.7	35.2	46.0	26 54.18	+ 0.38	. .	−43.80	19 26 10.76	− 4.33
	17	B. A. C. 6752 . .	F.	51.2	59.0	3.8	23.3	29.4	35.6	55.0	59.8	7.6	36 29.41	+ 0.08	. .	−43.85	19 35 45.64	− 3.55
	18	ν Cygni	F.	52.3	55.7	57.7	5.8	8.4	11.2	19.3	21.3	24.7	53 8.49	− 0.26	−43.98	−44.12	20 52 24.11	− 0.08
	19	σ^2 Ursæ Maj., S. P. .	F.	. .	. .	54.9	49.5	43.9	38.4	33.2	. .	. .	59 43.98	− 0.82	. .	−44.14	8 58 59.02	+ 0.27
	20	61^1 Cygni	F.	38.4	41.7	43.5	51.5	54.0	56.5	4.5	6.4	9.6	1 54.01	− 0.26	−44.28	−44.15	21 1 9.60	+ 0.09
	21	ζ Cygni	F.	59.4	2.2	4.0	11.0	13.3	15.8	22.8	24.6	27.6	8 13.41	− 0.31	−44.09	−44.17	21 7 8.93	− 0.07
	22	1 Pegasi	F.	41.0	43.6	45.3	51.8	54.0	56.1	2.6	4.2	7.0	16 53.96	− 0.35	−44.17	−44.21	21 16 9.40	− 0.09
	23	d Ursæ Maj., S. P. .	F.	. .	. .	57.0	51.2	45.2	38.9	32.8	. .	. .	23 45.02	− 0.92	. .	−44.24	9 22 59.86	+ 0.25
	24	β Cephei	F.	11.4	18.8	23.3	41.2	47.3	53.5	11.2	15.6	23.3	27 47.29	− 0.15	. .	−44.25	21 27 2.89	− 0.21
	25	ξ Aquarii. . . .	F.	27.7	30.3	31.7	37.9	40.0	42.0	48.2	49.7	52.2	31 39.97	− 0.49	−44.25	−44.27	21 30 55.21	0.00
	26	ε Pegasi	F.	25.5	28.0	29.5	35.8	37.8	39.9	46.0	47.6	50.1	38 37.80	− 0.42	−44.16	−44.29	21 37 53.07	− 0.12
	27	ζ Pegasi	F.	36.1	38.8	40.3	46.6	48.7	50.7	57.0	58.5	1.0	35 48.63	− 0.40	−44.42	−44.50	22 35 3.73	− 0.02
	28	ι Cephei	F.	23.8	29.9	33.5	48.3	53.4	58.3	13.0	16.7	23.0	45 53.32	+ 0.03	. .	−44.54	22 45 8.81	− 0.11
12	29	κ Ophiuchi . . .	S.	11.6	14.4	15.9	22.0	24.1	26.2	32.4	33.9	36.6	52 24.12	− 0.43	+48.51	−48.48	16 51 35.21	+ 0.07
	30	ε Ursæ Minoris. .	S.	. .	. .	. .	51.3	5.9	21.0	. .	. .	. .	0 6.01	+ 0.83	. .	−48.53	16 59 18.31	− 0.75
	31	B. A. C. 5828 . .	S.	20.7	23.6	25.3	32.1	34.4	36.5	43.4	45.0	48.0	10 34.33	− 0.36	. .	−48.56	17 9 45.41	− 1.34
	32	B. A. C. 6073 . .	S.	50.0	52.9	54.6	1.4	3.7	6.0	12.8	14.5	17.4	51 3.70	− 0.36	. .	−48.70	17 50 14.64	− 1.63
	33	B. A. C. 6150 . .	S.	7.5	10.4	12.2	19.2	21.5	23.9	30.9	32.5	35.5	3 21.51	− 0.34	. .	−48.75	18 2 32.42	− 1.70
	34	Saturn I, S. R. .	S.	1.3	4.3	6.0	. .	. .	. .	23.8	. .	28.0	17 14.78	− 0.58	. .	−48.80	18 16 25.40	. .
	35	Saturn II, N. R. .	S.	. .	. .	11.5	13.8	16.0	18.2	20.4	. .	. .	17 15.98	− 0.58	. .	−48.80	18 16 26.60	. .
	36	1 Aquilæ. . . .	S.	50.2	52.8	54.4	0.5	2.6	4.7	11.0	12.4	15.0	29 2.62	− 0.51	−48.91	−48.85	18 28 13.26	+ 0.13
	37	α Lyræ	S.	9.3	12.8	14.9	22.6	25.3	27.8	35.8	37.6	41.0	33 25.23	− 0.29	−48.78	−48.86	18 32 36.08	− 0.06
	38	51 Cephei, S. P. .	S.	. .	. .	. .	. .	. .	4.0	11.0	41.0	13.5	39 50.02	. .	. .	. .	. . . .	. .
	39	Anonymous . .	S.	19.2	30.5	37.4	55.4	13.0	31.0	49.0	7.2	. .	14 31.18	+ 0.32	. .	−49.00	19 13 42.50	− 4.24
	40	B. A. C. 6625 . .	S.	53.3	4.2	10.8	36.8	45.2	53.8	20.2	26.9	37.4	14 45.40	− 0.29	. .	−49.00	19 13 56.69	− 4.13
	41	δ Aquilæ. . . .	S.	. .	. .	47.0	49.2	51.1	53.3	55.3	. .	. .	19 51.18	− 0.46	−49.00	−49.02	19 19 1.66	+ 0.03
	42	B. A. C. 6702 . .	S.	7.6	18.7	24.8	50.6	59.0	8.0	34.0	40.2	51.2	26 59.34	+ 0.29	. .	−49.05	19 26 10.58	− 4.28
	43	B. A. C. 6752 . .	S.	56.3	4.5	9.0	28.3	34.8	40.8	0.2	4.9	12.8	36 34.62	+ 0.07	. .	−49.07	19 35 45.62	− 3.51
13	44	α Canis Majoris. .	E.	12.0	14.6	16.2	22.6	24.7	26.8	33.2	34.8	37.4	40 24.70	− 0.45	−56.76	−56.80	6 39 27.45	+ 0.04
	45	ε Canis Majoris. .	E.	16.2	19.2	21.0	28.0	30.3	32.6	39.7	41.3	44.1	54 30.27	− 0.51	−56.87	−56.85	6 53 32.91	− 0.03
	46	α^2 Geminorum . .	E.	4.5	7.7	9.3	16.6	18.9	21.3	28.6	30.6	33.5	27 19.00	− 0.30	−57.00	−56.94	7 26 21.76	+ 0.30
	47	α Canis Minoris .	E.	17.7	20.2	21.9	27.9	30.0	32.1	38.2	3.98	42.3	33 30.01	− 0.39	−57.03	−56.97	7 32 32.65	− 0.08

2, 29–43. Microscope VII out of focus.
11. Very hazy.
23, 24, 30, 39, 40, 42, 43. Bisections at sets B and D.

Number.	Circle Division.	MICROSCOPE MICROMS.				TELESCOPE MICROMETER.						Zenith Point Correction.	Apparent Zenith Distance, South.	Sympiesometer.	Refraction.	Apparent North Polar Distance.	Miscellan'us Corrections.
		V.	VI.	VII.	VIII.	Rev.	1.	2.	3.	4.	5.						
	° ′	r. ″	″	″	″							″	° ′ ′		′ ″	° ′ ″	″
1	318 46	27.8	15.0	24.5	20.1	32	100	098	. .	220	200	61.6	41 9 24.7	. .	+ 46.9	92 16 32.8	
2	337 34	9	28.9	. .	2.5	38	. .	630	. .	610	. .	62.5	22 22 47.6	. .	+ 22.6	73 29 31.4	− 0.8
3	294 54	8.6	24.5	2.9	0.7	39	418	426	. .	. .	. .	62.5	65 2 56.8	. .	+ 1 56.8	116 11 14.8	+ 0.9
4	353 12	10 14.2	0.3	9.5	5.8	33	995	035	. .	092	110	62.5	6 43 25.4	. .	+ 6.4	57 49 53.0	− 0.2
5	349 22	10 15.4	0.7	10.8	6.3	32	. .	790	. .	812	. .	62.5	10 33 22.1	. .	+ 10.1	61 39 53.4	+ 1.6
6	336 36	10 20.8	7.5	12.2	15.5	45	152	158	. .	. .	. .	62.5	23 20 38.0	. .	+ 23.2	74 27 22.4	
7	336 4	10 19.5	5.2	14.5	8.5	43	. .	. .	. .	495	515	62.5	23 52 9.7	. .	+ 23.8	74 58 54.7	
8	326 58	18.4	3.9	15.6	10.4	36	. .	346	. .	486	. .	62.5	32 58 21.3	. .	+ 35.0	84 5 17.5	
9	342 16	10 5.7	23.5	1.6	29.6	33	. .	892	. .	900	. .	62.5	17 39 30.7	. .	+ 17.1	68 46 9.0	+ 1.7
10	317 58	10 18.5	6.7	14.1	10.3	39	250	284	. .	324	382	62.5	41 59 6.1	. .	+ 48.7	93 6 16.0	
11	52 24	18.6	5.8	16.3	13.3	34	. .	620	680	692	. .	62.5	307 31 55.7	. .	− 1 10.4	358 37 6.5	+ 0.2
12	310 34	19.8	5.2	7.5	13.7	34	. .	508	. .	500	. .	62.5	49 21 51.3	. .	+ 1 3.0	100 29 15.5	− 0.3
13	32 10	9.0	25.6	2.7	27.9	37	. .	874	. .	874	. .	63.2	327 46 34.6	. .	− 34.8	18 52 21.0	+12.9
14	301 54	10 25.6	10.5	18.9	13.6	38	. .	225	. .	215	. .	63.2	58 2 54.7	. .	+ 1 28.3	109 10 44.2	+ 3.3
15	37 22	10 18.2	3.9	12.4	11.5	33	. .	990	. .	140	. .	63.2	322 33 30.3	. .	− 42.3	13 39 9.2	+11.8
16	37 20	12.3	27.8	0.9	0.0	35	. .	600	. .	580	. .	63.2	322 36 0.3	. .	− 42.3	13 41 39.2	+11.2
17	32 22	15.5	2.7	9.6	4.3	39	. .	958	. .	978	. .	63.2	327 34 58.2	. .	− 35.1	18 40 44.3	+11.0
18	1 42	10 21.1	8.6	16.3	4.9	31	. .	845	. .	848	. .	63.2	358 13 12.6	. .	− 1.8	49 19 31.9	0.0
19	73 20	10 8.4	24.3	1.0	1.8	35	. .	. .	840	. .	. .	63.2	286 36 2.5	. .	− 3 3.6	337 39 20.1	+ 3.9
20	359 10	14.7	0.6	8.0	1.8	37	. .	. .	. .	284	300	63.2	0 46 30.1	. .	+ 0.8	51 52 52.1	+ 2.3
21	350 44	16.0	0.2	8.8	2.5	33	. .	935	. .	940	. .	63.2	9 11 23.6	. .	+ 9.0	60 17 53.8	− 0.3
22	340 18	10 16.0	2.9	9.6	4.3	35	. .	940	. .	930	. .	63.2	19 37 55.5	. .	+ 19.8	70 44 36.5	+ 1.3
23	70 36	14.7	0.7	9.1	4.9	35	. .	140	. .	150	. .	63.2	289 19 57.7	. .	− 2 36.7	340 23 42.2	+ 1.5
24	31 2	16.0	2.1	8.9	3.7	37	. .	010	. .	018	. .	63.2	328 54 27.1	. .	− 33.5	20 0 14.8	− 0.7
25	312 38	22.1	8.1	15.6	8.3	36	. .	270	. .	220	. .	63.2	47 18 20.8	. .	+ 1 0.1	98 25 42.1	+ 0.6
26	330 20	13.4	29.2	6.6	3.6	34	. .	935	. .	921	. .	63.2	29 35 52.8	. .	+ 31.6	80 42 45.6	+ 1.4
27	331 12	10 24.5	11.1	18.4	13.2	32	. .	580	. .	602	. .	63.2	28 43 28.1	. .	+ 30.5	79 50 19.8	+ 2.1
28	26 34	18.7	3.9	11.7	8.6	38	. .	000	. .	056	. .	63.2	333 22 46.2	. .	− 27.9	24 28 39.5	− 0.1
29	330 38	10 25.8	. .	20.2	. .	36	155	130	. .	160	110	57.4	29 18 22.9	. .	+ 30.7	80 25 14.8	+ 2.1
30	43 16	23.8	. .	19.6	. .	32	. .	. .	810	855	760	57.4	316 39 30.8	. .	− 51.7	7 44 0.3	+ 0.1
31	346 2	26.8	. .	22.2	. .	33	. .	485	. .	480	. .	57.4	13 53 43.7	. .	+ 13.6	65 0 18.5	+11.0
32	347 8	27.9	. .	24.0	. .	38	085	090	. .	125	120	57.4	12 48 56.3	. .	+ 12.5	63 55 30.0	+11.4
33	349 47	8 24.8 12 25.0	. . . .	20.2 19.2	. .	32	720	735	. .	765	740	57.4	10 8 30.3	. .	+ 9.9	61 15 1.4	+11.6
34	298 20	10 26.5	. .	20.2	. .	32	815	. .	. .	. .	810	57.4	61 35 31.9	. .	+ 1 41.6	112 43 34.7	
35	298 20	10 26.5	. .	20.2	. .	31	. .	455	. .	455	. .	57.4	61 35 11.2	. .	+ 1 41.6	112 43 14.0	
36																	
37	359 42	10 27.8	. .	22.4	. .	32	. .	705	. .	695	. .	57.4	0 13 32.4	. .	+ 0.2	51 19 53.8	+ 1.0
38	53 46	26.1	. .	21.8	. .	30	. .	905	850	750	770	57.4	306 9 1.2	. .	− 1 15.5	357 14 6.9	+ 0.5
39	37 54	23.3	. .	18.0	. .	36	. .	750	. .	730	. .	57.4	322 2 29.9	. .	− 43.2	13 8 7.9	+12.1
40	37 22	24.5	. .	18.5	. .	32	. .	750	. .	755	. .	57.4	322 33 29.6	. .	− 42.4	13 39 8.4	+12.1
41	323 54	24.4	. .	18.3	. .	31	. .	. .	. .	890	860	57.4	36 1 15.8	. .	+ 40.2	87 8 17.2	+ 0.9
42	37 20	21.8	. .	15.8	. .	34	. .	945	. .	960	. .	57.4	322 36 0.7	. .	− 42.3	13 41 39.6	+11.5
43	32 22	26.5	. .	20.0	. .	38	. .	305	. .	295	. .	57.4	327 34 56.5	. .	− 35.1	18 40 42.6	+11.3
44	304 32	26.5	12.2	21.4	20.1	37	205	210	. .	180	200	59.6	55 24 38.3	. .	+ 1 20.0	106 32 19.5	− 0.7
45	292 16	22.0	8.9	16.4	13.8	31	565	602	. .	605	570	59.6	67 39 7.2	. .	+ 2 12.2	118 47 40.6	− 2.3
46	353 12	28.6	14.0	23.8	20.7	32	278	. .	. .	. .	250	59.6	6 43 24.8	. .	+ 6.5	57 49 52.5	− 0.9
47	326 36	19.0	5.6	16.4	11.6	34	270	252	. .	260	268	59.6	33 19 46.5	. .	+ 36.0	84 26 43.7	− 0.6

No.	Barom.	At. Ther.	Ex. Ther.
	in.	°	°
2	. .	. .	80.5
5	30.030	77.0	86.6
7	30.024	78.5	91.0
10	30.004	80.0	88.0
11	. .	. .	87.5
13	30.006	78.5	77.0
17	. .	. .	76.0
26	30.006	77.0	74.0
28	30.010	76.0	73.0
29	. .	. .	83.0
31	30.026	81.0	
32	. .	. .	78.5
36	. .	. .	77.7
38	30.045	79.0	
40	. .	. .	76.5
42	. .	. .	77.0
43	30.046	79.0	77.0

For summary of the elements of reduction see page 3.

No.	Parallax.	Semi-diam.	Defective Illumination.	Sum.
	′ ″	′ ″	′ ″	′ ″
1	− 11.1	+ 16.4	. .	+ 5.3
6	− 3.5	+ 15 46.1	. .	+ 15 42.6
7	− 3.5	− 15 46.2	. .	− 15 49.7
8	− 4.5	+ 3.1	. .	− 1.4
10	− 11.6	+ 16.9	. .	+ 5.3
34	− 0.9	− 10.3	. .	− 11.2
35	− 0.8	+ 10.3	. .	+ 9.5

DATE.	Number.	OBJECT.	Observer.	SECONDS OF TRANSIT OVER WIRES.										CORRECTIONS.			Apparent Right Ascension.	Miscellan'us Corrections.
				I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	Mean wire.	Inst.	Clock appar'nt.	Clock adopted.		
1871.													m. s.	s.	s.	s.	h. m. s.	s.
Aug. 14	1	Sun I, N. . . .	E.	51.5	54.3	55.7	2.1	4.3	6.5	12.7	14.3	17.0	35 4.27	− 0.36	. .	−57.44	9 34 6.47	. .
	2	Sun II, S. . . .	E.	2.5	5.3	6.8	13.0	15.2	17.4	23.8	25.4	27.8	37 15.24	− 0.36	. .	−57.44	9 36 17.44	. .
	3	B. A. C. 5871 . .	E.	25.8	29.4	31.7	40.5	43.5	46.5	55.4	57.6	1.3	17 43.52	− 0.36	. .	−59.08	17 16 44.08	− 1.44
	4	B. A. C. 5962 . .	E.	29.0	32.0	33.8	41.0	43.3	45.7	52.8	54.6	57.7	32 43.32	− 0.38	. .	−57.14	17 31 45.80	− 1.52
	5	μ Herculis . . .	E.	. .	. .	. .	. .	. .	. .	. .	. .	. .	. . .	. .	. .	. .	. . . .	. .
	6	B. A. C. 6073 . .	E.	0.4	3.3	5.0	11.9	14.2	16.5	23.3	25.0	28.0	51 14.18	− 0.40	. .	−59.22	17 50 14.56	− 1.61
	7	B. A. C. 6114 . .	E.	21.5	22.9	29.7	7.0	15.6	24.5	51.8	58.7	10.0	56 15.74	− 0.17	. .	−59.24	17 55 16.33	− 2.84
	8	B. A. C. 6185 . .	E.	33.2	37.6	40.4	50.9	54.4	58.0	8.5	11.1	15.5	8 54.40	− 0.34	. .	−59.28	18 7 54.78	− 1.86
	9	B. A. C. 6206 . .	E.	. .	. .	. .	. .	. .	. .	31.1	40.0	54.5	10 44.05	− 0.08	. .	−59.29	18 9 44.68	− 3.72
	10	B. A. C. 6208 . .	E.	. .	. .	. .	. .	. .	. .	37.8	46.0	0.6	10 50.29	− 0.08	. .	−59.29	18 9 50.92	− 3.72
	11	δ Ursæ Minoris. .	E.	. .	55.5	30.5	4.5	40.0	14.0	23.0	48.0	32.0	15 4.82	. .	. .	. .	. . . .	. .
	12	1 Aquilæ	E.	0.5	3.2	4.8	11.0	13.0	15.1	21.2	22.9	25.4	29 13.01	− 0.47	−59.36	−59.35	18 28 13.19	+ 0.08
	13	β Lyræ	E.	. .	. .	. .	. .	. .	. .	. .	. .	. .	. . .	. .	. .	. .	. . . .	. .
	14	δ Canis Majoris .	F.	57.2	0.2	1.9	8.5	10.9	13.2	20.0	21.8	24.7	4 10.93	− 0.50	−62.11	−61.96	7 3 8.47	+ 0.10
	15	Jupiter I, N. . .	F.	49.2	52.0	53.6	. .	. .	. .	11.4	13.2	16.0	21 2.57	− 0.40	. .	−62.03	7 20 0.14	. .
	16	Jupiter II, S. . .	F.	. .	. .	0.4	2.4	4.6	7.0	9.2	. .	. .	21 4.72	− 0.40	. .	−62.03	7 20 2.29	. .
	17	α² Geminorum . .	F.	9.6	12.7	14.5	21.6	24.1	26.6	33.8	35.6	38.5	27 24.11	− 0.37	−62.01	−62.05	7 26 21.69	+ 0.20
	18	α Canis Minoris .	F.	23.0	25.5	27.1	33.0	35.1	37.2	43.4	45.0	47.4	33 35.20	− 0.43	−62.16	−62.08	7 32 32.69	− 0.06
	19	β Geminorum . .	F.	13.6	16.4	18.0	25.0	27.4	29.8	36.8	38.4	41.3	38 27.41	− 0.38	−62.10	−62.10	7 37 24.93	− 0.03
15	20	Sun I, S. . . .	F.	42.2	44.8	46.5	52.7	54.8	57.0	3.3	5.0	7.6	38 54.88	− 0.41	. .	−62.54	9 37 51.93	. .
	21	Sun II, N. . . .	F.	55.8	57.3	1.5	3.7	5.8	7.9	10.0	14.2	15.7	41 5.77	− 0.41	. .	−62.54	9 40 2.82	. .
	22	δ Leonis	F.	4.5	7.4	9.0	15.6	17.8	19.9	26.3	28.0	30.4	8 17.66	− 0.39	−62.83	−62.88	11 7 14.39	− 0.11
	23	Mercury I, N. . .	F.	49.1	51.7	53.4	59.3	1.4	3.5	9.6	11.0	13.8	19 1.42	− 0.43	. .	−62.92	11 17 58.07	+ 0.22
	24	Venus I, N. . .	F.	37.8	40.4	41.8	48.0	50.0	52.1	58.2	59.7	2.2	9 50.02	− 0.44	. .	−63.11	12 8 46.47	+ 1.20
	25	Polaris, S. P. . .	F.	. .	. .	6.0	38.0	16.0	53.0	27.0	. .	. .	13 16.17	. .	. .	. .	. . . .	. .
	26	α Virginis . . .	F.	15.8	18.4	19.8	26.0	28.1	30.1	36.5	38.0	40.6	19 28.14	− 0.46	−63.44	−63.38	13 18 24.30	+ 0.04
	27	Saturn I, N. . .	F.	. .	. .	57.0	59.1	1.5	3.6	5.8	. .	. .	17 1.40	− 0.46	. .	−64.48	18 15 56.46	. .
	28	Saturn II, S. . .	F.	. .	. .	. .	. .	. .	. .	11.6	13.4	16.0	17 2.82	− 0.46	. .	−64.48	18 15 57.88	. .
	29	1 Aquilæ	F.	5.8	8.3	9.9	16.1	18.2	20.3	26.5	28.0	30.5	29 18.18	− 0.42	−64.59	−64.53	18 28 13.23	+ 0.13
	30	α Lyræ	F.	28.4	30.4	35.7	38.4	40.9	43.6	46.0	51.5	53.4	33 40.92	− 0.29	−64.53	−64.54	18 32 36.09	+ 0.01
	31	B. A. C. 6417 . .	F.	47.7	. .	22.4	15.6	32.7	49.8	42.0	55.0	16.7	41 32.45	+ 0.32	. .	−64.58	18 40 27.55	− 6.50
	32	B. A. C. 6469 . .	F.	22.7	31.8	37.4	59.8	7.0	14.5	36.6	41.8	51.2	50 6.98	− 0.07	. .	−64.62	18 49 2.29	− 3.29
	33	β Aquilæ	F.	53.6	56.2	57.7	3.8	5.9	7.9	14.0	15.7	18.1	50 5.88	− 0.38	64.82	−64.84	19 49 0.66	+ 0.01
	34	λ Ursæ Minoris. .	F.	. .	. .	. .	. .	0.0	49.0	41.0	. .	. .	55 1.38	. .	. .	. .	. . . .	. .
	35	20 Vulpeculæ. . .	F.	29.8	32.8	34.5	41.2	43.5	45.7	52.6	54.3	57.2	7 43.51	− 0.33	. .	−64.90	20 6 38.28	− 2.11
	36	π Capricorni. . .	F.	. .	. .	. .	. .	. .	. .	12.4	14.0	16.7	21 3.76	− 0.45	−64.82	−64.95	20 19 58.36	− 0.10
	37	ε Delphini . . .	F.	58.0	0.5	2.0	8.3	10.4	12.5	18.7	20.4	23.0	28 10.42	− 0.37	−64.91	−64.98	20 27 5.07	− 0.02
	38	α Cygni	F.	52.6	56.1	58.3	6.7	9.7	12.7	21.2	23.4	27.0	38 9.74	− 0.27	. .	−65.02	20 37 4.45	+ 0.01
	39	μ Capricorni. . .	F.	11.0	13.6	15.2	21.7	23.8	25.8	32.1	33.7	36.2	47 23.68	− 0.43	−65.24	−65.29	21 46 17.96	− 0.02
	40	α Canis Majoris. .	S.	22.3	25.0	26.5	33.0	35.1	37.3	43.6	45.3	48.0	40 35.12	− 0.33	−67.41	−67.34	6 39 27.45	0.00
	41	α Geminorum . .	S.	. .	. .	. .	. .	. .	. .	. .	. .	. .	. . .	. .	. .	. .	. . . .	. .
	42	α Canis Minoris .	S.	28.0	30.7	32.2	38.4	40.5	42.5	48.6	50.3	52.8	33 40.44	− 0.26	−67.55	−67.55	7 32 32.63	− 0.14
	43	β Geminorum . .	S.	18.8	21.7	23.4	30.4	32.7	35.0	42.0	43.8	46.6	38 32.71	− 0.21	−67.55	−67.57	7 37 24.93	− 0.05
16	44	Sun I	S.	32.5	35.0	36.6	43.0	45.1	47.2	53.4	55.0	57.5	42 45.03	− 0.24	. .	−68.03	9 41 36.76	. .
	45	Sun II, N. . . .	S.	42.9	45.6	47.4	53.7	55.8	57.9	4.1	5.7	8.4	44 55.72	− 0.24	. .	−68.03	9 43 47.45	. .
	46	Polaris, S.P. . .	S.	. .	. .	10.5	45.0	22.0	55.0	30.0	. .	. .	13 20.50	− 1.21	. .	−68.81	1 12 10.48	− 1.29
	47	α Ophiuchi . . .	S.	55.9	58.4	0.1	6.3	8.4	10.5	16.8	18.3	21.0	30 8.41	− 0.31	−69.75	−69.77	17 28 58.33	+ 0.01
	48	μ Herculis . . .	S.	22.2	25.3	27.0	34.0	36.2	38.5	45.5	47.2	50.0	42 36.21	− 0.28	−69.78	−69.82	17 41 26.11	− 0.04
	49	B. A. C. 6114 . .	S.	32.0	43.1	50.0	17.4	26.2	35.1	2.6	9.5	20.8	56 26.30	− 0.16	. .	−69.87	17 55 16.27	− 2.67

12, 31, 49. Bisections at sets B and D.

13. Telescope micrometer reading diminished by one revolution in reduction.

Number.	Circle Division.	MICROSCOPE MICROMS.				TELESCOPE MICROMETER.						Zenith Point Correction.	Apparent Zenith Distance, South.	Sympiesometer.	Refraction.	Apparent North Polar Distance.	Miscellan'us Corrections.
		V.	VI.	VII.	VIII.	Rev.	1.	2.	3.	4.	5.						
	° ′	r. ″	″	″	″							″	° ′ ″		′ ″	° ′ ″	″
1	335 42	10 23.2	10.4	19.8	16.5	38	745	720	. .	. .	. .	59.6	24 14 50.0	. .	+ 24.2	75 21 45.4	
2	335 10	10 24.8	11.0	21.9	16.0	37	. .	. .	. .	460	435	59.6	24 46 40.3	. .	+ 24.8	75 53 26.3	
3	7 24	24.5	10.6	20.8	16.1	32	. .	435	. .	405	. .	60.2	352 31 23.6	. .	− 7.2	43 37 37.6	+15.0
4	351 54	11 0.3	15.1	24.8	19.8	31	. .	840	. .	855	. .	60.2	8 1 19.5	. .	+ 7.8	59 7 48.5	+12.2
5	348 50	22.8	13.5	16.8	11.5	32	. .	. .	. .	615	620	60.2	11 5 25.0	. .	+ 10.8	62 11 57.0	+ 1.5
6	347 8	10 27.2	13.2	21.7	15.8	38	. .	185	. .	145	. .	60.2	12 48 53.5	. .	+ 12.5	63 55 27.2	+11.7
7	38 0	25.0	11.0	18.6	13.3	32	. .	470	. .	482	. .	60.2	321 55 24.8	. .	− 43.1	13 1 2.9	+15.4
8	15 16	27.3	13.4	22.5	17.0	29	. .	460	. .	530	. .	60.2	344 38 41.3	. .	− 15.1	35 44 47.4	+15.0
9																	
10																	
11	47 38	27.4	13.8	22.5	17.5	34	. .	642	. .	650	. .	60.2	312 18 0.2	. .	− 1 0.4	3 23 21.0	− 2.3
12	312 44	29.2	15.0	26.0	19.2	36	. .	400	. .	378	. .	60.2	47 12 28.9	. .	+ 59.3	98 19 49.4	− 0.1
13	354 16	11 0.0	15.3	24.2	18.8	37	310	270	. .	. .	. .	60.2	5 40 27.5	. .	+ 5.5	56 46 54.2	− 1.2
14	294 54	11 0.2	16.4	24.7	21.8	37	. .	. .	. .	966	930	61.7	65 2 55.0	. .	+ 1 56.3	116 11 12.5	− 0.5
15	343 18	10 16.9	29.5	6.8	4.2	37	. .	. .	. .	576	. .	61.7	16 38 33.2	. .	+ 16.2	67 45 10.6	
16	343 18	16.9	29.5	6.8	4.2	39	. .	. .	. .	. .	366	61.7	16 39 0.9	. .	+ 16.3	67 45 38.4	
17	353 12	23.0	8.8	17.8	11.1	32	. .	660	. .	690	. .	61.7	6 43 26.4	. .	+ 6.4	57 49 54.0	+ 0.5
18	326 36	15.2	0.0	9.8	5.2	34	542	. .	. .	. .	606	61.7	33 19 47.8	. .	+ 35.7	84 26 44.7	+ 0.4
19	349 22	10 4.7	19.7	29.8	24.0	33	. .	554	. .	620	. .	61.7	10 33 22.2	. .	+ 10.1	61 39 53.5	+ 1.5
20	334 50	10 26.4	13.5	21.6	13.6	31	010	954	. .	. .	. .	61.7	25 5 19.8	. .	+ 25.2	76 12 6.2	
21	335 22	11 0.2	14.2	24.6	16.5	33	. .	. .	. .	238	240	61.7	24 33 40.7	. .	+ 24.6	75 40 26.5	
22	342 16	14.7	1.0	9.7	6.4	33	. .	364	. .	372	. .	61.7	17 39 29.7	. .	+ 17.0	68 46 7.9	+ 0.3
23	324 24	15.0	0.3	8.3	6.4	33	382	. .	. .	. .	550	61.7	35 31 30.7	. .	+ 38.0	86 38 29.9	
24	316 22	17.8	2.8	13.2	9.4	38	. .	550	. .	670	. .	61.7	43 34 53.0	. .	+ 50.6	94 42 4.8	
25	52 24	12.7	1.6	9.3	6.3	35	170	100	110	190	210	61.7	307 31 56.4	. .	− 1 9.4	358 37 8.2	+ 0.9
26																	
27	298 20	10 26.6	12.6	19.9	14.1	34	. .	. .	. .	910	. .	60.8	61 35 47.1	. .	+ 1 40.4	112 43 48.7	
28	298 20	26.6	12.6	19.9	14.1	35	. .	. .	. .	. .	224	60.8	61 36 7.1	. .	+ 1 40.4	112 44 8.7	
29	312 44	21.4	7.0	14.5	10.4	37	. .	060	. .	032	. .	60.8	47 12 30.5	. .	+ 58.9	98 19 50.6	+ 1.1
30	359 42	20.7	5.7	13.9	9.0	33	. .	. .	. .	268	256	60.8	0 13 31.8	. .	+ 0.2	51 19 53.2	+ 0.9
31	44 18	25.6	12.0	20.6	14.6	35	. .	216	. .	278	. .	60.8	315 38 8.4	. .	− 53.4	6 43 36.2	+13.7
32	34 58	21.6	7.5	15.5	12.0	34	. .	650	. .	720	. .	60.8	324 57 56.2	. .	− 38.4	16 3 39.0	+14.0
33	327 8	10 29.9	15.4	23.4	20.4	33	. .	410	. .	460	. .	60.8	32 47 44.0	. .	+ 35.2	83 54 40.4	+ 1.3
34	49 56	17.2	12.5	11.1	6.9	32	. .	. .	712	720	680	60.8	309 59 22.6	. .	− 1 5.1	1 4 38.7	+ 2.0
35	347 8	22.3	7.0	15.0	10.0	33	. .	274	. .	262	. .	60.8	12 47 32.9	. .	+ 12.4	63 54 6.5	+11.3
36	302 26	22.2	6.8	14.9	10.0	35	. .	200	. .	206	. .	60.8	57 30 2.2	. .	+ 1 25.5	108 37 48.9	+ 0.1
37	331 56	24.4	10.8	18.8	15.3	38	. .	. .	. .	640	720	60.8	28 0 59.6	. .	+ 29.1	79 7 49.9	0.0
38	5 52	11 0.7	17.6	25.8	19.3	35	. .	730	. .	700	. .	60.8	354 4 20.4	. .	− 5.7	45 10 35.9	− 0.1
39	306 54	29.2	14.9	21.5	17.7	33	378	400	. .	390	390	60.8	53 1 41.7	. .	+ 1 12.8	104 9 15.7	+ 1.0
40	304 32	27.9	11.3	20.8	16.6	37	. .	235	. .	265	. .	62.5	55 24 41.1	. .	+ 1 18.6	106 32 20.9	+ 1.0
41	353 12	28.9	12.6	21.1	14.3	32	. .	. .	. .	415	400	62.5	6 43 27.2	. .	+ 6.4	57 49 54.8	+ 1.2
42	326 36	23.2	8.7	18.2	11.5	34	. .	030	. .	130	. .	62.5	33 19 48.8	. .	+ 35.5	84 26 45.5	+ 1.3
43	349 22	27.2	12.0	23.8	19.3	32	. .	210	. .	150	. .	62.5	10 33 25.0	. .	+ 10.5	61 39 56.7	+ 4.6
44																	
45	335 4	25.6	14.6	21.2	14.8	37	. .	. .	. .	867	928	62.5	24 52 35.4	. .	+ 24.9	75 59 21.5	
46	52 24	22.8	11.2	18.8	13.3	34	545	495	460	510	. .	62.0	307 31 55.6	. .	− 1 9.3	358 37 7.5	0.0
47	333 42	29.9	16.2	23.4	27.2	33	424	433	. .	397	410	61.2	26 13 44.7	. .	+ 26.5	77 20 32.4	+ 3.2
48	348 50	24.7	11.2	18.8	15.0	32	. .	542	. .	563	. .	61.2	11 5 26.2	. .	+ 10.6	62 11 58.0	+ 2.8
49	38 0	25.8	11.8	19.1	17.4	32	. .	480	. .	500	. .	61.2	321 55 26.6	. .	− 42.3	13 1 5.5	+15.7

No.	Barom.	At. Ther.	Ex. Ther.
	in.	°	°
2	. .	. .	93.5
11	30.106	81.5	81.0
15	. .	. .	88.0
19	30.116	80.5	88.7
21	30.096	83.0	93.5
22	. .	. .	98.0
24	. .	. .	97.6
25	30.040	85.0	96.0
28	. .	. .	84.5
32	30.046	84.0	82.5
37	. .	. .	83.0
39	30.044	82.0	86.0
40	30.006	82.0	86.0
43	30.010	82.0	90.0
47	29.920	86.0	
48	. .	. .	88.0

For summary of the elements of reduction see page 3.

No.	Parallax.	Semi-diam.	Defective Illumination.	Sum.
	′ ″	′ ″	′ ″	′ ″
1	− 3.6	+ 15 50.4	. .	+ 15 46.8
2	− 3.7	− 15 50.4	. .	− 15 54.1
15	− 0.4	+ 13.9	. .	+ 13.5
16	− 0.4	− 13.9	. .	− 14.3
20	− 3.7	− 15 49.8	. .	− 15 53.5
21	− 3.6	+ 15 49.8	. .	+ 15 46.2
23	− 5.0	+ 3.3	. .	− 1.7
24	− 10.9	+ 18.0	. .	+ 7.1
27	− 0.8	+ 10.0	. .	+ 9.2
28	− 0.8	− 10.0	. .	− 10.8
45	− 3.7	+ 15 49.3	. .	+ 15 45.6

DATE.	Number.	OBJECT.	Observer.	SECONDS OF TRANSIT OVER WIRES.										CORRECTIONS.			Apparent Right Ascension.	Miscellan'us Corrections.
				I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	Mean wire.	Inst.	Clock appar'nt.	Clock adopted.		
1871.													m. s.	s.	s.	s.	h. m. s.	s.
Aug. 16	1	B. A. C. 6206 . .	S.	45.0	58.9	7.2	43.0	54.6	6.5	41.5	50.8	5.6	10 54.79	− 0.11	. .	−69.92	18 9 44.76	− 3.50
	2	B. A. C. 6208 . .	S.	51.0	5.0	13.8	49.4	0.6	12.7	48.2	57.5	11.6	11 1.09	− 0.11	. .	−69.92	18 9 51.06	− 3.51
	3	δ Ursæ Minoris. .	S.	. .	. .	. .	. .	. .	. .	33.0	59.0	42.5	15 15.30	+ 0.16	. .	−69.94	18 14 5.52	− 0.08
	4	B. A. C. 6322 . .	S.	22.6	25.6	27.2	33.9	36.1	38.4	45.0	46.6	49.7	28 36.12	− 0.30	. .	−69.98	18 27 25.84	− 0.16
	5	51 Cephei, S. P. . .	S.	. .	. .	. .	. .	. .	. .	24.0	3.5	0.0	40 14.11	− 0.76	. .	−70.03	6 39 3.32	+ 0.61
	6	B. A. C. 6469 . .	S.	37.2	42.8	57.8	5.0	12.0	19.7	26.9	41.7	47.5	50 12.29	− 0.18	. .	−70.07	18 49 2.04	− 3.14
	7	B. A. C. 6514 . .	S.	51.3	56.5	11.7	19.3	26.4	33.9	41.3	. .	. .	57 26.44	− 0.18	. .	−70.13	18 56 16.13	− 3.24
	8	B. A. C. 6563 . .	S.	40.6	58.8	. .	16.7	25.9	. .	. .	10.6	17.3	4 34.69	− 0.15	. .	−70.16	19 3 24.38	− 3.83
	9	γ Aquilæ. . . .	S.	7.8	10.4	12.0	16.0	18.2	20.3	. .	. .	. .	41 20.26	− 0.32	−70.29	−70.26	19 40 9.68	+ 0.06
	10	β Aquilæ. . . .	S.	7.1	9.3	11.3	13.3	15.4	. .	. .	. .	. .	50 11.28	− 0.32	−70.28	−70.29	19 49 0.67	+ 0.02
18	11	δ Ursæ Minoris. .	E.	56.5	39.0	5.0	49.0	23.5	58.0	41.5	7.5	50.0	15 23.33	+ 2.02	. .	−80.51	18 14 4.84	− 0.13
	12	1 Aquilæ. . . .	E.	21.9	24.6	26.1	32.2	34.4	36.4	42.7	44.3	46.8	29 34.38	− 0.64	−80.59	−80.56	18 28 13.18	+ 0.10
	13	51 Cephei, S. P. . .	E.	41.5	49.0	17.5	10.5	27.5	44.5	39.5	6.5	12.5	40 27.67	− 3.66	. .	−80.60	6 39 3.41	− 0.04
	14	50 Draconis . . .	E.	6.9	17.1	22.9	47.6	55.5	2.5	28.0	33.6	44.0	51 55.34	+ 0.06	. .	−80.64	18 50 34.64	+ 0.21
	15	ζ Aquilæ. . . .	E.	39.4	42.0	43.5	49.8	52.0	54.0	0.3	2.0	4.6	0 51.96	− 0.54	−80.67	−80.67	18 19 30.75	+ 0.08
	16	δ Draconis . . .	E.	22.7	29.4	33.5	49.5	54.6	0.3	16.1	20.0	26.8	13 54.77	− 0.18	. .	−80.72	19 12 33.87	+ 0.01
	17	δ Aquilæ. . . .	E.	10.6	13.3	14.8	21.0	23.0	25.0	31.2	32.7	35.3	20 22.99	− 0.59	−80.76	−80.75	19 19 1.65	+ 0.06
	18	κ Aquilæ. . . .	E.	8.1	10.8	12.6	18.6	20.7	22.6	28.9	30.5	32.9	31 20.63	− 0.63	−80.84	−80.79	19 29 59.21	+ 0.09
	19	γ Aquilæ. . . .	E.	18.5	21.1	22.6	28.9	31.0	33.0	39.4	41.0	43.5	41 31.00	− 0.56	−80.80	−80.82	19 40 9.62	+ 0.01
	20	α Aquilæ. . . .	E.	40.3	43.0	44.6	50.8	52.9	54.9	0.9	2.6	5.2	45 52.80	− 0.57	−80.80	−80.84	19 44 31.39	0.00
	21	β Aquilæ. . . .	E.	9.6	12.3	13.9	20.0	22.0	24.1	30.3	31.9	34.5	50 22.07	− 0.58	−80.82	−80.86	19 49 0.63	− 0.01
	22	λ Ursæ Minoris. .	E.	. .	. .	. .	27.5	13.5	0.5	. .	. .	. .	55 13.48	+ 7.82	. .	−80.88	19 54 0.42	+ 0.02
	23	Anonymous . .	E.	. .	. .	. .	. .	. .	. .	1.2	3.2	6.5	1 50.86	− 0.44	. .	−80.91	20 0 29.51	. .
	24	20 Vulpeculæ. . .	E.	46.0	48.8	50.5	57.0	59.6	1.8	8.8	10.6	13.4	7 59.61	− 0.49	. .	−80.93	20 6 38.19	− 2.11
	25	α^2 Capricorni. . .	E.	5.1	7.7	9.2	15.5	17.7	19.8	26.0	27.5	30.3	12 17.64	− 0.65	−80.97	−80.95	20 10 56.04	+ 0.06
	26	π Capricorni. . .	E.	7.2	9.9	11.5	18.0	20.0	22.3	28.8	30.4	33.0	21 20.12	− 0.68	−80.95	−80.97	20 19 58.47	+ 0.01
	27	ε Delphini . . .	E.	14.2	16.9	18.4	24.6	26.6	28.7	34.9	36.5	39.0	28 26.64	− 0.55	−80.95	−81.00	20 27 5.09	0.00
	28	Groombridge 3241	E.	18.0	26.4	31.4	51.3	58.0	4.5	24.5	29.7	38.0	31 57.98	+ 0.42	. .	−81.01	20 30 37.39	+ 0.78
	29	α Cygni	E.	8.6	12.0	14.4	22.8	25.8	28.6	37.4	39.5	42.9	38 25.78	− 0.40	. .	−81.03	20 37 4.35	− 0.07
	30	μ Aquarii . . .	E.	53.2	55.8	57.3	3.7	5.6	7.8	14.0	15.5	18.1	47 5.67	− 0.64	−81.06	−81.07	20 45 43.96	+ 0.06
19	31	Sun I, N. . . .	F.	59.9	2.6	4.2	10.5	12.7	14.9	21.0	22.6	25.2	54 12.62	− 0.52	. .	−83.88	9 52 48.22	+65.13
	32	Sun II, S. . . .	F.	. .	. .	. .	. .	. .	. .	. .	. .	. .	. . .	. .	. .	. .	. . . .	. .
	33	Venus I, N. . .	F.	13.0	15.7	17.1	23.2	25.4	27.3	33.7	35.2	37.8	22 25.38	− 0.64	. .	−84.44	12 21 0.30	+ 1.28
	34	α Aquilæ. . . .	F.	48.0	49.9	54.0	56.0	58.1	0.2	2.3	6.5	8.0	45 58.11	− 0.57	−86.12	−86.14	19 44 31.40	+ 0.02
	35	β Aquilæ. . . .	F.	15.0	17.7	19.2	25.4	27.4	29.5	35.6	37.2	39.7	50 27.41	− 0.58	−86.16	−86.16	19 49 0.67	+ 0.03
	36	λ Ursæ Minoris. .	F.	. .	. .	. .	21.0	14.0	51.0	. .	. .	. .	55 11.61	. .	. .	. .	. . . .	. .
	37	π Capricorni. . .	F.	. .	17.0	21.1	23.5	25.6	27.7	30.0	34.0	. .	21 25.56	− 0.74	−86.33	−86.28	20 19 58.54	+ 0.08
	38	Polaris, S. P. . .	Ha.	. .	. .	47.0	22.5	59.0	33.5	8.0	. .	. .	13 58.00	. .	. .	. .	. . . .	. .
21	39	Sun I, N. . . .	F.	36.5	39.0	40.7	46.9	49.0	51.2	57.4	59.0	1.6	1 49.03	− 0.63	. .	−95.07	10 0 13.33	. .
	40	Sun II, S. . . .	F.	46.4	49.1	50.6	57.0	59.1	1.2	7.4	9.0	11.6	3 59.04	− 0.65	. .	−95.07	10 2 23.34	. .
	41	Venus I, N. . .	F.	30.5	33.0	34.6	40.7	42.8	44.7	50.8	52.5	55.0	20 42.73	− 0.75	. .	−95.60	12 19 6.38	+ 1.32
	42	Polaris, S. P. . .	F.	. .	. .	52.0	26.0	4.0	39.0	13.0	. .	...	14 2.80	. .	. .	. .	. . . .	. .
	43	α Bootis	F.	10.6	13.4	15.0	21.4	23.7	25.9	32.2	33.8	36.5	11 23.61	− 0.59	. .	. .	. . . .	. .
24	44	Moon I, N. . .	E.	58.3	1.5	3.0	9.9	12.1	14.6	21.4	23.1	26.0	22 12.21	− 0.70	. .	− 3.05	17 22 8.36	+73.49
	45	μ Herculis . . .	E.	15.7	18.6	20.3	27.3	29.5	31.8	38.8	40.6	43.5	41 29.57	− 0.44	− 3.12	− 3.15	17 41 25.98	− 0.03
	46	γ Draconis . . .	E.	21.6	25.8	28.5	38.2	41.5	44.9	54.7	57.0	1.0	53 41.47	− 0.29	. .	− 3.15	17 53 38.03	− 0.22
	47	γ^2 Sagittarii . .	E.	. .	. .	32.5	34.8	37.2	39.4	41.8	. .	. .	57 37.14	− 0.74	− 3.09	− 3.15	17 57 33.25	− 0.05
	48	μ^1 Sagittarii . .	E.	55.5	58.3	0.0	6.5	8.6	10.9	17.4	19.0	21.9	6 8.68	− 0.69	− 3.18	− 3.14	18 6 4.85	+ 0.04
	49	δ Ursæ Minoris. .	E.	37.5	19.0	45.0	27.5	3.5	37.0	12.0	47.0	30.0	14 3.17	. .	. .	. .	. . . .	. .
	50	1 Aquilæ. . . .	E.	4.4	7.0	8.5	14.9	16.9	19.0	25.1	26.7	29.4	28 16.88	− 0.63	− 3.16	− 3.14	18 28 13.11	+ 0.09

1, 3, 22, 49. Bisections at sets B and D.
5. Observed over sets B and D.
6, 7, 11. Bisections at wires C_1 and C_5.
8. Bisections at wires B_3, C_1, and D_2.
27. Telescope micrometer reading diminished one revolution in reduction.
August 24. Reading of microscope VIII has been bad all night.

Number.	Circle Division.	MICROSCOPE MICROMS.				TELESCOPE MICROMETER.						Zenith Point Correction.	Apparent Zenith Distance, South.	Sympiesometer.	Refraction.	Apparent North Polar Distance.	Miscellan'us Corrections.
		V.	VI.	VII.	VIII.	Rev.	1.	2.	3.	4.	5.						
	° ′	r. ″	″	″	″							″	° ′ ″		′ ″	° ′ ″	″
1	41 0	25.5	13.2	20.9	17.6	32	150	. .	. .	. .	050	61.2	318 55 21.5	. .	— 47.2	10 0 55.5	+15.2
2	41 0	25.5	13.2	20.9	17.6	31	. .	315	. .	320	. .	61.2	318 55 10.9	. .	— 47.2	10 0 44.9	+15.2
3	47 38	28.2	15.4	22.5	18.9	34	. .	. .	. .	600	550	61.2	312 18 1 9	. .	— 59.5	3 23 23.6	+ 0.6
4	344 34	29.2	15.4	22.0	19.2	34	. .	003	. .	032	. .	61.2	15 21 52.7	. .	+ 14.9	66 28 28.8	+11.7
5	53 46	25.1	11.7	19.1	15.0	30	. .	. .	. .	820	905	61.2	306 8 59.1	. .	— 1 14.1	357 14 6.2	+ 0.5
6	34 58	27.2	14.5	20.6	17.7	34	. .	373	. .	372	. .	61.2	324 57 56.6	. .	— 38.0	16 3 39.8	+14.3
7	34 56	25.3	11.8	17.2	14.9	31	. .	180	. .	180	. .	61.2	324 59 4.9	. .	— 38.0	16 4 48.1	+14.0
8	37 54	25.2	12.1	18.5	15.2	35	580	655	600	. .	. .	61.2	322 2 13.5	. .	— 42.4	13 7 52.3	+13.5
9	331 22	28.9	14.5	20.9	17.0	38	. .	292	. .	. .	. .	61.2	28 34 57.2	. .	+ 29.6	79 41 48.0	+ 1.1
10																	
11	47 38	10 17.8	4.5	13.5	10.4	35	. .	340	. .	340	. .	61.3	312 18 3.2	. .	— 1 0.7	3 23 23.7	+ 1.1
12	312 44	22.2	7.8	17.6	13.7	36	. .	760	. .	820	. .	61.3	47 12 29.1	. .	+ 59.7	98 19 50.0	+ 0.6
13	53 46	19.2	4.7	15.0	10.6	31	. .	365	. .	395	. .	61.3	306 9 3.1	. .	— 1 15.6	357 14 8.7	+ 3.4
14	36 18	22.2	7.7	16.2	13.5	32	. .	020	. .	052	. .	61.3	323 37 17.0	. .	— 40.8	14 42 57.4	+ 0.8
15	334 44	27.7	11.3	21.5	16.7	37	. .	148	. .	150	. .	61.3	25 12 38.7	. .	— 26.1	76 19 26.0	+ 2.2
16	28 28	14.8	1.3	9.0	5.7	34	. .	745	. .	730	. .	61.3	331 27 50.8	. .	— 30.1	22 33 41.9	+ 0.2
17	323 54	0.0	15.2	23.5	21.0	31	. .	505	. .	545	. .	61.3	36 1 15.4	. .	+ 40.3	87 8 16.9	+ 1.2
18	313 44	25.8	11.0	20.4	15.8	31	. .	975	. .	988	. .	61.3	46 11 18.2	. .	+ 57.8	97 18 37.2	+ 2.5
19	331 22	26.5	12.0	20.3	15.7	38	. .	290	. .	296	. .	61.3	28 34 55.6	. .	+ 30.2	79 41 47.0	+ 0.3
20	329 34	23.0	8.5	16.4	13.0	31	. .	590	. .	610	. .	61.3	30 21 9.4	. .	+ 32.5	81 28 3.1	+ 0.0
21	327 8	22.3	7.0	15.5	13.0	33	. .	775	. .	780	. .	61.3	32 47 42.0	. .	+ 35.8	83 54 39.0	+ 0.2
22	49 56	20.6	7.0	15.0	12.0	32	. .	352	. .	410	. .	61.3	309 59 19.9	. .	— 1 6.1	1 4 35.0	— 0.9
23	359 10	23.0	8.5	17.3	10.5	35	. .	. .	. .	752	765	61.3	0 46 13.1	. .	+ 0.7	51 53 35.0	
24	347 8	21.2	6.8	14.6	10.4	33	250	270	. .	285	280	61.3	12 47 33.3	. .	+ 12.6	63 54 7.1	+11.5
25	308 8	21.9	7.0	15.1	12.7	38	. .	545	. .	570	. .	61.3	51 48 55.1	. .	+ 1 10.6	102 56 26.9	+ 1.6
26	302 26	23.5	7.5	15.6	14.3	34	. .	992	. .	990	. .	61.3	57 30 1.3	. .	+ 1 27.1	108 37 49.6	+ 0.7
27	331 56	20.3	6.5	14.6	10.4	39	. .	920	. .	930	. .	61.3	28 0 59.6	. .	+ 29.6	79 7 50.4	+ 0.9
28	33 8	21.0	6.8	14.2	10.2	36	. .	610	. .	692	. .	61.3	326 48 25.7	. .	— 36.4	17 54 10.5	+ 1.3
29	5 52	18.5	5.0	12.5	8.0	36	. .	485	. .	555	. .	61.3	354 4 21.0	. .	— 5.8	45 10 36.4	+ 1.3
30	311 36	24.8	11.0	19.0	14.0	36	. .	292	. .	210	. .	61.3	48 20 22.7	. .	+ 1 2.5	99 27 46.4	+ 0.9
31	334 6	25.0	8.5	20.8	12.5	36	338	354	. .	. .	. .	60.6	25 50 23.6	. .	+ 26.5	76 57 11.3	
32	333 34	25.0	10.8	19.6	11.5	35	. .	. .	. .	020	906	60.6	26 22 1.4	. .	+ 27.1	77 28 49.7	
33	314 52	22.5	6.9	10.0	12.8	37	. .	195	. .	255	. .	60.6	45 4 32.8	. .	+ 54.5	96 11 48.5	
34																	
35	327 8	17.9	8.0	11.7	7.3	34	. .	085	. .	085	. .	61.3	32 47 43.5	. .	+ 36.4	83 54 41.1	+ 1.4
36	49 56	15.6	1.8	10.1	5.0	32	. .	902	. .	. .	. .	61.3	309 59 22.2	. .	— 1 7.2	1 4 36.2	+ 0.6
37																	
38	52 24	10 22.0	9.0	18.4	14.3	34	. .	710	760	685	. .	61.5	307 31 58.1	. .	— 1 10.7	358 37 8.6	+ 0.1
39	333 26	10 14.7	0.5	11.5	9.0	35	252	286	. .	. .	. .	62.1	26 30 0.8	. .	+ 27.1	77 36 49.1	
40	332 54	10 12.2	28.3	8.8	5.2	34	. .	. .	. .	212	308	62.1	27 1 41.5	. .	+ 27.7	78 8 30.4	
41	314 10	10 11.4	27.6	7.3	4.0	38	. .	325	. .	349	. .	62.1	45 46 43.4	. .	+ 55.6	96 54 0.2	
42	52 24	10.7	28.0	6.7	5.0	35	450	450	445	455	455	62.1	307 31 58.9	. .	— 1 10.2	358 37 9.9	+ 1.2
43	340 54	25.0	10.8	18.9	17.5	34	550	588	. .	624	640	62.1	19 1 59.2	. .	+ 18.6	70 8 39.0	+ 4.2
44	297 54	20.6	6.9	15.0	14.8	28	. .	292	402	512	. .	61.6	62 0 19.6	. .	+ 1 43.0	113 8 23.8	
45	348 50	23.2	9.2	17.4	14.5	32	. .	612	. .	560	. .	61.6	11 5 25.7	. .	+ 10.8	62 11 57.7	+ 3.3
46	12 32	23.2	10.0	17.5	16.0	32	. .	010	. .	050	. .	61.6	347 23 18.0	. .	— 12.4	38 29 26.8	+ 1.1
47	290 40	15.2	1.5	8.8	10.0	37	. .	870	. .	930	. .	61.6	69 16 39.8	. .	+ 2 24.7	120 25 25.7	+ 0.5
48	299 58	18.0	4.0	12.0	10.5	33	. .	080	. .	080	. .	61.6	59 57 28.0	. .	+ 1 35.2	111 5 24.4	+ 1.5
49	47 38	16.8	3.1	12.2	9.4	35	. .	300	335	292	. .	61.6	312 18 2.1	. .	— 1 0.7	3 23 22.6	+ 1.1
50	312 44	23.8	9.1	17.5	17.0	36	. .	760	. .	830	. .	61.6	47 12 30.9	. .	+ 59.8	98 19 51.9	+ 2.6

No.	Barom.	At. Ther.	Ex. Ther.
	in.	°	°
1	. .	. .	86.0
4	. .	. .	85.0
6	29.926	85.0	85.0
8	. .	. .	84.0
10	29.932	84.0	84.0
11	29.964	78.8	76.0
30	29.970	76.5	72.0
31	30.050	77.0	82.6
33	. .	. .	86.0
36	30.074	73.0	67.0
38	29.996	77.0	85.0
40	29.954	76.0	85.3
43	29.918	78.0	88.0
45	. .	. .	81.0

For summary of the elements of reduction see page 3.

No.	Parallax.	Semi-diam.	Defective Illumination.	Sum.
	′ ″	′ ″	′ ″	′ ″
31	— 3.8	+ 15 49.2	. .	+ 15 45.4
32	— 3.8	— 15 49.2	. .	— 15 53.0
33	— 14.0	+ 19.1	. .	+ 5.1
39	— 3.9	+ 15 50.6	. .	+ 15 46.7
40	— 4.0	— 15 50.6	. .	— 15 54.6
41	— 14.1	+ 19.1	. .	+ 5.0
44	—52 26.0	+ 16 15.0	. .	— 36 11.0

DATE.	Number.	OBJECT.	Observer.	SECONDS OF TRANSIT OVER WIRES.										CORRECTIONS.			Apparent Right Ascension.	Miscellan'us corrections.
				I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	Mean wire.	Inst.	Clock appar'nt.	Clock adopted.		
1871.													m. s.	s.	s.	s.	h. m. s.	s.
Aug. 24	1	α Lyræ	E.	23.8	27.0	28.8	36.8	39.3	41.9	49.8	51.7	55.0	32 39.34	− 0.38	− 3.02	− 3.14	18 32 35.82	− 0.10
	2	B. A. C. 6393	E.	27.0	32.7	35.9	49.4	53.8	58.4	11.5	15.0	20.4	39 53.79	− 0.15	. .	− 3.14	18 39 50.50	− 1.96
	3	B. A. C. 6410	E.	27.0	32.4	35.5	48.3	52.4	56.5	9.1	12.1	17.3	42 52.29	− 0.19	. .	− 3.14	18 42 48.96	− 1.95
	4	ζ Aquilæ	E.	21.7	24.4	25.9	32.3	34.4	36.5	42.7	44.4	47.0	59 34.37	− 0.52	− 3.16	− 3.14	18 59 30.71	+ 0.10
	5	d Sagittarii	E.	58.0	0.9	2.4	9.0	11.0	13.4	19.9	21.4	24.2	10 11.13	− 0.67	− 3.14	− 3.14	19 10 7.32	+ 0.02
	6	δ Draconis	E.	. .	. .	26.2	31.6	36.8	42.3	47.6	. .	. .	12 36.90	− 0.06	. .	− 3.14	19 12 33.70	+ 0.09
	7	δ Aquilæ	E.	. .	. .	1.2	3.3	5.4	7.4	9.4	. .	. .	19 5.34	− 0.56	− 3.18	− 3.14	19 19 1.64	− 0.09
	8	κ Aquilæ	E.	50.4	53.1	54.7	0.8	2.9	4.9	11.0	12.7	15.2	30 2.86	− 0.61	− 3.13	− 3.14	19 29 59.11	+ 0.03
	9	γ Aquilæ	E.	. .	. .	9.0	11.2	13.3	15.4	17.5	. .	. .	40 13.28	− 0.53	− 3.15	− 3.14	19 40 9.61	+ 0.04
	10	α Aquilæ	E.	22.7	25.3	26.8	33.0	35.0	37.0	43.4	44.9	47.5	44 35.07	− 0.54	− 3.14	− 3.14	19 44 31.39	+ 0.04
	11	β Aquilæ	E.	52.0	54.5	56.1	2.3	4.4	6.4	12.6	14.1	16.7	49 4.34	− 0.55	− 3.16	− 3.14	19 49 0.65	+ 0.05
	12	τ Aquilæ	E.	43.6	46.3	47.8	54.0	56.0	58.0	4.3	5.7	8.5	57 56.02	− 0.55	− 3.12	− 3.14	19 57 52.33	+ 0.00
	13	α^2 Capricorni	E.	47.2	49.9	51.4	57.8	59.8	1.9	8.3	9.9	12.4	10 59.84	− 0.64	− 3.20	− 3.14	20 10 56.06	+ 0.10
25	14	Sun I	F.	48.8	51.4	53.0	57.2	59.2	. .	. .	11.5	13.9	15 1.37	− 0.65	. .	− 2.98	10 14 57.74	. .
	15	Sun II, N.	F.	58.4	0.8	2.6	8.8	10.8	12.9	19.2	20.8	23.4	17 10.86	− 0.65	. .	− 2.98	10 17 7.25	. .
	16	Mercury I	F.	44.4	46.9	48.5	54.6	56.6	58.6	4.9	6.4	9.0	51 56.66	− 0.74	. .	− 2.98	11 51 52.94	+ 0.26
	17	α Virginis	F.	15.5	18.0	19.6	25.8	27.9	29.9	36.2	37.7	40.4	18 27.89	− 0.81	− 2.94	− 2.98	13 18 24.10	− 0.06
	18	μ Sagittarii	F.	55.6	58.3	59.8	6.4	8.6	10.8	17.2	19.0	21.7	6 8.60	− 0.87	− 2.93	− 2.98	18 6 4.75	− 0.05
	19	Saturn I, N.	F.	34.9	37.5	39.3	. .	. .	. .	57.0	58.8	1.4	14 48.15	− 0.90	. .	− 2.98	18 14 44.27	. .
	20	Saturn II, S.	F.	. .	. .	45.0	47.3	49.4	51.6	54.0	. .	. .	14 49.46	− 0.90	. .	− 2.98	18 14 45.58	. .
	21	Moon I, S.	F.	47.0	50.2	52.0	58.7	1.0	3.4	10.4	12.0	15.0	27 1.08	− 0.91	. .	− 2.98	18 26 57.19	+74.54
	22	β Lyræ	F.	9.5	12.5	14.5	21.7	24.1	26.7	34.0	35.8	38.8	45 24.18	− 0.39	− 3.02	− 2.98	18 45 20.81	+ 0.07
	23	ζ Aquilæ	F.	. .	. .	30.0	32.3	34.3	36.4	38.5	. .	. .	59 34.30	− 0.57	− 3.06	− 2.98	18 59 30.75	+ 0.16
	24	d Sagittarti	F.	58.2	1.0	2.4	9.0	11.0	13.2	19.8	21.4	24.0	10 11.11	− 0.85	− 2.95	− 2.98	19 10 7.28	− 0.01
	25	κ Aquilæ	F.	. .	. .	58.7	0.7	2.9	4.8	7.0	. .	. .	30 2.82	− 0.74	− 2.96	− 2.98	19 29 59.10	+ 0.02
	26	γ Aquilæ	F.	0.8	3.4	5.0	11.1	13.2	15.3	21.5	23.0	25.5	40 13.20	− 0.60	− 3.00	− 2.98	19 40 9.62	+ 0.05
	27	α Aquilæ	F.	22.5	25.2	26.7	32.9	35.0	37.0	43.2	44.8	47.4	44 34.97	− 0.61	− 2.97	− 2.98	19 44 31.38	+ 0.03
	28	ε Draconis	F.	. .	. .	29.9	35.7	41.7	47.6	53.7	. .	. .	48 41.72	+ 0.45	. .	− 2.98	19 48 39.19	+ 0.41
	29	λ Ursæ Minoris	F.	. .	. .	. .	. .	40.0	25.0	14.0	. .	. .	53 37.55	. .	. .	. .	. . . .	. .
	30	3 Ursæ Maj., S. P.	F.	33.9	26.6	22.7	. .	. .	. .	. .	. .	. .	59 59.90	− 1.62	. .	− 2.98	7 59 55.30	− 0.40
	31	α^2 Capricorni	F.	47.2	49.9	51.4	57.8	59.7	1.7	8.0	9.7	12.4	10 59.76	− 0.79	− 2.97	− 2.98	20 10 55.99	+ 0.03
	32	κ Cephei	F.	. .	. .	59.4	9.0	18.0	27.4	36.8	. .	. .	13 18.12	+ 1.16	. .	− 2.98	20 13 16.30	+ 0.66
	33	π Capricorni	F.	49.3	52.0	53.6	0.1	2.3	4.5	10.8	12.5	15.2	20 2.26	− 0.85	− 2.93	− 2.98	20 19 58.43	− 0.01
	34	ε Delphini	F.	56.3	59.0	0.4	6.7	8.6	10.8	17.0	18.6	21.2	27 8.73	− 0.59	− 3.02	− 2.98	20 27 5.16	+ 0.09
	35	α Cygni	F.	50.6	54.2	56.3	4.8	7.5	10.5	19.0	21.3	25.0	37 7.69	− 0.24	. .	− 2.98	20 37 4.47	+ 0.11
	36	μ Aquarii	F.	35.2	37.7	39.3	45.6	47.8	49.7	56.0	57.5	0.3	45 47.68	− 0.76	− 2.96	− 2.98	20 45 43.94	+ 0.04
	37	ν Cygni	F.	. .	. .	22.2	24.9	27.5	30.2	33.0	. .	. .	52 27.56	− 0.29	− 3.07	− 2.98	20 52 24.29	+ 0.15
28	38	1 Pegasi	F.	0.1	2.9	4.5	11.0	13.1	15.3	21.8	23.3	26.2	16 13.13	− 0.41	− 3.24	− 3.32	21 16 9.40	− 0.13
	39	Moon I, S.	F.	17.3	19.9	21.9	28.3	30.5	32.9	39.5	41.2	43.9	38 30.60	− 0.67	. .	− 3.32	21 38 26.60	+70.72
	40	θ Aquarii	F.	. .	. .	3.7	5.8	8.0	9.9	12.0	. .	. .	10 7.88	− 0.60	− 3.40	− 3.32	22 10 3.96	+ 0.10
29	41	Polaris, S. P.	Ha.	. .	. .	25.0	57.0	36.0	12.5	46.5	. .	. .	12 35.40	. .	. .	. .	. . . .	. .
	42	α Leonis	F.	21.5	24.0	25.6	31.9	34.0	36.1	42.5	44.0	46.6	1 34.02	− 0.42	− 3.82	− 3.95	10 1 29.65	− 0.17
30	43	Polaris, S. P.	F.	. .	. .	25.0	0.0	35.5	12.0	47.0	. .	. .	12 35.90	. .	. .	. .	. . . .	. .
	44	η Bootis	F.	24.0	26.8	28.4	34.8	37.0	39.0	45.7	47.3	50.0	48 37.00	− 0.38	− 3.93	− 3.96	13 48 32.66	− 0.08
	45	α Aquarii	F.	. .	. .	. .	. .	. .	. .	24.4	25.9	28.6	59 16.26	− 0.50	− 3.98	− 4.00	21 59 11.76	+ 0.01
	46	θ Aquarii	F.	56.2	58.8	0.2	6.6	8.6	10.6	16.8	18.4	20.9	10 8.57	− 0.54	− 4.14	− 4.00	22 10 4.03	+ 0.16
	47	π Aquarii	F.	35.8	38.6	40.0	46.0	48.2	50.4	56.4	57.8	0.5	18 48.19	− 0.49	− 4.07	− 4.00	22 18 43.70	+ 0.09
	48	ζ Pegasi	F.	56.0	58.7	0.2	6.4	8.5	10.6	16.8	18.4	21.0	35 8.51	− 0.43	− 4.08	− 4.00	22 35 4.04	+ 0.10

7, 9, 21, 28, 30, 32, 37. Bisections at sets B and D.

August 28. Zenith point correction obtained by taking the mean of the miscellaneous corrections of the stars from observations on different days.

Number.	Circle Division.	MICROSCOPE MICROMS.				TELESCOPE MICROMETER.						Zenith Point Correction.	Apparent Zenith Distance, South.	Sympiesometer.	Refraction.	Apparent North Polar Distance.	Miscellan'us Corrections.
		V.	VI.	VII.	VIII.	Rev.	1.	2.	3.	4.	5.						
	° ′	r. ″	″	″	″							″	° ′ ″		′ ″	° ′ ″	″
1	359 42	22.7	7.6	16.8	12.1	32	. .	935	. .	950	. .	61.6	0 13 29.0	. .	+ 0.2	51 19 50.4	− 0.3
2	23 40	19.8	5.8	14.0	8.8	37	. .	038	. .	120	. .	61.6	336 16 31.2	. .	− 24.4	27 22 28.0	+16.5
3	21 56	20.0	5.8	12.8	10.0	31	. .	350	. .	365	. .	61.6	337 59 3.4	. .	− 22.5	29 5 2.1	+16.5
4	334 44	19.3	3.7	12.8	8.8	37	. .	575	. .	590	. .	61.6	25 12 37.4	. .	+ 26.1	76 19 24.7	+ 1.5
5	301 54	18.7	2.5	10.8	6.9	38	. .	780	. .	800	. .	61.6	58 2 54.4	. .	+ 1 28.7	109 10 44.3	+ 3.1
6	28 28	19.3	5.2	13.2	9.0	34	. .	420	. .	480	. .	61.6	331 27 50.6	. .	− 30.2	22 33 41.6	+ 1.4
7	323 54	20.6	5.6	13.0	12.5	32	. .	100	. .	145	. .	61.6	36 1 15.3	. .	+ 40.3	87 8 16.8	+ 1.5
8	313 44	20.3	6.3	13.5	10.0	32	. .	325	. .	342	. .	61.6	46 11 18.1	. .	+ 57.8	97 18 37.1	+ 2.6
9	331 32	22.8	8.5	15.8	11.8	38	. .	560	. .	580	. .	61.6	28 34 56.1	. .	+ 30.2	79 41 47.5	+ 1.5
10	329 34	20.9	5.8	13.6	13.7	31	. .	755	. .	765	. .	61.6	30 21 10.4	. .	+ 32.5	81 28 4.1	+ 1.7
11	327 8	18.7	3.6	12.5	11.3	34	. .	040	. .	045	. .	61.6	32 47 43.4	. .	+ 35.7	83 54 40.3	+ 2.1
12	327 58	21.5	6.8	15.7	14.5	34	. .	790	. .	802	. .	61.6	31 57 58.1	. .	+ 34.6	83 4 53.9	+ 2.0
13	308 8	20.3	5.3	12.4	12.5	38	. .	672	. .	695	. .	61.6	51 48 55.7	. .	+ 1 10.3	102 56 27.2	+ 1.9
14																	
15	332 4	18.7	5.5	16.9	12.1	32	. .	. .	. .	992	928	62.3	27 51 28.8	. .	+ 28.6	78 58 18.6	
16																	
17	310 34	17.0	2.8	9.9	8.3	34	670	686	. .	706	730	62.3	49 21 52.0	. .	+ 1 2.9	100 29 16.1	+ 1.1
18	299 58	18.7	4.8	11.5	9.7	33	095	. .	. .	. .	065	61.8	59 57 28.2	. .	+ 1 35.2	111 5 24.6	+ 1.7
19	298 18	14.8	0.3	7.5	6.4	34	120	. .	. .	. .	120	61.8	61 37 40.2	. .	+ 1 41.2	112 45 42.6	
20	298 18	14.8	0.3	7.5	6.4	35	. .	160	. .	190	. .	61.8	61 37 56.5	. .	+ 1 41.2	112 45 58.9	
21	295 57	12 3.6 8 3.5	18.2 18.1	25.9 25.6	21.1 21.3	39	. .	250	260	290	. .	61.8	63 59 46.9	. .	+ 1 52.0	115 8 0.1	
22	354 46	19.1	4.0	13.1	8.8	37	. .	. .	. .	020	006	61.8	5 40 29.2	. .	+ 5.5	56 46 55.9	+ 1.8
23	334 44	19.4	4.3	13.6	9.0	37	. .	. .	. .	540	534	61.8	25 12 37.4	. .	+ 25.9	76 19 24.5	+ 1.4
24	301 54	23.2	6.9	14.8	11.0	38	. .	570	. .	540	. .	61.8	58 2 55.2	. .	+ 1 27.9	109 10 44.3	+ 3.1
25	313 44	20.6	5.4	13.8	8.9	32	. .	354	. .	352	. .	61.8	46 11 18.2	. .	+ 57.3	97 18 36.7	+ 2.2
26	331 22	19.1	4.3	11.7	9.4	38	. .	745	. .	775	. .	61.8	28 34 55.7	. .	+ 30.0	79 41 46.9	+ 1.0
27	329 34	19.7	4.0	11.3	9.3	32	. .	875	. .	885	. .	61.8	30 21 10.0	. .	+ 32.2	81 28 3.4	+ 1.1
28	30 58	17.0	2.0	9.2	7.5	33	. .	. .	. .	725	708	61.8	328 57 36.1	. .	− 33.1	20 3 24.2	− 0.9
29	49 56	22.5	7.8	16.5	12.4	32	. .	. .	190	135	155	61.8	309 59 18.1	. .	− 1 5.6	1 4 33.7	− 0.1
30	72 8	15.8	1.0	9.2	7.7	32	804	. .	. .	. .	. .	61.8	287 47 21.2	. .	− 2 49.7	338 50 52.7	+ 1.8
31	308 8	14.5	29.3	6.3	5.0	39	. .	070	. .	078	. .	61.8	51 48 55.5	. .	+ 1 10.0	102 56 26.7	+ 1.4
32	38 22	16.0	2.1	9.7	8.3	38	. .	. .	. .	675	740	61.8	321 34 53.0	. .	− 43.7	12 40 30.5	+ 0.6
33	302 26	12.7	27.7	3.6	1.0	35	. .	830	. .	856	. .	61.8	57 30 3.3	. .	+ 1 26.3	108 37 50.8	+ 1.8
34	331 56	22.5	10.6	16.4	10.7	38	. .	702	. .	704	. .	61.8	28 0 58.8	. .	+ 29.4	79 7 49 4	+ 0.8
35	5 52	22.4	11.1	15.0	11.5	36	. .	100	. .	100	. .	61.8	354 4 19.0	. .	− 5.7	45 10 34.5	+ 1.4
36	311 36	18.0	4.2	9.8	7.7	36	796	. .	. .	. .	796	61.8	48 20 23.6	. .	+ 1 2.0	99 27 46.8	+ 1.4
37	1 42	22.1	9.3	15.7	12.4	31	. .	. .	. .	. .	650	61.8	358 13 10.3	. .	− 1.7	49 19 29.8	+ 1.8
38	340 18	18.0	4.3	10.8	6.8	34	. .	554	. .	574	. .	63.6	19 37 52.0	. .	+ 19.8	70 44 33.0	+ 1.1
39	301 42	13.8	27.8	4.8	2.6	34	. .	. .	040	. .	. .	63.6	58 13 38.6	. .	+ 1 29.3	109 21 29.1	
40	312 38	13.2	28.6	5.0	3.1	35	. .	085	. .	115	. .	63.6	47 17 55.2	. .	+ 1 0.0	98 25 16.4	+ 1.0
41																	
42																	
43																	
44																	
45																	
46	312 38	14.2	0.0	7.2	3.9	35	. .	892	. .	900	. .	62.1	47 17 51.8	. .	+ 1 0.8	98 25 13.8	− 1.5
47	321 46	12.7	27.8	5.5	3.5	32	. .	614	. .	560	. .	62.1	38 9 14.8	. .	+ 44.0	89 16 20.0	− 1.2
48	331 12	15.5	2.1	9.3	4.0	33	. .	845	. .	845	. .	62.1	28 43 21.8	. .	+ 30.7	79 50 13.7	− 1.0

No.	Barom.	At. Ther.	Ex. Ther.
	in.	°	°
3	30.164	79.0	77.0
13	30.160	79.0	78.0
15	30.134	81.5	90.0
16	. .	. .	91.0
17	. .	. .	90.0
21	30.052	80.0	81.0
25	. .	. .	80.0
30	30.076	80.0	79.5
37	30.066	79.0	78.0
38	. .	. .	74.5
40	30.000	76.0	75.0
41	29.862	81.0	89.0
42	. .	. .	86.0
44	29.650	81.5	91.5
46	29.865	74.0	66.0

For summary of the elements of reduction see page 3.

No.	Parallax.	Semi-diam.	Defective Illumination.	Sum.
	′ ″	′ ″	′ ″	° ′ ″
15	− 4.1	+ 15 51.6	. .	+ 15 47.5
19	− 0.8	+ 8.2	. .	+ 7.4
20	− 0.8	− 8.2	. .	− 9.0
21	−53 29.0	− 16 17.2	. .	−1 9 46.2
39	−50 3.2	− 16 7.4	. .	−1 6 10.6

DATE.	Number.	OBJECT.	Observer.	SECONDS OF TRANSIT OVER WIRES.										CORRECTIONS.			Apparent Right Ascension.	Miscellan'us Corrections.
				I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	Mean wire.	Inst.	Clock appar'nt.	Clock adopted.		
1871.													m. s.	s.	s.	s.	h. m. s.	s.
Aug. 30	1	Moon II . . .	F.	16.6	19.2	20.7	27.0	29.0	31.2	37.7	39.2	41.9	32 29.17	− 0.55	. .	− 4.01	23 32 24.61	−66.23
	2	α Andromedæ . .	F.	36.0	38.9	40.7	47.6	50.0	52.4	59.3	1.0	3.8	1 49.97	− 0.31	− 3.94	− 4.01	0 1 45.65	− 0.05
31	3	Polaris, S. P. . .	Ha.	. .	. .	34.0	10.0	46.0	20.0	55.0	. .	. .	12 45.00	−21.04	. .	− 3.72	1 12 20.24	− 1.09
	4	π Aquarii . . .	Ha.	35.7	38.2	39.8	46.0	48.0	50.1	56.1	57.7	0.3	18 47.99	− 0.71	− 3.64	− 3.71	22 18 43.57	− 0.05
	5	η Aquarii . . .	Ha.	38.2	40.6	42.2	48.3	50.3	52.4	58.5	0.1	2.7	28 50.37	− 0.73	− 3.69	− 3.71	22 28 45.93	+ 0.01
	6	ζ Pegasi	Ha.	56.0	58.5	0.0	6.3	8.4	10.5	16.7	18.1	20.8	35 8.37	− 0.62	− 3.74	− 3.71	22 35 4.04	+ 0.09
	7	ι Cephei	Ha.	42.8	48.8	52.8	7.7	12.5	17.3	32.5	35.7	42.2	45 12.48	+ 0.43	. .	− 3.71	22 45 9.20	+ 0.05
	8	α Piscis Australis .	Ha.	24.3	27.0	29.0	36.0	38.3	40.9	48.0	49.9	52.8	50 38.47	− 1.07	− 3.67	− 3.71	22 50 33.69	0.00
	9	α Pegasi	Ha.	14.2	16.8	18.5	24.7	26.8	29.0	35.2	36.8	39.5	58 26.83	− 0.57	− 3.77	− 3.71	22 58 22.55	+ 0.09
	10	α Andromedæ . .	Ha.	35.9	38.7	40.6	47.5	49.9	52.3	59.2	0.8	3.8	1 49.86	− 0.42	− 3.71	− 3.71	0 1 45.73	+ 0.02
	11	γ Pegasi	Ha.	29.6	32.2	33.8	40.0	42.2	44.2	50.6	52.3	55.0	6 42.21	− 0.58	− 3.72	− 3.71	0 6 37.92	+ 0.01
	12	Moon II, N. . .	Ha.	. .	. .	31.1	33.4	35.5	37.5	39.7	. .	. .	23 35.44	− 0.75	. .	− 3.71	0 23 30.98	−64.63
	13	β Ceti.	Ha.	0.6	3.3	4.8	11.4	13.7	15.7	22.3	23.7	26.6	37 13.57	− 0.92	− 3.67	− 3.71	0 37 8.94	+ 0.01
	14	32^2 Camelopard., S. P.	Ha.	. .	. .	52.2	32.1	12.3	51.8	32.9	. .	. .	48 12.26	− 5.42	. .	− 3.71	12 48 3.13	+ 0.10
	15	ε Piscium . . .	Ha.	9.2	11.8	13.2	19.5	21.4	23.5	29.6	31.3	33.8	56 21.48	− 0.65	− 3.77	− 3.71	0 56 17.12	+ 0.08
	16	Polaris	Ha	. .	. .	16.0	42.0	3.0	31.0	54.0	. .	. .	12 5.20	+19.76	. .	− 3.71	1 12 21.25	− 0.34
Sept. 2	17	Polaris	Ha.	. .	. .	15.0	39.0	3.0	28.0	56.0	. .	. .	12 4.20	. .	. .	. .	. . . .	. .
	18	η Piscium . . .	Ha.	28.7	31.3	32.9	39.2	41.4	43.6	49.8	51.4	54.2	24 41.39	− 0.50	− 3.85	− 3.86	1 24 37.03	+ 0.06
	19	Neptune . . .	Ha.	17.0	19.5	21.0	27.0	29.1	31.2	37.5	39.0	41.6	30 29.21	− 0.57	. .	− 3.86	1 30 24.78	. .
	20	ο Piscium . . .	Ha.	29.1	31.7	33.2	39.3	41.5	43.5	49.8	51.3	54.0	38 41.49	− 0.56	− 3.92	− 3.86	1 38 37.07	+ 0.03
	21	β Arietis	Ha.	24.2	27.0	28.6	35.2	37.3	39.5	46.0	47.7	50.4	47 37.32	− 0.44	− 3.81	− 3.86	1 47 33.02	− 0.03
	22	Moon II, N. . .	Ha.	41.6	44.2	45.8	52.1	54.0	56.1	2.6	4.2	7.0	0 54.18	− 0.57	. .	− 3.86	2 0 49.75	−63.41
	23	ξ^1 Ceti.	Ha.	3.7	6.4	7.9	14.0	16.2	18.2	24.4	25.9	28.5	6 16.13	− 0.56	− 3.84	− 3.86	2 6 11.71	+ 0.02
	24	ι Cassiopeæ . . .	Ha.	3.3	9.8	13.7	29.4	34.7	39.9	55.4	59.3	5.7	18 34.58	+ 0.73	. .	− 3.86	2 18 31.45	+ 0.13
	25	5 Ursæ Minoris, S.P.	Ha.	. .	. .	11.4	2.2	54.4	45.4	36.7	. .	. .	27 54.02	− 2.88	. .	− 3.86	14 27 47.28	+ 0.33
	26	γ Ceti.	Ha.	31.0	33.5	35.2	41.2	43.3	45.3	51.5	53.0	55.6	36 43.29	− 0.63	− 3.89	− 3.86	2 36 38.80	+ 0.03
3	27	γ Ceti.	F.	. .	. .	. .	. .	. .	. .	51.6	53.0	55.7	36 43.38	− 0.79	− 3.80	− 3.90	2 36 38.69	− 0.10
	28	Moon II, N. . .	F.	46.3	48.9	50.5	56.9	59.0	1.1	7.5	9.2	11.7	48 59.01	− 0.68	. .	− 3.90	2 48 54.43	−63.68
	29	α Ceti.	F.	26.3	28.8	30.4	36.6	38.5	40.6	46.8	48.3	50.8	55 38.57	− 0.78	− 3.88	− 3.90	2 55 33.89	0.00
	30	48 Cephei	F.	13.7	25.5	32.0	0.1	9.4	19.0	47.2	53.5	5.1	4 9.50	+ 1.77	. .	− 3.90	3 4 7.37	+ 0.16
	31	α Persei	F.	55.0	58.7	1.0	10.4	13.5	16.7	26.2	28.5	32.4	15 13.60	− 0.10	. .	− 3.90	3 15 9.65	+ 0.16
	32	γ^2 Ursæ Minoris, S. P.	F.	. .	. .	. .	43.0	33.9	29.1	16.1	9.0	2.2	21 2.37	− 2.62	. .	− 3.90	15 21 55.85	+ 0.09
	33	δ Persei	F.	32.9	36.5	38.6	47.8	50.8	53.8	3.0	5.2	9.0	33 50.84	− 0.16	. .	− 3.90	3 33 46.78	+ 0.02
	34	γ^1 Eridani. . . .	F.	. .	. .	2.7	4.6	6.9	9.0	11.0	. .	. .	52 6.84	− 0.99	− 3.89	− 3.90	3 52 1.95	+ 0.03
	35	Groom. 2320, S. P.	F.	37.8	30.9	27.0	10.1	4.6	59.0	42.8	38.7	31.7	6 4.73	− 2.17	. .	− 3.90	16 5 58.66	+ 0.44
	36	γ Tauri	F.	20.4	23.0	24.7	31.0	33.0	35.2	41.7	43.2	45.8	12 33.11	− 0.64	− 3.90	− 3.90	4 12 28.57	+ 0.01
	37	α Tauri	F.	24.3	27.0	28.5	35.0	37.0	39.1	45.4	47.1	49.8	28 37.02	− 0.63	− 3.94	− 3.90	4 28 32.49	+ 0.02
	38	ι Aurigæ. . . .	F.	26.8	29.7	31.5	39.0	41.4	43.7	51.0	52.9	56.0	48 41.33	− 0.42	− 3.97	− 3.90	4 48 37.01	+ 0.03
4	39	Polaris, S. P. . .	Ha.	. .	. .	41.0	14.0	51.0	26.0	59.0	. .	. .	12 50.20	−24.36	. .	− 3.83	1 12 22.01	− 1.65
	40	α Virginis . . .	Ha.	16.6	19.2	20.8	27.0	29.0	31.1	37.2	38.9	41.4	18 29.02	− 0.97	− 4.00	− 3.83	13 18 24.22	+ 0.15
	41	Polaris	Ha.	. .	. .	15.5	37.5	2.0	29.0	57.0	. .	. .	12 2.20	+22.57	. .	− 3.88	1 12 20.89	− 2.45
	42	Neptune . . .	Ha.	8.8	11.3	12.9	19.0	21.2	23.2	29.5	31.0	33.5	30 21.16	− 0.76	. .	− 3.88	1 30 16.52	. .
	43	ο Piscium . . .	Ha.	29.3	31.7	33.4	39.5	41.6	43.8	49.9	51.4	54.0	38 41.62	− 0.76	− 3.81	− 3.88	1 38 36.98	− 0.10
	44	γ Ceti.	Ha.	31.2	33.8	35.5	41.4	43.5	45.6	51.8	53.3	55.8	36 43.54	− 0.82	− 3.90	− 3.89	2 36 38.83	+ 0.01
	45	ζ Arietis	Ha.	. .	. .	31.0	33.5	35.6	37.8	40.0	. .	. .	7 35.58	− 0.61	− 3.89	− 3.89	3 7 31.08	− 0.04
	46	α Persei	Ha.	54.6	58.6	1.1	10.3	13.5	16.7	26.0	28.4	32.3	15 13.50	− 0.14	. .	− 3.89	3 15 9.47	− 0.06
	47	γ^2 Ursæ Minoris, S. P.	Ha.	. .	. .	15.9	9.1	2.4	55.9	49.4	. .	. .	21 2.54	− 2.53	. .	− 3.89	15 20 56.12	+ 0.42
	48	Moon II, N. . .	Ha.	31.0	33.7	35.3	41.9	44.1	46.3	52.8	54.4	57.0	37 44.06	− 0.66	. .	− 3.89	3 37 39.51	−64.39

12. Bisections at wires I–VII.
22, 25, 28. Bisections at wires II–VI.
32, 48. Bisections at sets B and D.
47. Bisections at wires V and VI.

Number.	Circle Division.	MICROSCOPE MICROMS.				TELESCOPE MICROMETER.						Zenith Point Correction.	Apparent Zenith Distance, South.	Sympiesometer.	Refraction.	Apparent North Polar Distance.	Miscellan'us Corrections.
		V.	VI.	VII.	VIII.	Rev.	1.	2.	3.	4.	5.						
	° ′	r. ″	″	″	″							″	° ′ ″		′ ″	° ′ ″	″
1																	
2	349 26	10 13.3	28.4	7.4	1.9	37	. .	. .	. .	870	860	62.1	10 30 36.6	. .	+ 10.3	61 37 8.1	− 0.4
3	52 24	17.0	3.5	11.6	9.4	35	. .	280	270	285	. .	63.2	307 32 2.7	. .	− 1 11.7	358 37 12.2	+ 0.4
4	321 46	10 18.5	3.7	11.4	6.5	32	185	. .	. .	. .	230	63.2	38 9 15.3	. .	+ 45.2	89 16 21.7	+ 0.6
5	320 16	16.2	1.3	8.8	5.5	33	430	. .	. .	. .	405	63.2	39 39 31.8	. .	+ 47.7	90 46 40.7	+ 0.8
6	331 12	20.0	5.5	13.4	7.0	32	. .	480	. .	515	. .	63.2	28 43 21.3	. .	+ 31.5	79 50 14.0	− 0.6
7	26 34	18.4	4.0	11.1	5.5	37	. .	680	. .	690	. .	63.2	333 22 39.9	. .	− 28.8	24 28 32.3	0.0
8	290 46	20.5	5.8	12.1	8.0	31	. .	860	. .	900	. .	63.2	69 9 11.7	. .	+ 2 29.8	120 18 2.7	− 1.8
9	335 34	15.2	1.0	8.2	1.1	36	490	. .	. .	. .	495	63.2	24 22 17.6	. .	+ 26.1	75 29 4.9	+ 0.9
10	349 26	13.2	28.7	6.0	1.1	37	800	. .	. .	. .	835	63.2	10 30 36.6	. .	+ 10.7	61 37 8.5	+ 0.3
11	335 32	17.3	2.6	9.8	3.1	39	240	. .	. .	. .	255	63.2	24 25 1.8	. .	+ 26.2	75 31 49.2	+ 0.7
12	317 38	18.5	4.0	11.9	5.4	33	545	420	945	575	370	63.2	42 17 26.9	. .	+ 52.5	93 24 40.6	
13	302 22	16.3	1.3	9.8	4.6	33	465	. .	. .	. .	445	63.2	57 33 32.2	. .	+ 1 30.6	108 41 24.0	− 0.5
14	56 4	14.0	0.2	7.3	2.6	35	. .	. .	680	. .	. .	63.2	303 2 4.6	. .	− 1 28.6	354 6 57.2	+ 2.8
15	328 14	15.3	0.8	8.5	2.8	31	. .	870	. .	905	. .	63.2	31 41 7.3	. .	+ 35.7	82 48 4.2	− 0.4
16	49 38	14.1	0.8	8.9	2.6	33	. .	765	725	750	. .	63.2	310 17 35.6	. .	− 1 8.1	1 22 48.7	+ 0.7
17	49 38	10 11.6	27.5	6.2	0.0	33	. .	905	850	905	. .	63.7	310 17 35.5	. .	− 1 8.3	1 22 48.4	+ 1.0
18	335 44	11.0	27.5	5.5	29.1	36	. .	470	. .	465	. .	63.7	24 12 14.6	. .	+ 26.1	75 19 1.9	+ 1.8
19	328 38	16.2	1.4	9.7	3.9	31	. .	. .	. .	650	640	63.7	31 17 5.0	. .	+ 35.3	82 24 1.5	
20	329 34	11.5	27.1	5.1	29.0	37	190	. .	. .	. .	190	63.7	30 22 25.6	. .	+ 34.0	81 29 20.8	+ 0.4
21	341 14	12.8	28.2	6.0	29.8	37	740	. .	. .	. .	780	63.7	18 42 35.6	. .	+ 19.7	69 49 16.5	+ 1.2
22	328 30	10.5	26.0	4.2	28.7	32	. .	545	205	860	. .	63.7	31 25 8.1	. .	+ 35.4	82 32 4.7	
23	329 18	15.3	29.1	7.2	1.4	37	. .	. .	. .	110	140	63.7	30 38 27.1	. .	+ 34.3	81 45 22.6	− 0.2
24	27 52	15.7	0.9	9.4	2.5	39	. .	260	. .	305	. .	63.7	332 5 2.4	. .	− 30.8	23 10 52.8	− 0.1
25	64 44	8.5	24.4	2.6	28.8	36	. .	130	. .	. .	. .	63.7	295 12 5.8	. .	− 2 2.8	346 16 24.2	+ 4.2
26	323 44	13.0	28.6	6.0	1.4	32	600	. .	. .	. .	600	63.7	36 11 16.6	. .	+ 42.6	87 18 20.4	+ 0.3
27	323 44	10 14.5	29.1	6.1	2.0	32	. .	. .	. .	565	575	63.8	36 11 16.9	. .	+ 42.3	87 18 20.4	+ 0.4
28	333 22	11.6	26.1	3.9	4.3	36	848	698	624	408	230	63.8	26 34 16.8	. .	+ 28.9	77 41 6.9	
29	324 38	8.7	23.0	1.9	27.6	35	078	080	. .	068	084	63.8	35 17 50.3	. .	+ 40.9	86 24 52.4	+ 0.2
30	38 16	10 7.5	21.7	0.0	25.7	32	. .	440	. .	520	. .	63.8	321 39 10.3	. .	− 45.7	12 44 45.8	− 1.1
31	10 26	4.9	20.0	28.3	28.1	35	. .	. .	. .	455	475	63.8	349 29 54.3	. .	− 10.7	40 36 4.8	0.0
32	68 42	10.4	25.0	4.3	3.5	35	326	326	. .	. .	. .	63.8	291 13 56.9	. .	− 2 27.6	342 17 50.5	+ 1.0
33	8 24	13.3	27.8	6.0	27.3	33	. .	345	. .	420	. .	63.8	351 31 27.9	. .	− 8.7	42 37 40.4	− 2.4
34	307 12	9.6	24.5	0.6	0.3	38	. .	. .	. .	630	616	63.8	52 44 45.5	. .	+ 1 15.8	103 52 22.5	+ 2.1
35	72 50	6.4	20.7	28.8	28.7	35	. .	851	. .	885	. .	63.8	287 6 0.0	. .	− 3 5.6	338 9 15.6	− 0.9
36	336 22	7.0	20.5	29.1	28.4	36	. .	924	. .	960	. .	63.8	23 34 17.5	. .	+ 25.2	74 41 3.9	+ 1.3
37	337 18	4.9	18.5	27.9	25.1	37	. .	188	. .	160	. .	63.8	22 38 18.9	. .	+ 24.1	73 45 4.2	+ 2.4
38	354 0	10 0.4	14.5	23.3	20.7	36	. .	248	. .	252	. .	63.8	5 56 0.4	. .	+ 6.0	57 2 27.6	+ 0.5
39																	
40																	
41	49 38	14.5	0.3	8.2	8.0	33	. .	575	570	535	. .	62.5	310 17 33.2	. .	− 1 7.1	1 22 47.3	+ 0.5
42	328 38	15.1	0.0	8.1	8.0	35	. .	400	. .	410	. .	62.5	31 18 1.5	. .	+ 34.7	82 24 57.4	
43	329 34	15.0	0.1	7.8	7.9	37	020	. .	. .	. .	030	62.5	30 22 26.4	. .	+ 33.4	81 29 21.0	+ 0.9
44	323 44	13.5	29.0	6.2	7.0	32	635	. .	. .	. .	590	62.5	36 11 17.3	. .	+ 41.7	87 18 20.2	+ 0.3
45	341 36	13.5	29.2	6.0	6.2	32	. .	. .	. .	895	850	62.5	18 19 21.1	. .	+ 18.9	69 26 1.2	+ 1.4
46	10 26	14.0	0.0	7.2	7.1	35	. .	965	. .	005	. .	62.5	349 29 54.7	. .	− 10.6	40 36 5.3	+ 0.6
47	68 42	14.7	0.2	8.4	8.6	35	. .	. .	. .	940	970	62.5	291 13 54.1	. .	− 2 26.0	342 17 49.2	− 0.1
48	337 34	15.5	0.7	8.1	8.5	33	. .	000	850	710	. .	62.5	22 21 22.7	. .	+ 23.5	73 28 7.4	

No.	Barom.	At. Ther.	Ex. Ther.
	in.	°	°
2	. .	. .	62.5
3	30.050	74.0	78.5
4	30.168	69.0	59.0
9	. .	. .	59.0
11	. .	. .	57.0
16	30.170	67.5	56.5
17	30.280	66.5	56.5
20	. .	. .	56.0
23	. .	. .	56.5
26	30.278	66.0	54.5
27	30.188	69.0	56.5
34	. .	. .	57.0
36	. .	. .	56.5
37	. .	. .	56.0
38	30.200	68.0	55.0
40	30.140	75.0	87.0
41	30.122	71.0	63.0
43	. .	. .	62.5
44	. .	. .	62.0
45	. .	. .	61.0

For summary of the elements of reduction see page 3.

No.	Parallax.	Semi-diam.	Defective Illumination.	Sum.
	′ ″	′ ″	′ ″	′ ″
12	−38 15.6	+ 15 35.8	. .	− 22 39.8
22	−28 50.6	+ 15 12.2	. .	− 13 38.4
28	−24 27.4	+ 15 1.5	. .	− 9 25.9
42	− 0.2	. .	. .	− 0.2
48	−20 35.8	+ 14 55.1	. .	− 5 40.7

DATE.	Number.	OBJECT.	Observer.	SECONDS OF TRANSIT OVER WIRES.										CORRECTIONS.			Apparent Right Ascension.	Miscellan'us Corrections.
				I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	Mean wire.	Inst.	Clock appar'nt.	Clock adopted.		
1871.													m. s.	s.	s.	s.	h. m. s.	s.
Sept. 4	1	ζ Persei	Ha.	53.1	56.2	58.2	5.2	7.6	10.2	17.1	19.0	22.0	46 7.62	− 0.47	− 3.89	− 3.89	3 46 3.26	− 0.01
	2	γ^{1} Eridani.	Ha.	54.2	56.8	58.3	2.6	4.8	8.9	11.0	15.2	19.3	52 6.79	− 1.00	− 3.81	− 3.89	3 52 1.90	− 0.04
	3	α Canum Venat.	Ha.	47.9	51.0	53.1	1.0	3.7	6.5	14.2	16.1	19.3	50 3.64	− 0.42	− 4.17	− 4.04	12 49 59.18	+ 0.13
5	4	Polaris, S. P.	F.	. .	. .	30.0	4.0	40.0	14.0	50.0	. .	. .	12 39.60	. ..	. .	. .	. . . .	. .
	5	ζ Virginis	F.	0.0	2.6	4.2	10.2	12.4	14.5	20.5	22.0	24.6	28 12.33	− 0.80	− 4.15	− 4.04	13 28 7.49	+ 0.11
	6	η Ursæ Majoris	F.	12.1	16.2	18.7	28.1	31.3	34.4	43.5	46.3	50.3	42 31.21	− 0.24	. .	− 4.04	13 42 26.93	+ 0.08
	7	η Bootis	F.	24.6	27.1	28.8	35.2	37.4	39.7	46.0	47.5	50.2	48 37.39	− 0.63	− 4.14	− 4.04	13 48 32.72	+ 0.05
	8	α Bootis	F.	. .	. .	47.2	49.4	51.5	53.7	55.9	. .	. .	9 51.54	− 0.62	− 4.14	− 4.04	14 9 46.88	+ 0.10
	9	ε Piscium	F.	12.4	13.6	17.9	19.9	22.0	24.1	26.1	30.2	31.7	56 21.99	− 0.73	− 4.11	− 4.09	0 56 17.17	+ 0.04
	10	Polaris.	F.	. .	. .	16.0	42.0	6.0	32.0	57.0	. .	. .	12 6.60	. .	. .	. .	. . . .	+ 0.10
	11	θ^{1} Ceti.	F.	29.2	31.8	33.3	39.7	41.6	43.8	49.9	51.5	54.1	17 41.66	− 0.86	− 4.17	− 4.09	1 17 36.71	+ 0.40
	12	38 Cassiopeæ.	F.	12.1	19.6	24.2	41.3	47.2	53.0	11.0	15.4	22.9	21 47.41	+ 0.40	. .	− 4.09	1 21 43.72	− 0.46
	13	Neptune	F.	4.8	7.4	9.0	15.0	17.0	19.0	25.2	26.9	29.4	30 17.08	− 0.72	. .	− 4.09	1 30 12.27	
	14	ο Piscium	F.	29.4	31.9	33.6	39.8	42.0	44.0	50.0	51.7	54.3	38 41.86	− 0.71	− 4.08	− 4.10	1 38 37.05	− 0.05
	15	50 Cassiopeæ.	F.	. .	. .	22.2	28.9	35.2	41.9	48.6	. .	. .	52 35.36	+ 0.54	. .	− 4.10	1 52 31.80	− 0.48
	16	α Arietis	F.	47.7	50.6	52.0	58.9	1.0	3.2	9.9	11.6	14.5	0 1.04	− 0.59	− 4.05	− 4.10	1.59 56.35	− 0.04
	17	α Draconis, S. P.	F.	. .	. .	. .	. .	. .	. .	28.1	21.7	18.6	0 59.03	− 1.58	. .	− 4.10	14 0 53.35	+ 0.75
	18	5 Ursæ Minoris, S.P.	F.	. .	. .	11.2	2.3	54.3	45.5	36.4	. .	. .	27 53.94	− 2.39	. .	− 4.10	14 27 47.45	+ 0.72
	19	γ Ceti.	F.	31.3	33.9	35.4	41.5	43.5	45.6	51.8	53.2	56.0	36 43.58	− 0.76	− 3.98	− 4.10	2 36 38.72	− 0.12
	20	β Ursæ Minoris, S.P.	F.	. .	. .	26.2	18.2	10.9	3.2	55.3	. .	. .	51 10.76	− 2.21	. .	− 4.10	14 51 4.45	+ 0.39
	21	α Ceti.	F.	. .	. .	34.6	36.7	38.8	40.8	42.9	. .	. .	55 38.76	− 0.76	− 4.04	− 4.10	2 55 33.90	− 0.04
	22	48 Cephei	F.	. .	. .	51.3	0.3	9.8	19.0	27.9	. .	. .	4 9.66	+ 1.13	. .	− 4.10	3 4 6.69	− 0.73
	23	η Tauri	F.	42.0	44.8	46.3	53.3	55.4	57.5	4.4	6.0	8.8	39 55.39	− 0.58	− 4.04	− 4.11	3 39 50.70	− 0.07
	24	ζ Persei	F.	53.5	56.5	58.2	. .	7.9	. .	17.3	19.2	22.2	46 7.83	− 0.49	− 4.04	− 4.11	3 46 3.23	− 0.08
	25	γ^{1} Eridani.	F.	54.5	57.0	58.6	5.0	7.0	9.2	15.5	17.0	19.7	52 7.06	− 0.91	− 4.14	− 4.11	3 52 2.04	+ 0.07
	26	γ Tauri	F.	20.7	23.4	24.8	31.2	33.3	35.4	41.7	43.4	46.1	12 33.33	− 0.65	− 4.05	− 4.11	4 12 28.57	− 0.05
	27	ε Tauri	F.	58.2	1.0	2.6	9.0	11.2	13.4	19.8	21.4	24.0	21 11.18	− 0.63	− 4.04	− 4.11	4 21 6.44	− 0.08
	28	Moon II, N.	F.	30.6	33.5	35.0	41.7	43.9	46.0	52.8	54.4	57.2	27 43.90	− 0.62	. .	− 4.11	4 27 39.17	−65.40
	29	α Tauri	F.	27.1	28.8	33.0	35.0	37.2	39.4	41.5	45.7	47.3	28 37.22	− 0.64	− 4.07	− 4.11	4 28 32.47	− 0.06
	30	ι Aurigæ.	F.	26.9	30.0	31.8	39.0	41.6	43.9	51.3	53.2	56.3	48 41.56	− 0.48	− 4.06	− 4.11	4 48 36.97	− 0.09
	31	11 Orionis	F.	. .	. .	13.7	15.8	17.9	19.9	22.0	. .	. .	57 17.86	− 0.65	− 4.14	− 4.11	4 57 13.10	− 0.04
6	32	Moon II	Ha.	1.9	4.7	6.6	13.4	15.6	17.8	24.6	26.3	29.0	19 15.54	− 0.62	. .	− 4.12	5 19 10.80	−66.45
	33	δ Orionis.	Ha.	18.6	21.2	22.7	28.9	30.8	32.9	39.0	40.5	43.0	25 30.84	− 0.81	− 4.13	− 4.12	5 25 25.91	− 0.02
	34	ε Orionis.	Ha.	33.6	36.2	37.8	43.9	45.9	47.9	54.0	55.5	58.2	29 45.89	− 0.82	− 4.12	− 4.12	5 29 40.95	− 0.01
	35	α Orionis.	Ha.	4.6	7.3	8.8	14.9	17.0	19.0	25.2	26.7	29.3	48 16.98	− 0.75	− 4.11	− 4.12	5 48 12.11	− 0.04
7	36	9 Camelopardalis	F.	50.6	56.7	0.4	15.7	20.7	25.8	41.0	44.8	51.0	41 20.74	+ 0.21	. .	− 4.19	4 41 16.76	+ 0.16
	37	ι Aurigæ.	F.	27.2	30.2	32.2	39.5	41.8	44.3	51.6	53.3	56.5	48 41.84	− 0.47	− 4.29	− 4.19	4 48 37.18	+ 0.06
	38	11 Orionis.	F.	5.2	7.9	9.4	15.9	17.9	20.0	26.4	27.9	30.6	57 17.91	− 0.64	− 4.14	− 4.19	4 57 13.08	− 0.12
	39	ε Ursæ Minoris, S.P.	F.	. .	. .	52.4	37.3	22.5	8.0	51.6	. .	. .	59 22.36	− 3.65	. .	− 4.19	16 59 14.52	+ 0.09
	40	α Aurigæ.	F.	58.2	1.8	4.0	12.7	15.7	18.6	27.4	29.6	33.3	7 15.70	− 0.31	. .	− 4.19	5 7 11.20	− 0.02
	41	β Orionis.	F.	13.8	16.4	18.2	24.3	26.3	28.3	34.5	36.2	38.7	8 26.30	− 0.84	− 4.17	− 4.19	5 8 21.27	− 0.02
	42	β Tauri	F.	0.2	3.3	5.0	12.0	14.3	16.5	23.5	25.4	28.2	18 14.27	− 0.51	− 4.29	− 4.19	5 18 9.57	+ 0.08
	43	δ Orionis.	F.	18.6	22.6	26.9	28.9	31.0	33.0	35.0	39.1	43.1	25 30.91	− 0.77	− 4.21	− 4.19	5 25 25.95	− 0.01
	44	ε Orionis.	F.	33.8	36.3	37.9	43.9	45.9	48.0	54.1	55.6	58.2	29 45.97	− 0.78	− 4.21	− 4.19	5 29 41.00	+ 0.01
	45	α Columbæ	F.	49.7	52.8	54.7	2.0	4.5	6.9	14.5	16.0	19.5	35 4.51	− 1.12	− 4.16	− 4.19	5 34 59.20	− 0.07
	46	α Orionis.	F.	. .	. .	. .	17.0	19.2	21.2	25.3	26.9	29.4	48 17.06	− 0.71	− 4.20	− 4.19	5 48 12.16	− 0.02
	47	Moon II, S.	F.	3.4	6.4	8.0	14.9	17.0	19.4	26.3	28.0	30.8	12 17.13	− 0.57	. .	− 4.19	6 12 12.37	−67.30

15, 18, 20, 22, 28, 47. Bisections at sets B and D.

47. North polar distance seems wrong; cannot account for it.

Number.	Circle Division.	MICROSCOPE MICROMS.				TELESCOPE MICROMETER.						Zenith Point Correction.	Apparent Zenith Distance, South.	Sympiesometer.	Refraction.	Apparent North Polar Distance.	Miscellan'us Corrections.
		V.	VI.	VII.	VIII.	Rev.	1.	2.	3.	4.	5.						
	° ′	r. ″	″	″	″							″	° ′ ′		′ ″	° ′ ″	″
1	352 32	14.6	29.5	7.0	6.5	33	. .	. .	. .	810	800	62.5	7 23 36.3	. .	+ 7.4	58 30 4.9	+ 0.3
2	307 12	17.9	3.0	10.6	11.0	38	140	. .	. .	. .	090	62.5	52 44 45.8	. .	+ 1 15.1	103 52 22.1	+ 1.8
3	0 4	14.0	0.3	9.3	11.2	38	224	. .	. .	140	. .	57.3	359 52 40.1	. .	— 0.1	50 59 1.2	+ 2.8
4	52 24	10 11.7	25.0	7.5	7.6	36	000	020	015	020	038	57.3	307 32 3.2	. .	— 1 11.0	358 37 13.4	0.0
5	321 6	13.2	29.1	8.7	11.0	31	. .	870	. .	844	. .	57.3	38 49 2.0	. .	+ 43.9	89 56 7.1	+ 1.4
6	11 0	10.8	24.4	5.5	4.4	36	. .	665	. .	680	. .	57.3	348 56 12.1	. .	— 10.7	40 2 22.6	+ 1.8
7	340 6	14.3	1.2	10.0	10.5	37	675	658	. .	670	700	57.3	19 50 32.5	. .	+ 19.7	70 57 13.4	+ 2.5
8	340 54	8.8	24.7	5.7	4.7	35	. .	860	. .	830	. .	57.3	19 1 58.8	. .	+ 18.8	70 8 38.8	+ 3.0
9	328 14	9.9	24.2	2.5	3.3	32	. .	440	. .	390	. .	60.4	31 41 8.2	. .	+ 35.2	82 48 4.6	+ 0.7
10	49 38	10 5.5	20.5	29.0	28.8	34	162	205	208	218	182	60.4	310 17 31.6	. .	— 1 7.3	1 22 45.5	— 1.0
11	312 12	10.0	24.8	3.4	4.4	33	. .	. .	. .	058	032	60.4	47 43 18.4	. .	+ 1 2.8	98 50 42.4	+ 0.9
12																	
13	328 38	10.8	25.0	3.9	4.1	37	. .	585	. .	585	. .	60.4	31 18 28.6	. .	+ 34.8	82 25 24.6	
14	329 34	10 5.5	18.7	27.3	27.8	37	. .	815	. .	758	. .	60.4	30 22 25.6	. .	+ 33.5	81 29 20.3	+ 0.3
15	32 50	10 1.5	16.0	23.0	24.2	38	. .	. .	. .	640	622	60.4	327 6 34.6	. .	— 37.0	18 12 18.8	— 3.0
16	343 54	10 13.5	28.8	5.3	6.2	36	. .	108	. .	. .	. .	60.4	16 2 8.5	. .	+ 16.5	67 8 46.2	— 0.6
17	76 0	10 0.2	14.5	21.2	23.8	40	. .	990	. .	. .	. .	60.4	283 57 9.2	. .	— 3 46.3	334 59 44.1	+ 1.5
18	64 44	10 1.7	17.4	25.0	27.9	36	234	200	. .	376	382	60.4	295 12 0.6	. .	— 2 1.2	346 16 20.6	+ 1.3
19	323 44	10 17.7	2.5	9.7	11.5	32	. .	375	. .	380	. .	60.4	36 11 15.5	. .	+ 41.9	87 18 18.6	— 1.2
20	66 20	16.0	1.8	10.8	12.2	39	. .	010	. .	075	. .	60.4	293 36 57.4	. .	— 2 10.4	344 41 8.2	— 0.2
21	324 38	19.9	4.5	13.5	14.2	34	. .	. .	. .	370	376	60.4	35 17 48.8	. .	+ 40.6	86 24 50.6	— 1.4
22	38 16	18.5	2.6	10.9	10.9	31	. .	. .	. .	870	850	60.4	321 39 8.2	. .	— 45.4	12 44 44.0	— 2.5
23	344 46	10 22.7	7.4	15.2	14.9	39	. .	008	. .	984	. .	60.4	15 11 2.0	. .	+ 15.6	66 17 38.8	— 1.3
24	352 32	10 11.4	26.4	4.7	3.4	34	. .	076	. .	044	. .	60.4	7 23 35.1	. .	+ 7.5	58 30 3.8	— 0.6
25	307 12	19.0	4.5	11.8	13.8	38	. .	078	. .	042	. .	60.4	52 44 44.6	. .	+ 1 15.3	103 52 21.1	+ 0.8
26	336 22	10 13.1	27.3	5.4	5.7	36	520	550	. .	594	574	60.4	23 34 14.9	. .	+ 25.0	74 41 1.1	— 1.3
27	339 56	19.5	4.0	13.0	13.1	33	. .	790	. .	786	. .	60.4	19 59 39.2	. .	+ 20.9	71 6 21.3	— 1.3
28	341 0	10 12.7	27.0	5.0	6.0	34	. .	644	495	344	. .	60.4	18 55 42.8	. .	+ 19.7	70 2 23.7	
29	337 18	10 15.1	29.7	6.0	7.5	36	. .	. .	. .	495	478	60.4	22 38 15.4	. .	+ 24.0	73 45 0.6	— 1.1
30	354 0	15.8	0.9	8.8	9.7	35	. .	332	. .	294	. .	60.4	5 55 59.2	. .	+ 6.0	57 2 26.4	— 0.6
31	336 16	15.2	29.5	6.7	7.4	34	. .	658	. .	650	. .	60.4	23 39 47.4	. .	+ 25.2	74 46 33.8	— 0.6
32																	
33	320 40	10 11.0	25.7	5.4	4.9	37	. .	570	. .	570	. .	61.5	39 16 30.2	. .	+ 46.1	80 23 37.5	— 1.0
34	319 46	12.2	28.5	8.0	7.6	34	. .	950	. .	960	. .	61.5	40 9 52.3	. .	+ 47.5	91 17 1.0	+ 0.2
35	328 26	13.1	28.5	7.5	7.8	35	. .	815	. .	810	. .	61.5	31 30 5.7	. .	+ 34.5	82 37 1.4	— 0.9
36	27 8	10 10.2	24.5	2.2	3.2	32	. .	504	. .	514	. .	60.7	332 47 10.7	. .	— 30.0	23 53 1.9	+ 1.6
37	354 0	10 12.5	26.9	5.7	5.8	35	. .	656	. .	660	. .	60.7	5 56 1.2	. .	+ 6.1	57 2 28.5	+ 1.7
38	336 16	13.8	28.4	7.5	6.3	34	728	734	. .	. .	. .	60.7	23 39 48.3	. .	+ 25.5	74 46 35.0	+ 0.8
39	58 46	13.7	27.9	7.1	8.2	36	. .	. .	525	. .	. .	60.7	301 10 15.9	. .	— 1 36.0	352 15 1.1	+ 0.4
40	6 54	11.7	26.7	4.5	5.0	35	778	810	. .	. .	. .	60.7	353 2 3.0	. .	— 7.1	44 8 17.1	+ 0.7
41	312 42	10 19.5	2.7	11.7	12.6	33	. .	. .	. .	480	445	60.7	47 13 33.6	. .	+ 1 2.9	98 20 57.7	+ 1.3
42	349 32	17.3	1.0	10.1	11.1	34	. .	186	. .	190	. .	60.7	10 23 43.3	. .	+ 10.7	61 30 15.2	+ 0.3
43	320 40	15.0	28.7	7.9	8.8	37	. .	430	. .	365	. .	60.7	39 16 30.2	. .	+ 47.6	90 23 39.0	+ 0.6
44	319 46	17.3	2.0	10.4	12.2	34	. .	700	. .	686	. .	60.7	40 9 51.5	. .	+ 49.1	91 17 1.8	+ 1.1
45	286 56	21.2	6.2	14.6	16.5	30	. .	. .	. .	578	550	60.7	72 58 51.9	. .	+ 3 7.6	124 8 20.7	+ 0.7
46	328 26	13.3	26.7	5.7	6.0	36	. .	. .	. .	005	010	60.7	31 30 6.6	. .	+ 35.6	82 37 3.4	+ 1.1
47	344 26	9 24.1	7.6	16.0	16.2	37	. .	275	350	382	. .	60.7	15 30 7.6	. .	+ 16.0	66 36 44.8	

No.	Barom.	At. Ther.	Ex. Ther.
	in.	°	°
2	30.132	70.5	61.0
3	30.110	73.0	84.5
7	30.080	75.0	86.0
9	. .	. .	61.0
14	30.064	70.0	59.5
22	30.050	70.0	58.0
26	. .	. .	58.0
29	. .	. .	57.0
31	30.056	67.0	57.5
34	. .	. .	64.5
35	29.890	69.0	64.5
36	30.290	69.0	53.5
38	. .	. .	54.2
46	30.286	63.5	56.0

For summary of the elements of reduction see page 3.

No.	Parallax.	Semi-diam.	Defective Illumination.	Sum.
	′ ″	′ ″	′ ″	′ ″
13	— 0.2	. . .	. .	— 0.2
28	—17 26.7	+ 14 50.5	. .	— 2 36.2
47	—14 20.2	— 14 50.2	. .	— 29 10.4

DATE.	Number.	OBJECT.	Observer.	SECONDS OF TRANSIT OVER WIRES.										CORRECTIONS.			Apparent Right Ascension.	Miscellan'us Corrections.
				I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	Mean wire.	Inst.	Clock appar'nt.	Clock adopted.		
1871.													m. s.	s.	s.	s.	h. m. s.	s.
Sept. 7	1	γ Geminorum . .	F.	8.4	11.0	12.6	18.9	21.0	23.0	29.6	31.1	33.8	30 21.04	− 0.62	− 4.16	− 4.19	6 30 16.23	− 0.06
	2	51 Cephei	F.	. .	. .	. .	. .	10.0	51.5	34.5	. .	. .	39 9.70	. .	. .	. .	. . . .	. .
	3	ε Canis Majoris .	F.	24.8	27.6	29.3	36.4	38.7	41.0	48.0	49.7	52.5	53 38.67	− 1.04	− 4.11	− 4.19	6 53 33.44	− 0.13
8	4	α Orionis. . . .	Ha.	4.6	7.4	8.8	14.9	16.9	19.0	25.2	26.7	29.4	48 16.99	− 0.80	− 4.01	− 4.06	5 48 12.13	− 0.08
	5	δ Ursæ Minoris, S.P.	Ha	. .	. .	22.0	47.0	12.5	38.0	3.0	. .	. .	14 12.50	. .	. .	. .	. . . .	. .
	6	γ Geminorum . .	Ha.	8.2	10.8	12.5	18.9	21.0	23.0	29.6	31.0	33.7	30 20.97	− 0.67	− 4.01	− 4.06	6 30 16.24	− 0.08
	7	α Canis Majoris .	Ha.	20.5	23.0	24.5	31.0	33.3	35.5	41.7	43.3	46.0	39 33.20	− 1.11	. .	− 4.06	6 39 28.03	− 0.03
	8	Moon II, S. . .	Ha.	11.5	14.4	16.3	23.0	25.3	27.4	34.5	36.1	39.2	6 25.30	− 0.58	. .	− 4.06	7 6 20.66	−67.79
	9	α^2 Geminorum . .	Ha.	. .	. .	. .	. .	. .	. .	36.6	38.4	41.4	26 26.96	− 0.43	− 4.11	− 4.06	7 26 22.47	+ 0.29
	10	α Canis Minoris .	Ha.	25.8	28.4	30.0	36.0	38.0	40.1	46.3	47.8	50.5	32 38.10	− 0.81	− 4.13	− 4.06	7 32 33.23	− 0.07
	11	β Geminorum . .	Ha.	16.3	19.2	20.8	27.7	30.1	32.6	39.4	41.0	44.0	37 30.12	− 0.49	− 4.06	− 4.06	7 37 25.57	− 0.03
9	12	Anonymous . .	F.	4.7	7.7	9.5	14.7	16.7	25.5	30.4	32.0	. .	25 19.94	− 1.37	. .	− 4.25	18 25 14.32	− 2.01
	13	Anonymous . .	F.	. .	6.2	8.9	11.4	14.0	16.8	21.7	23.7	26.7	27 11.40	− 1.37	. .	− 4.25	18 27 5.78	− 2.04
	14	51 Cephei, S. P. . .	F.	. .	. .	55.0	12.5	30.0	47.5	5.0	. .	. .	39 30.00	−12.69	. .	− 4.25	6 39 13.06	− 0.75
	15	γ Aquilæ. . . .	F.	2.0	4.5	6.1	12.4	14.6	16.5	22.8	24.3	26.9	40 14.46	− 0.72	− 4.30	− 4.25	19 40 9.49	+ 0.08
	16	α Aquilæ. . . .	F.	23.7	26.4	27.9	34.2	36.3	38.2	44.4	45.9	48.6	44 36.18	− 0.75	− 4.20	− 4.25	19 44 31.18	− 0.01
	17	λ Ursæ Minoris. .	F.	. .	. .	. .	. .	. .	2.0	52.0	. .	. .	53 13.87	+29.77	. .	− 4.25	19 53 39.39	− 0.58
	18	51 Cephei	F.	. .	. .	43.0	25.0	6.5	. .	31.0	. .	. .	39 6.88	+11.17	. .	− 4.26	6 39 13.79	− 0.30
	19	δ Geminorum . .	F.	17.0	19.9	21.6	28.3	30.4	32.5	39.2	40.8	43.7	12 30.38	− 0.58	− 4.22	− 4.26	7 12 25.54	− 0.10
	20	α^2 Geminorum . .	F.	12.7	15.8	22.4	24.9	27.2	29.6	32.2	38.4	41.8	26 27.22	− 0.43	− 4.34	− 4.26	7 26 22.53	+ 0.32
	21	α Canis Minoris. .	F.	26.0	28.5	30.0	36.2	38.3	40.3	46.6	48.0	50.6	32 38.28	− 0.77	− 4.32	− 4.27	7 32 33.24	− 0.09
	22	β Geminorum . .	F.	16.4	19.3	21.0	28.0	30.2	32.6	39.6	41.2	44.2	37 30.28	− 0.50	− 4.19	− 4.27	7 37 25.51	− 0 11
	23	Moon II . . .	F.	49.0	52.0	53.7	0.4	2.7	5.0	11.9	13.4	16.3	1 2.71	− 0.57	. .	− 4.27	8 0 57.87	−67.82
21	24	Polaris, S. P. . .	F.	. .	. .	55.0	30.0	6.0	42.0	16.0	. .	. .	13 5.80	. .	. .	. .	. . . .	. .
	25	α Virginis . . .	F.	16.6	19.0	20.7	26.9	28.9	31.0	37.5	38.9	41.5	18 29.00	− 1.16	− 3.87	− 3.82	13 18 24.02	+ 0.03
	26	α Bootis	F.	38.4	40.9	42.6	49.2	51.3	53.5	0.0	1.5	4.0	9 51.27	− 0.74	− 3.91	− 3.82	14 9 46.71	+ 0.09
	27	θ Bootis	F.	31.4	35.5	38.1	48.2	51.5	54.9	4.9	7.3	11.6	20 51.49	− 0.03	. .	− 3.82	14 20 47.64	+ 0.16
	28	5 Ursæ Minoris. .	F.	. .	. .	30.6	39.2	47.7	56.3	4.9	. .	. .	27 47.74	+ 2.00	. .	− 3.82	14 27 45.92	+ 0.21
	29	ε Bootis	F.	11.8	14.6	16.5	23.4	25.7	28.0	34.9	36.7	39.6	39 25.69	− 0.61	− 3.90	− 3.82	14 39 21.26	+ 0.06
	30	Moon I, N. . .	F.	30.7	33.7	35.4	42.5	44.8	47.0	54.2	56.0	58.6	6 44.77	− 1.39	. .	− 3.83	18 6 39.55	+73.93
	31	Anonymous . .	F.	25.3	28.4	30.3	38.0	40.8	43.4	51.2	52.9	56.2	26 40.72	− 1.66	. .	− 3.83	18 26 35.23	− 1.80
	32	B. A. C. 6393 . .	F.	. .	. .	43.5	48.0	52.4	57.0	1.4	. .	. .	39 52.46	+ 0.43	. .	− 3.83	18 39 49.06	− 0.72
	33	β Lyræ	F.	9.8	12.9	14.7	22.0	24.5	27.0	34.3	36.0	39.2	45 24.49	− 0.51	− 3.76	− 3.83	18 45 20.15	− 0.04
	34	ζ Aquilæ. . . .	F.	. .	. .	. .	. .	. .	. .	43.4	44.9	47.6	59 34.96	− 0.82	− 3.87	− 3.83	18 59 30.31	+ 0.12
	35	d Sagittarii . . .	F.	. .	7.6	9.8	12.0	14.3	16.4	20.7	22.3	25.0	10 12.05	− 1.30	− 3.80	− 3.83	19 10 6.92	− 0.01
	36	δ Draconis . . .	F.	3.3	10.0	14.0	29.9	35.2	40.4	56.8	0.4	7.0	12 35.23	+ 0.79	. .	− 3.83	19 12 32.19	− 0.01
	37	κ Aquilæ. . . .	F.	51.2	54.0	55.4	1.3	3.7	5.9	12.0	13.5	16.0	30 3.67	− 1.12	− 3.77	− 3.83	19 29 58.72	− 0.02
	38	γ Aquilæ, (R.) . .	F.	0.8	3.6	5.0	11.4	13.3	15.4	21.7	23.4	25.8	40 13.38	− 0.46	. .	− 3.83	19 40 9.09	− 0.14
	39	τ Aquilæ. . . .	F.	44.4	46.9	48.5	54.5	56.7	58.9	5.0	6.6	9.0	57 56.72	− 0.93	− 3.75	− 3.83	19 57 51.96	− 0.06
	40	20 Vulpeculæ. . .	F.	28.7	31.4	33.2	40.0	42.3	44.7	51.5	53.4	56.0	6 42.36	− 0.64	. .	− 3.83	20 6 37.89	− 1.70
	41	κ^1 Cephei . . .	F.	19.3	30.4	37.8	5.8	15.6	24.0	51.9	59.2	10.8	13 14.98	+ 2.26	. .	− 3.83	20 13 13.41	− 0.13
	42	κ^2 Cephei . . .	F.	. .	. .	58.3	7.3	16.6	25.5	35.4	. .	. .	13 16.62	+ 2.26	. .	− 3.83	20 13 15.05	+ 1.51
	43	π Capricorni . . .	F.	. .	58.8	1.0	3.3	5.4	7.6	11.9	13.5	16.2	20 3.23	− 1.29	− 3.70	− 3.83	20 19 58.11	− 0.10
	44	ε Delphini, (R.) . .	F.	56.8	. .	. .	. .	. .	. .	17.3	18.8	21.6	27 9.05	− 0.45	. .	− 3.83	20 27 4.77	− 0.05
	45	α Cygni, (R.). . .	F.	50.3	53.5	55.4	. .	. .	. .	. .	. .	. .	37 7.23	+ 0.38	. .	− 3.83	20 37 3.78	− 0.15
	46	λ Aquarii . . .	F.	48.2	50.8	52.3	58.4	0.5	2.7	8.6	10.3	12.8	46 0.51	− 1.13	− 3.95	− 3.84	22 46 55.54	+ 0.19
	47	Daphne . . .	F.	28.6	31.0	33.0	39.0	40.9	43.0	49.0	51.0	53.4	51 40.99	− 1.04	. .	− 3.84	22 51 36.11	. .

8, 28, 30, 32, 41, 42. Bisections at sets B and D.

Number.	Circle Division.	MICROSCOPE MICROMS.				TELESCOPE MICROMETER.						Zenith Point Correction.	Apparent Zenith Distance, South.	Sympiesometer.	Refraction.	Apparent North Polar Distance.	Miscellan'us Corrections.
		V.	VI.	VII.	VIII.	Rev.	1.	2.	3.	4.	5.						
	° ′	r. ″	″	″	″							″	° ′ ′		′ ″	° ′ ″	″
1	337 34	20.0	4.8	13.0	14.1	38	. .	170	. .	170	. .	60.7	22 22 47.5	. .	+ 23.7	73 29 32.4	+ 0.9
2																	
3	292 16	24.0	8.6	18.3	19.5	30	. .	770	. .	760	. .	60.7	67 38 58.2	. .	+ 2 18.8	118 47 38.2	− 0.6
4	328 26	10 6.3	20.0	1.3	0.7	36	. .	125	. .	140	. .	63.7	31 30 5.7	. .	+ 36.0	82 37 2.9	+ 0.7
5	54 24	9.2	23.8	3.9	4.0	34	. .	315	350	295	. .	63.7	305 31 40.9	. .	− 1 21.6	356 36 40.5	+ 0.1
6	337 32	7.7	23.5	2.4	2.6	30	. .	835	. .	805	. .	63.7	22 22 46.2	. .	+ 24.0	73 29 31.4	− 0.1
7	304 32	10.6	25.2	4.7	4.5	37	. .	550	. .	585	. .	63.7	55 24 31.8	. .	+ 1 24.2	106 32 17.2	+ 0.1
8	344 40	10 6.2	20.5	0.0	29.5	32	. .	170	205	250	. .	63.7	15 15 4.9	. .	+ 15.8	66 21 41.9	
9	353 12	10 23.6	7.5	16.9	16.8	32	. .	. .	. .	505	555	63.7	6 43 27.2	. .	+ 6.8	57 50 55.2	0.0
10	326 36	7.8	22.5	2.2	2.0	34	. .	555	. .	580	. .	63.7	33 19 43.2	. .	+ 37.9	84 26 42.3	− 1.1
11	349 22	11.2	25.1	4.0	4.5	33	. .	010	. .	990	. .	63.7	10 33 21.9	. .	+ 10.7	61 39 53.8	+ 0.2
12	283 18	15.8	0.6	7.8	10.0	35	. .	145	. .	140	. .	61.8	76 37 57.2	. .	+ 3 55.2	127 48 13.6	− 4.9
13	283 8	12.0	25.3	1.1	4.0	38	. .	. .	. .	900	900	61.8	76 48 49.3	. .	+ 3 58.6	127 59 9.1	− 5.0
14	53 46	15.5	0.3	8.0	8.1	31	. .	. .	380	. .	. .	61.8	306 8 58.2	. .	− 1 18.1	357 14 1.3	− 0.2
15	331 22	17.9	0.8	8.6	9.3	38	. .	. .	. .	650	. .	61.8	28 34 52.0	. .	+ 31.2	79 41 44.4	− 0.2
16	329 34	14.4	25.7	3.4	6.0	32	. .	160	. .	110	. .	61.8	30 21 7.7	. .	+ 33.5	81 28 2.4	+ 1.3
17																	
18	48 16	13.6	28.7	9.1	9.7	37	930	935	935	. .	. .	63.2	311 40 41.1	. .	− 1 4.3	2 45 58.0	− 0.5
19	343 16	15.7	0.0	7.6	9.6	36	. .	465	. .	487	. .	63.2	16 40 19.2	. .	+ 17.1	67 46 57.5	+ 1.1
20	353 12	13.7	27.2	6.4	7.5	33	. .	296	. .	290	. .	63.2	6 43 28.3	. .	+ 6.7	57 49 56.2	+ 0.9
21	326 36	16.1	0.9	9.5	10.2	34	. .	196	. .	192	. .	63.2	33 19 45.0	. .	+ 37.5	84 26 43.7	+ 0.3
22	349 22	16.0	28.3	8.1	8.2	32	. .	830	. .	858	. .	63.2	10 33 22.9	. .	+ 10.6	61 39 54.7	+ 1.0
23																	
24	52 24	10 9.5	25.0	2.8	7.2	36	. .	180	214	244	. .	64.2	307 32 11.3	. .	− 1 14.7	358 37 17.8	− 1.2
25																	
26	340 54	10 8.5	20.5	0.9	2.1	35	. .	502	. .	548	. .	64.2	19 1 57.8	. .	+ 19.8	70 8 38.8	+ 1.2
27	13 28	10 4.7	19.1	27.5	29.5	31	. .	442	. .	446	. .	64.2	346 26 52.7	. .	− 13.9	37 33 0.0	− 0.6
28	37 18	10 11.6	25.5	4.7	7.6	35	. .	. .	. .	758	766	64.2	322 38 5.9	. .	− 43.8	13 43 43.3	− 1.6
29	348 40	16.7	29.3	9.5	11.3	35	. .	. .	. .	850	896	64.2	11 16 11.9	. .	+ 11.4	62 22 44.5	+ 1.0
30	296 30	10 15.2	29.0	7.2	8.5	31	390	. .	420	. .	446	64.2	63 25 1.6	. .	+ 1 56.1	114 33 18.9	
31	283 8	10 14.3	28.0	5.2	6.3	42	. .	. .	. .	820	822	64.2	76 49 55.0	. .	+ 4 4.7	128 0 20.9	− 5.4
32	23 40	10 23.0	7.6	15.2	15.4	36	. .	. .	. .	560	540	64.2	336 16 28.3	. .	− 25.7	27 22 23.8	+20.1
33																	
34	334 44	10 12.6	27.0	5.6	4.3	37	. .	. .	. .	600	560	64.2	25 12 33.7	. .	+ 27.6	76 19 22.5	+ 1.2
35	301 54	15.2	29.7	7.4	8.5	38	. .	. .	. .	485	473	64.2	58 2 50.0	. .	+ 1 33.8	109 10 45.0	+ 3.1
36	28 28	17.0	1.5	9.1	8.7	34	. .	. .	. .	132	114	64.2	331 27 45.9	. .	− 31.9	22 33 35.2	0.0
37	313 44	16.7	1.8	10.6	10.0	32	. .	040	. .	066	. .	64.2	46 11 13.6	. .	+ 1 1.1	97 18 35.9	+ 1.6
38	208 32	11 21.8	6.5	14.1	14.4	37	. .	295	. .	310	. .	64.2	151 25 8.6	. .	− 32.0	89 41 44.6	+ 0.7
39	327 58	10 17.1	28.5	9.0	9.4	34	. .	710	. .	720	. .	64.2	31 57 53.3	. .	+ 36.7	83 4 51.2	+ 1.1
40	347 8	10 21.1	3.9	12.8	13.5	32	700	690	. .	710	670	64.2	12 47 26.8	. .	+ 13.4	63 54 1.4	+17.1
41	38 22	20.2	2.8	11.9	13.0	37	. .	950	. .	936	. .	64.2	321 34 46.7	. .	− 46.7	12 40 21.2	− 1.8
42	38 22	20.2	2.8	11.9	13.0	38	. .	. .	. .	. .	252	64.2	321 34 51.4	. .	− 46.7	12 40 25.9	+ 2.9
43	302 26	11.0	23.3	2.9	4.0	35	. .	. .	. .	420	430	64.2	57 29 58.2	. .	+ 1 32.2	108 37 51.6	+ 1.5
44	207 58	15.7	0.4	8.4	8.0	39	. .	350	. .	386	. .	64.2	151 59 4.3	. .	− 31.4	79 7 48.3	+ 2.3
45	174 0	16.0	29.1	7.5	9.3	34	. .	. .	. .	. .	400	64.2	185 55 47.1	. .	+ 6.1	45 10 28.0	+ 1.0
46	312 48	17.2	0.4	10.0	10.5	36	. .	145	. .	120	. .	64.2	47 8 16.0	. .	+ 1 3.8	98 15 41.0	+ 0.8
47	318 40	10 17.4	0.1	9.0	10.7	36	. .	372	. .	364	. .	64.2	41 16 19.4	. .	+ 52.0	92 23 32.6	− 4.4

No.	Barom.	At. Ther.	Ex. Ther.
	in.	°	°
3	. .	. .	61.5
4	. .	. .	52.5
5	30.378	63.0	
6	. .	. .	55.5
8	. .	. .	60.5
9	30.392	63.0	61.5
11	. .	. .	63.5
16	30.296	67.5	64.0
19	30.200	62.0	63.5
21	30.288	62.5	66.2
25	. .	. .	61.0
26	. .	. .	61.2
29	30.276	61.0	62.0
31	. .	. .	53.0
33	30.300	61.0	52.5
34	. .	. .	52.0
44	. .	. .	49.0
45	30.320	60.5	48.2

For summary of the elements of reduction see page 3.

No.	Parallax.	Semi-diam.	Defective Illumination.	Sum.
	′ ″	′ ″	′ ″	′ ″
8	−14 10.4	− 14 54.2	. .	− 29 4.6
30	−52 49.7	+ 16 10.2	. .	− 36 39.5

DATE.	Number.	OBJECT.	Observer.	SECONDS OF TRANSIT OVER WIRES.										CORRECTIONS.			Apparent Right Ascension.	Miscellan's Corrections.
				I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	Mean wire.	Inst.	Clock appar'nt.	Clock adopted.		
													m. s.	s.	s.	s.	h. m. s.	s.
1871. Sept. 21	1	α Pegasi	F.	. .	. .	. .	. .	. .	. .	35.7	37.2	40.0	58 27.23	— 0.81	— 3.86	— 3.84	22 58 22.58	+ 0.05
	2	Calliope	F.	47.5	50.5	52.5	58.8	1.0	3.6	10.4	12.3	14.8	4 1.27	— 1.45	. .	— 3.84	23 4 55.98	. .
	3	γ Cephei, (R.)	F.	. .	. .	. .	1.9	10.7	19.0	28.3	46.7	53.5	34 10.58	+ 3.74	. .	— 3.84	23 34 10.48	+ 0.24
	4	Thisbe	F.	35.4	38.0	39.5	45.9	47.8	49.9	55.8	57.5	0.0	47 47.76	— 0.90	. .	— 3.84	23 47 43.02	. .
	5	α Andromedæ	F.	36.4	39.2	41.0	48.2	50.5	52.7	59.8	1.4	4.5	1 50.41	— 0.60	— 3.86	— 3.84	0 1 45.97	+ 0.04
	6	Weisse 127	F.	46.6	49.3	50.8	57.0	58.8	0.9	7.0	8.7	11.4	8 58.94	— 1.08	. .	— 3.84	0 8 54.02	— 2.42
	7	Anonymous	F.	22.8	25.6	27.0	33.2	35.2	37.0	43.4	44.9	47.5	14 35.18	— 1.07	. .	— 3.84	0 14 30.27	— 2.42
	8	α Ursæ Majoris	S.	. .	. .	38.6	42.8	47.3	51.6	55.8	. .	. .	55 47.22	+ 0.02	. .	— 3.89	10 55 43.35	— 0.42
22	9	Sun I, N.	S.	58.7	1.0	2.7	8.7	11.0	12.9	19.0	20.7	23.0	56 10.86	— 1.03	. .	— 3.90	11 56 5.93	. .
	10	Sun II, S.	S.	. .	. .	14.9	17.0	19.0	21.0	23.0	. .	. .	58 18.98	— 1.03	. .	— 3.90	11 58 14.05	. .
	11	Polaris, S. P.	S.	. .	. .	. .	. .	10.0	41.0	. .	. .	. .	13 7.93	—33.52	. .	— 3.90	1 12 30.51	+ 1.27
	12	α^2 Libræ	S.	. .	. .	46.0	48.3	50.3	52.4	54.7	. .	. .	43 50.34	— 1.28	— 4.08	— 3.91	14 43 45.15	+ 0.17
	13	51 Cephei, S. P.	S.	. .	. .	6.0	24.0	42.0	0.0	17.5	. .	. .	39 41.86	—17.69	. .	— 3.94	6 39 20.23	— 0.33
	14	ζ Aquilæ	S.	22.6	25.2	26.6	33.0	35.0	37.2	43.5	45.0	47.7	59 35.09	— 0.82	— 4.02	— 3.94	18 59 30.33	+ 0.16
	15	Moon I, S.	S.	59.9	2.8	4.5	11.3	13.7	16.0	23.0	25.0	27.8	11 13.78	— 1.45	. .	— 3.94	19 11 8.39	+73.84
	16	γ Aquilæ	S.	1.7	4.3	5.9	12.0	14.2	16.2	22.5	24.1	26.6	40 14.17	— 0.87	— 4.06	— 3.95	19 40 9.35	+ 0.14
	17	β Aquilæ	S.	52.8	55.5	1.0	3.2	5.2	7.3	9.4	15.0	17.6	49 5.22	— 0.94	— 3.98	— 3.95	19 49 0.33	+ 0.06
	18	20 Vulpeculæ	S.	. .	. .	37.9	40.3	42.5	44.8	47.0	. .	. .	6 42.50	— 0.62	. .	— 3.95	20 6 37.93	— 1.68
	19	ν Cygni	S.	12.0	15.3	17.1	25.5	28.2	31.0	38.9	41.0	44.4	52 28.16	— 0.31	— 4.00	— 3.96	20 52 23.89	+ 0.11
	20	α Aquarii	S.	4.3	6.9	8.5	14.7	16.8	18.8	24.9	26.4	28.9	59 16.69	— 1.04	— 3.91	— 3.96	21 59 11.69	— 0.02
	21	θ Aquarii	S.	56.6	59.3	0.8	7.0	9.0	11.0	17.2	18.7	21.5	10 9.01	— 1.16	— 3.97	— 3.96	22 10 3.89	+ 0.03
	22	π Aquarii	S.	36.4	38.9	40.3	46.5	48.5	50.6	56.6	58.4	0.9	18 48.57	— 1.03	— 3.91	— 3.96	22 18 43.58	— 0.03
	23	9 Draconis, S. P.	S.	. .	. .	26.5	17.6	9.0	0.0	51.0	. .	. .	24 8.82	— 4.18	. .	— 3.96	10 24 0.68	— 0.60
	24	η Aquarii	S.	38.7	41.2	42.8	49.0	51.0	53.0	59.2	0.7	3.7	28 51.03	— 1.04	— 4.02	— 3.96	22 28 46.03	+ 0.07
	25	ζ Pegasi	S.	56.5	59.1	0.7	6.9	8.8	10.9	17.0	18.8	21.5	35 8.91	— 0.88	— 4.00	— 3.97	22 35 4.06	+ 0.09
	26	λ Aquarii	S.	48.2	50.7	52.4	56.5	0.5	4.6	8.9	10.4	13.0	46 0.58	— 1.16	— 3.98	— 3.97	22 46 55.45	+ 0.09
	27	α Piscis Australis	S.	. .	. .	34.4	36.9	39.1	41.5	44.0	. .	. .	50 39.18	— 1.54	— 3.83	— 3.97	22 50 33.67	— 0.10
	28	α Pegasi	S.	. .	. .	23.0	25.0	27.1	29.4	31.4	. .	. .	58 27.18	— 0.81	— 3.81	— 3.97	22 58 22.40	— 0.13
	29	θ Piscium	S.	20.5	23.0	24.7	30.8	32.7	34.8	41.0	42.6	45.0	21 32.79	— 0.95	— 3.94	— 3.97	23 21 27.87	+ 0.03
	30	ι Piscium	S.	14.0	16.6	18.2	24.3	26.3	28.3	34.5	36.0	38.7	33 26.32	— 0.96	— 3.94	— 3.97	23 33 21.39	— 0.03
	31	Thisbe	S.	46.4	49.0	50.5	56.6	58.8	0.7	6.7	8.5	11.0	40 58.69	— 0.90	. .	— 3.97	23 46 53.82	. .
	32	ω Piscium	S.	36.4	38.8	40.3	46.6	48.6	50.7	56.9	58.5	1.0	52 48.64	— 0.94	— 3.98	— 3.97	22 52 43.73	+ 0.02
23	33	γ^2 Sagittarii	Ha.	24.1	26.9	28.7	35.8	38.2	40.7	47.7	49.5	52.5	57 38.23	— 1.46	— 4.00	— 3.97	17 57 32.80	+ 0.04
	34	δ Ursæ Minoris	Ha.	. .	. .	34.5	9.5	44.0	18.5	53.0	. .	. .	13 43.90	. .	. .	. .	. . . .	. .
	35	1 Aquilæ	Ha.	5.3	7.9	9.4	15.7	17.7	19.8	25.9	27.4	30.2	28 17.70	— 1.12	— 3.94	— 3.98	18 28 12.60	+ 0.03
	36	B. A. C. 6393	Ha.	25.9	31.6	34.7	48.3	52.7	57.1	10.5	13.7	19.4	39 52.63	+ 0.38	. .	— 3.98	18 39 49.03	— 0.62
	37	B. A. C. 6410	Ha.	. .	. .	. .	51.3	55.5	59.8	8.2	11.2	16.7	42 51.46	+ 0.27	. .	— 3.98	18 42 47.75	— 0.67
	38	B. A. C. 6453	Ha.	10.8	13.5	15.2	21.7	24.0	26.2	32.9	34.7	37.4	49 24.04	— 0.69	. .	— 3.98	18 49 19.37	— 1.24
	39	ζ Aquilæ	Ha.	22.5	25.0	26.6	33.0	35.0	37.2	43.5	45.0	47.7	59 35.06	— 0.81	— 4.02	— 3.98	18 59 30.27	+ 0.12
	40	d Sagittarii	Ha.	59.3	1.9	3.5	10.0	12.3	14.4	21.0	22.5	25.0	10 12.21	— 1.29	— 4.00	— 3.98	19 10 6.94	+ 0.04
	41	τ Aquilæ	Ha.	44.6	47.0	48.6	54.9	57.0	59.0	5.0	6.7	9.3	57 56.90	— 0.92	— 3.97	— 3.98	19 57 52.00	+ 0.01
	42	α^1 Capricorni	Ha.	24.3	26.9	28.5	34.7	36.9	39.0	45.3	46.9	49.4	10 36.88	— 1.18	. .	— 3.98	20 10 31.72	. .
	43	α^2 Capricorni	Ha.	. .	. .	56.7	58.7	1.0	3.0	5.0	. .	. .	11 0.88	— 1.18	— 3.98	— 3.98	20 11 55.72	+ 0.04
	44	Moon I, S.	Ha.	32.7	35.4	37.0	44.0	46.3	48.6	55.4	57.2	59.9	14 46.28	— 1.35	. .	— 3.98	20 14 40.95	+72.72
26	45	λ Ursæ Minoris	Ha.	. .	. .	12.0	2.0	55.0	42.0	33.0	. .	. .	52 52.80	. .	. .	. .	. . . .	. .
	46	20 Vulpeculæ	Ha.	28.9	31.6	33.2	40.1	42.4	44.7	51.5	53.2	56.0	6 42.40	— 0.53	. .	— 4.11	20 6 37.76	— 1.61
	47	α^2 Capricorni	Ha.	. .	. .	56.8	59.0	0.9	3.0	5.0	. .	. .	11 0.94	— 1.00	— 4.27	— 4.11	20 11 55.83	+ 0.20

4. Wire A used.
15. Bisections at wires II–VI.
42. Microscope VI out of focus.
44. Bisections at wires III–V.

Number.	Circle Division.	MICROSCOPE MICROMS.				TELESCOPE MICROMETER.						Zenith Point Correction.	Apparent Zenith Distance, South.	Sympiesometer.	Refraction.	Apparent North Polar Distance.	Miscellan'us Corrections.
		V.	VI.	VII.	VIII.	Rev.	1.	2.	3.	4.	5.						
	° ′	r. ″	″	″	″							″	° ′ ″		′ ″	° ′ ″	″
1	335 34	11.0	24.5	3.6	3.2	36	. .	390	. .	406	. .	64.2	24 22 13.8	. .	+ 26.9	75 29 1.9	+ 1.0
2	292 58	16.7	0.5	9.2	12.0	33	. .	516	. .	512	. .	64.2	66 57 35.7	. .	+ 2 18.7	118 6 15.6	− 4.3
3	141 54	18.0	29.5	8.9	11.1	29	. .	. .	. .	350	210	64.2	218 0 28.5	. .	+ 46.4	13 5 6.3	+ 2.2
4	329 16	13.0	26.6	4 9	6.7	38	. .	690	. .	700	. .	64.2	30 38 16.6	. .	+ 35.2	81 45 13.0	− 3.1
5	349 26	10.0	23.0	2.5	3.0	37	. .	. .	. .	570	560	64.2	10 30 30.9	. .	+ 11.0	61 37 3.1	− 0.5
6	316 42	14.2	28.4	6.5	8.5	38	. .	200	. .	180	. .	64.2	43 14 45.0	. .	+ 55.9	94 22 2.1	+15.9
7	317 16	11.6	24.9	4.5	4.8	33	. .	. .	. .	495	485	64.2	42 39 29.8	. .	+ 54.8	93 46 45.8	+16.0
8																	
9	321 36	10 0.9	14.3	24.3	27.7	30	. .	540	. .	. .	. .	65.8	38 18 37.1	. .	+ 45.2	89 25 43.5	
10	321 6	10 4.3	16.7	28.4	29.1	37	. .	. .	. .	. .	785	65.8	38 50 30.0	. .	+ 46.0	89 57 37.2	
11	52 24	10 6.2	22.5	1.4	2.0	36	. .	. .	440	400	450	65.8	307 32 13.1	. .	− 1 14.0	358 37 20.3	+ 0.9
12																	
13	53 46	13.3	28.0	6.6	6.5	31	355	350	350	350	350	64.9	306 8 59.9	. .	− 1 18.8	357 14 2.3	+ 1.9
14	334 44	10 12.1	26.5	5.4	4.0	37	. .	580	. .	580	. .	64.9	25 12 34.1	. .	+ 27.2	76 19 22.5	+ 1.2
15	295 45	8 10.2 12 11.4	24.9 26.1	3.8 4.7	2.1 2.7	38	930	990	830	835	845	64.9	64 11 52.7	. .	+ 1 59.0	115 20 12.9	
16	331 22	14.3	29.0	7.7	6.7	38	. .	. .	. .	590	600	64.9	28 34 52.0	. .	+ 31.6	79 31 44.8	+ 0.9
17	327 8	13.3	27.0	5.0	5.7	33	. .	880	. .	895	. .	64.9	32 47 38.1	. .	+ 37.4	83 54 36.7	+ 0.2
18	347 8	13.2	27.4	5.3	5.7	33	. .	060	. .	120	. .	64.9	12 47 26.1	. .	+ 13.2	63 54 0.5	+17.2
19	1 42	14.3	0.2	7.1	6.5	31	. .	460	. .	495	. .	64.9	358 13 3.1	. .	− 1.8	49 19 22.5	+ 0.8
20																	
21	312 38	10 12.6	26.4	4.0	5.2	34	. .	. .	. .	845	865	64.9	47 17 52.0	. .	+ 1 3.4	98 25 16.6	+ 1.4
22	321 46	14.8	28.7	6.8	7.6	32	. .	160	. .	210	. .	64.9	38 9 13.6	. .	+ 46.0	89 16 20.8	+ 1.0
23	64 38	10 20.4	4.5	13.0	15.6	35	. .	070	. .	050	. .	64.9	295 18 3.5	. .	− 2 3.3	346 22 21.4	− 0.1
24	320 16	16.8	0.5	8.0	9.0	33	. .	065	. .	100	. .	64.9	39 39 29.0	. .	+ 48.6	90 46 38.8	+ 0.1
25	331 12	15.8	0.3	7.4	7.2	32	. .	. .	. .	485	495	64.9	28 43 19.0	. .	+ 32.2	79 50 12.4	+ 0.5
26	312 48	16.7	1.2	8.5	8.5	36	. .	125	. .	190	. .	64.9	47 8 16.3	. .	+ 1 3.3	98 15 40.8	+ 0.5
27	290 46	12.1	26.8	3.4	4.8	32	. .	. .	. .	. .	300	64.9	69 9 12.2	. .	+ 2 33.2	120 18 6.6	− 0.5
28	335 34	18.2	3.5	11.9	10.3	35	. .	750	. .	775	. .	64.9	24 22 12.6	. .	+ 26.6	75 29 0.4	− 0.4
29	326 44	11.8	26.5	3.8	4.3	37	. .	280	. .	330	. .	64.9	33 12 29.4	. .	+ 38.6	84 19 29.2	+ 0.6
30	326 0	17.8	1.8	9.9	10.6	39	185	195	. .	215	215	64.9	33 57 4.5	. .	+ 39.7	85 4 5.4	− 0.2
31																	
32	327 12	15.3	29.7	7.7	8.0	34	. .	303	. .	311	. .	64.9	32 43 46.9	. .	+ 37.9	83 50 46.0	− 0.7
33	290 40	9.5	26.2	0.5	28.1	38	295	. .	. .	. .	285	62.2	69 16 38.4	. .	+ 2 26.6	120 25 26.2	+ 0.2
34	47 38	10.5	27.0	3.3	2 5	35	. .	600	590	570	. .	62.2	312 17 59.5	. .	− 1 1.5	3 23 19.2	+ 0.2
35	312 44	9.5	25.3	0.7	29.6	37	640	. .	. .	. .	640	62.2	47 12 28.9	. .	+ 1 0.5	98 19 50.6	+ 1.5
36	23 40	9.5	24.9	1.6	28.7	37	. .	320	. .	390	. .	62.2	336 16 25.1	. .	− 24.7	27 22 21.6	+20.2
37	21 56	10.0	26.7	3.0	1.0	31	. .	. .	. .	610	580	62.2	337 58 58.5	. .	− 22.7	29 4 57.0	+20.3
38	343 32	10.7	27.5	3.1	1.0	36	080	. .	. .	. .	105	62.2	16 24 7.3	. .	+ 16.6	67 30 45.1	+14.9
39	334 44	8.8	23.2	1.6	28.9	38	050	. .	. .	. .	040	62.2	25 12 34.5	. .	+ 26.5	76 19 22.2	+ 0.9
40	301 54	10.6	26.4	1.5	0.0	39	200	. .	. .	. .	225	62.2	58 2 53.7	. .	+ 1 30.1	109 10 45.0	+ 3.0
41	327 58	10.4	26.3	2.2	0.0	35	. .	335	. .	320	. .	62.2	31 57 54.4	. .	+ 35.2	83 4 50.8	+ 0.9
42	308 8	11.0	. .	2.8	1.2	30	170	215	. .	. .	. .	62.2	51 46 37.3	. .	+ 1 11.5	102 54 10.0	
43																	
44	297 10	10.7	25.2	0.5	0.9	33	. .	650	510	450	. .	62.2	62 45 26.5	. .	+ 1 49.1	113 53 36.8	
45	49 56	7.2	0.7	29.6	2.0	32	. .	655	705	650	. .	61.0	309 59 12.7	. .	− 1 8.0	1 4 25.9	− 0.8
46	347 8	8.5	2.4	29.4	1.6	33	. .	470	. .	478	. .	61.0	12 47 25.7	. .	+ 13.0	63 53 59.9	+17.6
47	308 8	12.2	5.0	2.0	4.0	39	. .	. .	. .	890	970	61.0	51 48 52.0	. .	+ 1 12.7	102 56 25.9	+ 0.1

No.	Barom.	At. Ther.	Ex. Ther.
	in.	°	°
7	30.318	60.0	44.7
10	. .	. .	65.0
11	. .	. .	67.0
14	30.228	60.5	58.0
17	. .	. .	55.5
19	. .	60.0	52.5
20	30.220	60.0	51.0
22	. .	. .	50.5
26	30.216	60.0	49.0
29	. .	. .	47.5
32	30.206	60.0	47.0
33	29.928	63.5	70.0
35	. .	. .	68.0
40	. .	. .	65.5
44	29.906	63.0	64.5
45	29.850	64.5	57.0

For summary of the elements of reduction see page 3.

No.	Parallax.	Semi-diam.	Defective Illumination.	Sum.
	′ ″	′ ′	′ ″	° ′ ″
9	− 5.4	+ 15 56.8	. .	+ 15 51.4
10	− 5.5	− 15 56.8	. .	− 16 2.3
15	−53 3.9	− 16 7.9	. .	−1 9 11.8
44	−52 12.1	− 16 4.3	. .	−1 8 16.4

DATE.	Number.	OBJECT.	Observer.	SECONDS OF TRANSIT OVER WIRES.										CORRECTIONS.			Apparent Right Ascension.	Miscellan'us Corrections.
				I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	Mean wire.	Inst.	Clock appar'nt.	Clock adopted.		
1871.													m. s.	s.	s.	s.	h. m. s.	s.
Sept. 26	1	ε Delphini	Ha.	57.3	59.8	1.4	7.5	9.5	11.7	18.0	19.6	22.0	27 9.64	− 0.73	− 4.11	− 4.11	20 27 4.80	+ 0.05
	2	μ Aquarii.	Ha.	36.5	39.0	40.5	46.8	48.7	50.9	7.0	8.6	11.2	45 48.80	− 0.97	− 4.10	− 4.11	20 45 43.72	+ 0.06
	3	ν Cygni	Ha.	11.7	15.3	17.2	25.2	27.9	30.6	38.8	40.8	44.3	52 27.98	− 0.30	− 3.91	− 4.11	20 52 23.57	− 0.14
	4	σ² Ursæ Maj., S. P.	Ha.	. .	. .	18.3	13.0	7.7	2.4	56.8	. .	. .	59 7.67	− 2.23	. .	− 4.11	8 59 1.33	+ 0.70
	5	ζ Cygni	Ha.	19.1	22.0	23.9	31.0	33.3	35.7	42.6	44.4	47.4	7 33.27	− 0.47	− 4.08	− 4.11	21 7 28.69	− 0.02
	6	α Cephei, (R.)	Ha.	8.3	13.8	17.2	30.1	34.3	39.2	51.9	55.2	0.9	15 34.54	+ 1.02	. .	− 4.11	21 15 31.45	− 0.83
	7	β Aquarii	Ha.	41.0	43.6	45.2	51.3	53.3	55.3	1.5	3.0	5.6	24 53.31	− 0.93	− 4.19	− 4.11	21 24 48.27	+ 0.11
	8	ε Pegasi, (R)	Ha.	. .	. .	53.4	55.4	57.4	59.6	1.7	. .	. .	37 57.50	− 0.43	. .	− 4.11	21 37 52.96	− 0.18
	9	λ Aquarii	Ha.	48.2	50.7	52.3	58.5	0.5	2.6	8.7	10.4	12.8	46 0.52	− 0.96	− 4.13	− 4.11	22 46 55.45	+ 0.10
	10	α Piscis Australis	Ha.	25.0	27.9	29.6	36.7	39.2	41.7	44.0	48.5	50.4	50 39.22	− 1.26	− 4.16	− 4.11	20 50 33.85	+ 0.09
	11	α Pegasi	Ha.	14.7	17.3	18.8	25.1	27.3	29.4	35.8	37.3	40.0	58 27.30	− 0.68	− 4.07	− 4.11	22 58 22.51	− 0.01
	12	Moon I, S.	Ha.	39.5	41.9	43.6	49.9	52.1	54.0	0.7	2.2	4.8	7 42.08	− 1.01	. .	− 4.11	23 7 46.96	+66.50
	13	α Leonis	F.	22.7	25.3	26.8	32.9	35.0	37.0	43.6	45.0	47.7	1 35.11	− 0.82	− 4.09	− 4.06	10 1 30.23	− 0.01
	14	γ¹ Leonis	F.	43.4	46.0	47.8	54.2	56.3	58.5	5.2	6.7	9.5	12 56.40	− 0.70	− 4.09	− 4.06	10 12 51.64	+ 0.01
	15	Venus II	F.	. .	. .	35.3	37.2	39.3	41.5	43.4	. .	. .	54 39.34	− 1.15	. .	− 4.06	11 54 34.13	− 2.06
27	16	Sun I, S.	F.	58.3	0.6	2.2	8.4	10.4	12.5	18.7	20.2	22.7	14 10.44	− 1.04	. .	− 4.06	12 14 5.34	+64.17
	17	Sun, N.	F.	. .	. .	. .	. .	. .	. .	. .	. .	. .	. . .	. .	. .	. .	. . . .	. .
	18	Polaris, S. P.	F.	. .	. .	. .	33.0	9.0	45.5	. .	. .	. .	13 9.44	. .	. .	. .	. . . .	. .
	19	α Virginis	F.	. .	. .	25.2	27.3	29.3	. .	37.6	39.0	41.8	18 29.31	− 1.18	− 4.18	− 4.06	13 18 24.07	+ 0.10
	20	α Serpentis	F.	48.0	50.5	52.0	58.2	0.3	2.4	8.6	10.1	12.7	38 0.31	− 0.91	− 4.15	− 4.05	15 58 55.35	+ 0.12
	21	α Aquarii	F.	4.6	7.0	8.6	14.8	16.9	18.8	25.0	26.5	29.0	59 16.80	− 1.11	− 3.99	− 4.04	21 59 11.65	− 0.02
	22	θ Aquarii	F.	56.6	59.2	0.8	7.0	9.0	11.1	17.3	18.8	21.3	10 9.01	− 1.21	− 3.95	− 4.04	22 10 3.76	− 0.07
	23	π Aquarii	F.	36.4	39.0	40.4	46.6	48.6	50.7	57.0	58.5	0.9	18 48.68	− 1.08	− 3.99	− 4.04	22 18 43.56	− 0.03
	24	ω Piscium	F.	36.0	39.0	40.5	46.7	48.7	50.7	7.0	8.4	0.9	52 48.71	− 1.00	− 3.97	− 4.04	23 52 43.67	− 0.06
	25	α Leonis	S.	22.5	25.0	26.7	33.0	35.0	37.1	43.5	45.0	47.5	1 35.03	− 0.80	− 4.01	− 4.10	10 1 30.13	− 0.13
	26	γ¹ Leonis	S.	46.2	47.8	52.0	54.3	56.5	58.5	0.8	5.2	7.0	12 56.48	− 0.68	− 4.17	− 4.10	10 12 51.70	+ 0.05
	27	α Ursæ Majoris	S.	21.0	26.5	30.0	42.9	47.7	52.0	5.0	8.4	14.1	55 47.51	+ 0.56	. .	− 4.10	10 55 43.97	+ 0.06
	28	δ Leonis	S.	. .	. .	15.2	17.4	19.6	21.8	24.0	. .	. .	7 19.60	− 0.66	− 4.23	− 4.10	11 7 14.88	+ 0.11
	29	Mercury II, (center)	S.	. .	. .	58.5	0.5	2.5	4.6	6.7	. .	. .	19 2.56	− 0.92	. .	− 4.10	11 18 57.54	− 0.28
	30	Venus, N.	S.	. .	. .	. .	. .	. .	. .	. .	. .	. .	. . .	. .	. .	. .	. . . .	. .
28	31	Sun II, N.	S.	42.7	45.3	46.8	53.0	55.0	57.0	3.2	4.7	7.4	19 55.01	− 1.01	. .	− 4.10	12 19 49.90	−64.17
	32	Polaris, S. P.	S.	. .	. .	. .	. .	8.0	42.0	15.0	. .	. .	13 6.67	−33.07	. .	− 4.10	1 12 29.56	− 3.48
	33	β Aquarii	S.	41.0	43.5	45.2	51.3	53.4	55.5	1.5	3.1	5.7	24 53.36	− 1.09	− 4.10	− 4.12	21 24 48.15	+ 0.01
	34	ε Pegasi	S.	45.8	48.2	49.8	56.0	58.2	0.3	6.4	8.0	10.6	37 58.14	− 0.87	− 4.14	− 4.12	21 37 53.15	+ 0.03
	35	μ Capricorni.	S.	10.5	13.3	14.9	21.2	23.2	25.4	31.7	33.3	36.0	46 23.28	− 1.22	− 4.06	− 4.12	21 46 17.94	− 0.03
	36	79 Draconis	S.	. .	. .	7.4	14.5	21.6	28.6	35.7	. .	. .	51 21.56	+ 1.59	. .	− 4.12	21 51 19.03	− 0.10
	37	θ Aquarii	S.	56.6	59.3	0.8	7.0	9.1	11.1	17.4	19.0	21.6	10 9.10	− 1.13	− 4.13	− 4.12	22 10 3.85	+ 0.03
	38	π Aquarii	S.	36.4	39.2	40.5	46.6	48.7	50.8	56.8	58.5	1.0	18 48.72	− 1.00	− 4.12	− 4.12	22 18 43.60	+ 0.02
	39	η Aquarii	S.	38.8	41.5	43.0	49.1	51.0	53.1	59.3	0.8	3.4	28 51.11	− 1.02	− 4.15	− 4.12	22 28 45.97	+ 0.06
	40	ζ Pegasi	S.	56.5	59.0	0.6	7.0	9.0	11.0	17.2	18.9	21.4	35 8.96	− 0.85	− 4.09	− 4.12	22 35 3.99	+ 0.03
	41	ι Cephei	S.	42.7	48.9	52.9	7.3	12.3	17.4	32.0	35.9	42.1	45 12.39	+ 0.76	. .	− 4.12	22 45 9.03	+ 0.12
	42	α Piscis Australis	S.	. .	34.6	36.6	39.4	41.7	44.0	48.8	50.7	53.7	50 39.32	− 1.51	− 4.01	− 4.12	22 50 33.69	− 0.07
	43	α Pegasi	S.	14.8	17.3	19.0	25.3	27.4	29.6	35.9	37.5	40.2	58 27.44	− 0.79	− 4.10	− 4.12	22 58 22.53	+ 0.01
	44	α Andromedæ	S.	36.9	39.7	41.5	48.3	50.8	53.0	0.0	1.8	4.7	1 50.74	− 0.56	− 4.19	− 4.13	0 1 46.05	+ 0.08

4. Bisections at wires V–VI.
12. Bisections at wires III–V.
36.41. Bisections at sets B and D.

Number.	Circle Division.	MICROSCOPE MICROMS.				TELESCOPE MICROMETER.						Zenith Point Correction.	Apparent Zenith Distance, South.	Sympiesometer.	Refraction.	Apparent North Polar Distance.	Miscellan'us Corrections.
		V.	VI.	VII.	VIII.	Rev.	1.	2.	3.	4.	5.						
	° ′	r. ″	″	″	″							″	° ′ ″		′ ″	° ′ ″	″
1	331 56	8.0	3.0	29.0	29.4	39	. .	280	. .	230	. .	61.0	28 0 53.8	. .	+ 30.5	79 7 45.5	— 0.3
2	311 36	10.0	4.5	29.3	1.0	36	. .	905	. .	945	. .	61.0	48 20 19.2	. .	+ 1 4.5	99 27 44.9	— 0.5
3	1 42	8.0	4.1	29.0	27.5	31	. .	970	. .	935	. .	61.0	358 13 1.6	. .	— 1.8	49 19 21.0	— 0.1
4	73 20	4.5	29.2	24.8	26.0	35	. .	. .	. .	690	650	61.0	286 35 54.4	. .	— 3 12.5	337 39 3.1	— 0.5
5	350 44	8.3	2.1	28.1	27.3	32	. .	720	. .	740	. .	61.0	9 11 12.8	. .	+ 9.3	60 17 43.3	— 1.4
6	156 46	8.6	2.2	28.0	0.2	30	. .	340	. .	390	. .	61.0	203 8 36.5	. .	+ 24.6	27 7 20.1	+ 1.8
7	314 56	8.4	3.3	29.4	29.0	38	. .	450	. .	465	. .	61.0	45 0 41.6	. .	+ 57.6	96 8 0.4	— 0.9
8	209 32	11.5	7.1	1.8	2.4	36	. .	360	. .	395	. .	61.0	150 24 12.8	. .	— 32.8	80 42 41.2	+ 2.4
9	312 48	10.4	6.5	1.2	1.9	36	. .	730	. .	710	. .	61.0	47 8 17.4	. .	+ 1 2.3	98 15 40.9	+ 0.5
10	290 46	9.5	5.5	29.5	0.8	32	. .	580	. .	660	. .	61.0	69 9 13.1	. .	+ 2 30.9	120 18 5.2	+ 2.5
11	335 34	7.6	3.0	28.8	28.4	36	590	. .	. .	. .	575	61.0	24 22 12.5	. .	+ 26.2	75 28 59.9	— 0.4
12	309 14	7.4	2.0	27.4	28.6	33	. .	. .	000	845	640	61.0	50 41 14.0	. .	+ 1 10.7	101 48 45.9	
13	333 38	18.0	13.1	12.0	12.1	32	552	548	. .	534	540	61.0	26 17 22.1	. .	+ 28.1	77 24 11.4	— 0.1
14	341 32	15.7	11.6	9.8	8.8	34	314	312	. .	286	280	61.0	18 23 46.8	. .	+ 18.9	69 30 26.9	+ 0.8
15																	
16	319 8	4.2	1.1	27.8	29.7	33	574	598	. .	. .	. .	61.0	40 47 25.4	. .	+ 48.6	91 54 35.2	
17	319 40	2.3	28.5	25.8	26.3	34	. .	. .	. .	048	090	61.0	40 15 29.3	. .	+ 47.8	91 22 38.3	
18	52 24	12.2	9.3	6.9	9.0	36	. .	210	130	232	. .	61.0	307 31 13.5	. .	— 1 13.2	358 36 21.5	+ 0.2
19																	
20	327 54	16.1	12.7	11.0	12.2	38	992	996	. .	002	998	61.0	32 3 0.4	. .	+ 35.1	83 9 56.7	+ 1.4
21	320 6	18.8	14.1	10.8	11.9	32	. .	392	. .	386	. .	61.1	39 49 19.9	. .	+ 48.3	90 56 29.4	— 0.2
22	312 38	17.0	11.9	7.8	9.9	34	. .	596	. .	590	. .	61.1	47 17 51.4	. .	+ 1 2.8	98 25 15.4	+ 0.1
23	321 46	15.0	10.3	7.5	8.5	32	200	. .	. .	. .	188	61.1	38 9 13.3	. .	+ 45.5	89 16 20.0	+ 0.3
24																	
25	333 38	13.7	9.1	6.1	6.6	32	. .	840	. .	830	. .	61.2	26 17 21.8	. .	+ 28.2	77 24 11.2	— 0.4
26	341 32	14.2	10.0	7.6	7.5	34	. .	. .	. .	490	455	61.2	18 23 48.1	. .	+ 19.0	69 30 28.3	+ 2.0
27	23 28	10.6	7.5	3.9	4.9	33	. .	095	. .	115	. .	61.2	336 27 24.4	. .	— 24.8	27 33 20.8	— 0.8
28																	
29	325 50	16.3	12.9	9.0	10.4	38	910	895	. .	865	910	61.2	34 6 58.2	. .	+ 38.5	85 13 57.9	
30	312 54	15.1	11.8	9.6	9.7	38	130	125	. .	. .	. .	61.2	47 2 45.4	. .	+ 1 0.7	98 10 7.3	
31	319 16	7.7	1.8	0.5	1.2	31	. .	. .	. .	490	480	61.2	40 38 54.4	. .	+ 48.5	91 46 4.1	
32																	
33	314 56	20.6	15.6	12.0	11.2	37	. .	675	. .	670	. .	61.8	45 0 42.6	. .	+ 58.1	96 8 1.9	+ 0.6
34	330 20	19.2	15.3	11.8	11.4	33	. .	965	. .	975	. .	61.8	29 35 15.4	. .	+ 33.1	80 42 39.7	+ 1.1
35	306 54	16.1	10.0	5.3	6.2	33	. .	810	. .	885	. .	61.8	53 1 38.4	. .	+ 1 17.3	104 9 16.9	+ 1.5
36	34 8	19.2	14.5	10.4	11.0	36	. .	760	. .	790	. .	61.8	325 48 28.0	. .	— 39.6	16 54 9.6	+ 0.4
37	312 38	19.8	15.4	11.6	11.7	34	. .	310	. .	320	. .	61.8	47 17 50.8	. .	+ 1 3.2	98 25 15.2	— 0.1
38	321 46	19.1	14.4	10.8	10.7	31	. .	860	. .	915	. .	61.8	38 9 12.8	. .	+ 45.9	89 16 19.9	+ 0.2
39	320 16	26.4	21.5	17.3	18.4	32	. .	485	. .	525	. .	61.8	39 39 29.3	. .	+ 48.4	90 46 38.9	+ 0.3
40	331 12	16.1	11.3	7.4	6.9	32	. .	485	. .	460	. .	61.8	28 43 18.4	. .	+ 32.0	79 50 11.6	+ 0.2
41	26 34	20.2	15.5	11.3	11.5	36	. .	. .	. .	955	970	61.8	333 22 31.7	. .	— 29.3	24 28 23.6	+ 1.0
42	290 46	19.8	15.6	10.6	12.0	32	. .	160	. .	165	. .	61.8	69 9 17.5	. .	+ 2 32.4	120 18 11.1	+ 3.2
43	335 34	15.4	10.5	6.9	6.7	36	. .	150	. .	130	. .	61.8	24 22 14.2	. .	+ 26.5	75 29 1.9	+ 1.8
44	349 26	17.5	12.5	9.1	9.0	37	. .	050	. .	055	. .	61.8	10 30 30.5	. .	+ 10.8	61 37 2.5	— 0.6

No.	Barom.	At. Ther.	Ex. Ther.
	in.	°	°
2	. .	. .	54.0
4	. .	. .	53.5
8	29.848	64.5	52.0
9	. .	. .	50.5
12	29.862	64.0	50.0
13	29.870	58.5	60.0
17	. .	. .	64.0
20	29.820	62.5	66.0
21	. .	. .	49.8
24	29.870	61.0	48.5
25	. .	. .	59.5
26	29.966	58.0	
27	. .	. .	62.0
30	. .	. .	64.5
31	. .	. .	64.5
32	29.956	62.0	66.5
33	30.090	61.0	53.0
35	. .	. .	51.0
37	. .	. .	50.5
38	30.102	61.0	50.0
41	. .	. .	49.5
43	. .	. .	50.0
44	30.112	61.0	51.5

For summary of the elements of reduction see page 3.

No.	Parallax.	Semi-diam.	Defective Illumination.	Sum.
	′ ″	′ ″	′ ″	° ′ ″
12	—44 29.0	— 15 45.2	. .	—1 0 14.2
16	— 5.8	— 15 58.4	. .	— 16 4.2
17	— 5.7	+ 15 58.4	. .	+ 15 52.7
29	— 5.9	. .	0.0	— 5.9
30	— 23.0	+ 30.5	. .	+ 7.5
31	— 5.8	+ 15 59.6	. .	+ 15 53.8

DATE.	Number.	OBJECT.	Observer.	SECONDS OF TRANSIT OVER WIRES.										CORRECTIONS.			Apparent Right Ascension.	Miscellan'us Corrections.
				I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	Mean wire.	Inst.	Clock appar'nt.	Clock adopted.		
													m. s.	s.	s.	s.	h. m. s.	s.
1871. Sept. 28	1	Moon II	S.	56.6	59.0	0.7	7.0	9.2	11.3	17.5	19.0	21.7	51 9.11	− 1.00	. .	− 4.13	0 51 3.98	−63.89
	2	ε Piscium	S.	10.1	12.6	14.3	20.4	22.5	24.6	30.7	32.4	34.9	56 22.50	− 0.89	− 4.15	− 4.13	0 56 17.48	+ 0.04
	3	Polaris	S.	. .	. .	14.0	39.0	3.0	28.0	55.0	. .	. .	12 3.80	+30.99	. .	− 4.13	1 12 30.66	− 2.49
29	4	α Pegasi, (R.)	Ha.	. .	22.6	24.7	26.9	29.0	31.0	35.3	36.8	39.4	58 26.81	− 0.47	. .	− 4.04	22 58 22.30	− 0.22
	5	ο Cephei	Ha.	55.4	1.8	5.7	21.9	27.2	32.6	48.5	52.5	59.0	13 27.18	+ 1.04	. .	− 4.04	23 13 24.18	+ 0.04
	6	θ Piscium	Ha.	20.5	23.2	24.6	30.7	32.8	35.0	41.0	42.5	45.2	21 32.83	− 0.96	− 3.96	− 4.04	23 21 27.83	− 0.02
	7	λ Draconis, S. P.	Ha.	. .	. .	0.5	54.5	48.9	42.8	36.5	. .	. .	23 48.64	− 3.26	. .	− 4.04	11 23 41.34	+ 0.18
	8	γ Cephei, (R.)	Ha.	. .	. .	52.0	0.9	10.1	19.0	27.7	. .	. .	34 9.94	+ 3.79	. .	− 4.04	23 34 9.69	− 0.45
	9	Groombridge 4163	Ha.	. .	. .	27.9	34.9	42.3	49.9	57.0	. .	. .	48 42.40	+ 2.00	. .	− 4.04	23 48 40.36	+ 0.19
	10	ω Piscium	Ha.	36.5	39.0	40.5	46.6	48.7	50.8	57.0	58.5	1.0	52 48.73	− 0.93	− 4.05	− 4.04	23 52 43.76	+ 0.02
	11	α Andromedæ	Ha.	36.6	39.5	41.2	48.3	50.6	52.9	59.8	1.6	4.5	1 50.56	− 0.56	− 4.01	− 4.04	0 1 45.96	− 0.01
	12	γ Pegasi	Ha.	30.4	33.0	34.7	41.0	43.0	45.2	51.5	53.0	55.7	6 43.06	− 0.81	− 4.07	− 4.04	0 6 38.21	+ 0.03
	13	ε Piscium	Ha.	10.2	12.7	14.2	20.4	22.5	24.5	30.7	32.1	34.8	56 22.46	− 0.93	− 4.06	− 4.04	0 56 17.49	+ 0.04
	14	Polaris	Ha.	. .	. .	14.0	40.0	4.0	28.0	56.0	. .	. .	12 4.40	. .	. .	. .	. . . .	. .
	15	θ^1 Ceti	Ha.	29.8	32.4	33.9	40.2	42.2	44.2	50.5	52.0	54.5	17 42.19	− 1.19	− 4.01	− 4.04	1 17 36.96	− 0.01
	16	η Piscium	Ha.	29.7	32.4	34.0	40.3	42.4	44.6	50.9	52.5	55.0	24 42.42	− 0.81	− 4.11	− 4.04	1 24 37.57	+ 0.14
	17	Neptune	Ha.	59.5	1.9	3.5	9.7	11.7	13.8	20.0	21.5	24.0	28 11.73	− 0.93	. .	− 4.04	1 28 6.76	. .
	18	Moon II, N.	Ha.	26.5	28.9	30.5	36.7	38.9	41.0	47.2	48.9	51.5	39 38.90	− 0.96	. .	− 4.04	1 39 33.90	−63.49
	19	γ^1 Leonis	F.	43.5	46.3	47.9	54.5	56.7	58.8	5.4	6.9	9.7	12 56.63	− 0.76	− 4.20	− 4.16	10 12 51.71	+ 0.02
	20	Mercury II, S.	F.	0.7	3.4	5.0	10.9	13.2	15.3	21.4	22.9	25.4	23 13.13	− 1.03	. .	− 4.17	11 23 7.93	− 0.26
	21	Venus II, N.	F.	23.0	25.6	27.2	33.2	35.2	37.4	43.5	45.0	47.6	48 35.30	− 1.24	. .	− 4.17	11 48 29.89	− 2.02
	22	Venus S. C.	F.	. .	. .	. .	. .	. .	. .	. .	. .	. .	. . .	. .	. .	. .	. . . .	. .
30	23	Sun I, N.	F.	48.2	50.8	52.3	58.4	0.5	2.7	8.7	10.2	12.9	25 0.52	− 1.16	. .	− 4.18	12 24 55.18	. .
	24	Sun II	F.	. .	. .	4.8	6.9	8.9	11.0	13.0	. .	. .	27 8.92	− 1.16	. .	− 4.18	12 27 3.58	. .
	25	Polaris, S. P.	F.	. .	. .	3.0	40.0	13.0	48.0	24.0	. .	. .	13 13.60	−36.88	. .	− 4.18	1 12 32.54	+ 1.01
	26	θ Piscium	F.	20.8	23.4	24.9	31.0	33.0	35.2	41.4	43.0	45.5	21 33.13	− 0.97	− 4.25	− 4.21	23 21 27.95	+ 0.10
	27	Groombridge 4163	F.	. .	. .	28.0	35.4	42.6	49.8	57.0	. .	. .	48 42.56	+ 2.04	. .	− 4.21	23 48 40.39	+ 0.25
	28	Polaris	F.	. .	. .	. .	. .	2.0	26.5	51.0	. .	. .	12 1.56	+36.15	. .	− 4.22	1 12 33.49	− 0.21
	29	Moon II, N.	F.	43.5	46.4	47.7	54.2	56.3	58.4	4.8	6.4	9.0	27 56.30	− 0.89	. .	− 4.22	2 27 51.19	−63.66
	30	γ Ceti	F.	32.3	35.0	36.5	42.5	44.5	46.7	52.7	54.2	56.8	36 44.58	− 1.02	− 4.16	− 4.22	2 36 39.34	− 0.06
Oct. 2	31	Polaris	Ha.	. .	. .	19.0	43.5	4.0	31.5	56.0	. .	. .	12 6.80	. .	. .	. .	. . . .	. .
	32	β Arietis	Ha.	25.7	28.3	29.9	36.5	38.7	40.9	47.4	49.0	51.7	47 38.68	− 0.75	− 4.29	− 4.32	1 47 33.61	− 0.01
	33	α Arietis	Ha.	48.6	51.6	53.0	59.8	2.0	4.0	10.7	12.6	15.4	0 1.97	− 0.71	− 4.33	− 4.32	1 59 56.94	+ 0.02
	34	ξ^1 Ceti	Ha.	5.2	7.7	9.4	15.6	17.5	19.8	25.9	27.4	29.9	6 17.60	− 0.95	− 4.34	− 4.32	2 6 12.33	+ 0.06
	35	γ Ceti	Ha.	32.5	35.2	36.7	42.8	44.8	46.8	52.9	54.6	57.0	36 44.81	− 1.03	− 4.35	− 4.32	2 36 39.46	+ 0.03
	36	α Ceti	Ha.	27.6	30.2	31.8	38.0	40.0	42.0	48.1	49.8	52.3	55 39.98	− 1.01	− 4.29	− 4.32	2 55 34.65	+ 0.09
	37	Moon II, N.	Ha.	22.5	25.2	26.8	33.5	35.7	37.7	44.5	46.0	48.8	6 35.63	− 0.78	. .	− 4.32	4 6 30.53	−65.18
3	38	Moon II, N.	F.	35.2	38.0	39.6	46.3	48.7	51.0	57.6	59.2	2.0	57 48.62	− 0.71	. .	− 4.61	4 57 43.30	−66.19
	39	β Tauri	F.	1.7	4.5	6.2	13.1	15.6	18.0	24.9	26.7	29.7	18 15.60	− 0.60	− 4.66	− 4.61	5 18 10.39	+ 0.03
	40	α Leporis	F.	56.9	59.6	1.3	7.7	10.0	12.0	18.6	20.0	22.8	27 9.88	− 1.32	− 4.55	− 4.61	5 27 3.95	− 0.10
	41	ε Orionis	F.	35.1	37.7	39.3	45.3	47.5	49.6	55.7	57.2	59.8	29 47.47	− 1.06	− 4.68	− 4.61	5 29 41.80	+ 0.06
	42	α Columbæ	F.	51.4	54.5	56.3	3.7	6.3	8.6	16.0	17.9	20.9	35 6.18	− 1.63	− 4.49	− 4.61	5 34 59.94	− 0.16
	43	α Orionis, (R.)	F.	5.9	8.4	9.9	16.1	18.0	20.2	26.4	28.0	30.4	48 18.14	− 0.50	. .	− 4.61	5 48 13.03	+ 0.09
	44	δ Ursæ Min., S. P.	F.	. .	. .	14.5	38.5	5.0	30.0	54.5	. .	. .	14 4.50	−14.09	. .	− 4.61	18 13 45.80	− 0.20
	45	γ Geminorum	F.	. .	. .	18.2	20.3	22.5	24.6	26.7	. .	. .	30 22.46	− 0.79	− 4.61	− 4.61	6 30 17.06	− 0.03

8, 18, 23, 27, 37. Bisections at sets B and D.
29. Telescope micrometer reading diminished one revolution in reduction.
38. Bisections at wires V and VI.
40. Bisections at wires C_1 and C_5.
45. Telescope micrometer reading diminished five revolutions in reduction

Number.	Circle Division.	MICROSCOPE MICROMS.				TELESCOPE MICROMETER.						Zenith Point Correction.	Apparent Zenith Distance, South.	Sympiesometer.	Refraction.	Apparent North Polar Distance.	Miscellan'us corrections.
		V.	VI.	VII.	VIII.	Rev.	1.	2.	3.	4.	5.						
	° ′ ″	r. ″	″	″	″							″	° ′ ″		′ ″	° ′ ″	″
1																	
2	328 14	19.0	13.4	9.6	9.6	31	350	400	. .	425	415	61.8	31 41 4.4	. .	+ 36.1	82 48 1.7	− 0.1
3	49 38	16.6	11.2	7.9	7.5	32	875	900	940	880	910	61.8	310 17 25.5	. .	− 1 9.0	1 22 37.7	− 0.5
4	204 18	7.6	3.5	28.8	28.9	34	. .	. .	. .	785	. .	60.8	155 37 44.5	. .	− 26.9	75 29 3.6	+ 3.6
5	28 26	3.4	29.0	24.2	25.1	34	. .	315	. .	310	. .	60.8	331 29 33.9	. .	− 32.3	22 35 22.8	− 0.8
6	326 44	4.5	29.7	25.2	26.0	37	860	870	. .	. .	. .	60.8	33 12 28.8	. .	+ 38.9	84 19 28.9	+ 0.8
7	70 56	3.1	28.7	24.2	26.0	31	. .	775	. .	. .	. .	60.8	288 58 53.4	. .	− 2 51.0	340 2 23.6	+ 1.0
8	141 54	6.0	1.0	27.1	28.4	30	. .	. .	. .	. .	240	60.8	218 0 33.0	. .	+ 46.6	13 5 1.6	+ 0.4
9	34 44	3.5	0.1	25.1	26.9	38	085	115	. .	. .	. .	60.8	325 12 34.2	. .	− 41.3	16 18 14.1	− 0.4
10	327 12	6.0	1.6	27.6	28.1	35	. .	040	. .	040	. .	60.8	32 43 47.2	. .	+ 38.2	83 50 46.6	+ 0.3
11	349 26	4.7	29.2	27.5	26.5	37	910	. .	. .	. .	900	60.8	10 30 30.3	. .	+ 11.0	61 37 2.5	+ 0.6
12	335 30	5.5	0.7	26.9	26.0	31	. .	790	. .	792	. .	60.8	24 24 56.4	. .	+ 27.0	75 31 44.6	+ 0.2
13	328 14	5.0	1.0	26.0	25.5	32	245	. .	260	. .	. .	60.8	31 41 3.1	. .	+ 36.8	82 48 1.1	− 0.6
14	49 38	7.0	2.7	29.2	28.6	33	. .	605	630	640	. .	60.8	310 17 26.6	. .	− 1 10.3	1 22 37.5	− 0.3
15	312 12	8.6	4.9	0.3	0.0	32	820	. .	. .	. .	800	60.8	47 43 15.5	. .	+ 1 5.6	98 50 42.3	+ 0.8
16	335 44	4.4	0.1	26.0	24.9	36	. .	635	. .	620	. .	60.8	24 12 9.7	. .	+ 26.8	76 18 57.7	+ 1.2
17	328 24	7.5	2.9	29.0	29.6	34	. .	180	. .	200	. .	60.8	31 31 35.6	. .	+ 36.6	82 38 23.4	
18	326 22	7.5	2.5	28.5	29.9	36	430	. .	185	. .	030	60.8	33 34 6.6	. .	+ 39.6	84 41 7.4	
19	341 32	13.8	8.9	5.5	8.8	34	370	388	. .	382	382	60.7	18 23 45.6	. .	+ 19.3	69 30 26.1	− 0.5
20	325 54	13.6	9.6	6.6	8.7	32	. .	820	. .	820	. .	60.7	34 1 21.8	. .	+ 38.9	85 8 21.9	
21	313 34	10.1	5.4	3.2	5.0	34	. .	230	. .	250	. .	60.7	46 21 39.9	. .	+ 1 0.2	97 29 1.3	
22	313 34	10.1	5.4	3.2	5.0	37	. .	. .	. .	. .	880	60.7	46 22 36.2	. .	+ 1 0.2	97 29 57.6	
23	318 30	12.2	7.5	4.4	5.5	33	. .	. .	. .	. .	558	60.7	41 25 30.7	. .	+ 50.5	92 32 42.4	
24																	
25	52 24	9.8	4.8	0.8	7.5	36	660	. .	635	. .	652	60.7	307 32 16.5	. .	− 1 14.3	358 37 23.4	+ 1.0
26	326 44	14.6	9.5	5.9	7.4	37	. .	. .	. .	285	220	63.3	33 12 32.3	. .	+ 38.7	84 19 32.2	+ 4.2
27	34 44	14.2	10.3	5.2	5.8	37	. .	528	. .	530	. .	63.3	325 12 36.1	. .	− 41.1	16 18 16.2	+ 2.1
28																	
29	331 30	18.3	13.8	7.3	13.7	33	798	526	390	176	080	63.3	28 25 21.6	. .	+ 32.2	79 32 15.0	
30																	
31	49 38	10.3	5.5	1.9	29.5	33	. .	345	395	370	. .	60.1	310 17 24.4	. .	− 1 7.9	1 22 37.7	+ 1.0
32	341 14	9.4	4.6	29.8	26.6	37	. .	780	. .	775	. .	60.1	18 42 30.4	. .	+ 19.5	69 49 11.1	+ 0.4
33	343 54	9.2	5.5	29.5	26.1	36	. .	090	. .	105	. .	60.1	16 2 4.6	. .	+ 16.4	67 8 42.2	− 0.2
34	329 18	11.5	6.3	1.7	29.5	37	. .	260	. .	180	. .	60.1	30 38 23.9	. .	+ 34.2	81 45 19.3	− 0.7
35	323 44	8.2	4.0	28.5	27.8	32	. .	885	. .	890	. .	60.1	36 11 14.7	. .	+ 42.3	87 18 18.2	− 0.1
36	324 38	8.5	4.9	0.6	28.4	34	. .	950	. .	910	. .	60.1	35 17 47.1	. .	+ 41.0	86 24 49.3	− 1.2
37	339 56	5.6	0.7	26.3	23.0	37	260	. .	370	. .	480	60.1	20 0 20.4	. .	+ 21.1	71 7 2.7	
38	342 50	10 22.5	17.1	12.7	12.8	29	. .	. .	. .	020	986	61.4	17 4 32.6	. .	+ 17.8	68 11 11.6	
39	349 32	15.9	8.4	4.4	3.9	34	. .	236	. .	238	. .	61.4	10 23 42.9	. .	+ 10.6	61 30 14.7	+ 1.0
40	303 10	15.2	14.5	17.8	24.0	38	. .	368	. .	358	. .	61.4	56 46 55.9	. .	+ 1 28.1	107 54 45.2	+ 2.1
41	319 46	17.4	10.1	5.5	8.1	34	. .	732	. .	726	. .	61.4	40 9 52.4	. .	+ 48.8	91 17 2.4	+ 2.2
42	286 56	19.7	15.9	11.2	13.4	30	. .	608	. .	550	. .	61.4	72 58 53.3	. .	+ 3 6.7	124 8 21.2	+ 1.2
43	211 27	{12 7.0 { 8 7.5	2.7 3.2	28.3 28.1	28.5} 28.5}	39	. .	. .	. .	250	. .	61.4	148 29 53.3	. .	− 35.4	82 37 3.3	+ 1.5
44	54 24	10.7	5.8	2.8	3.2	34	310	320	356	356	360	61.4	305 31 41.7	. .	− 1 20.9	356 36 42.0	+ 1.1
45	337 32	14.7	9.0	5.2	4.7	35	. .	. .	. .	632	594	61.4	22 22 47.5	. .	+ 23.8	73 29 32.5	+ 0.9

No.	Barom.	At. Ther.	Ex. Ther.
	in.	°	°
3	30.135	61.0	49.0
4	30.362	64.5	46.0
7	. .	. .	46.0
12	. .	. .	45.0
14	. .	. .	44.0
18	30.398	68.0	43.0
19	30.440	63.0	58.0
20	. .	. .	63.0
22	. .	. .	64.3
24	30.392	65.2	65.5
26	. .	. .	48.3
30	30.330	59.0	45.0
31	29.958	67.5	54.5
34	. .	. .	52.5
36	. .	. .	51.5
37	29.902	65.5	51.0
38	. .	. .	51.0
42	29.890	67.0	51.2

For summary of the elements of reduction see page 3.

No.	Parallax.	Semi-diam.	Defective Illumination.	Sum.
	′ ″	′ ″	′ ″	′ ″
17	− 0.2	. . .	. .	− 0.2
18	−30 46.4	+ 15 17.2	. .	− 15 29.2
20	− 5.6	− 3.8	. .	− 9.4
21	− 22.6	+ 28.2	. .	+ 5.6
22	− 22.6	− 28.2	+ 0.1	− 50.7
23	− 5.8	+ 16 0.6	. .	+ 15 54.8
29	−26 11.7	+ 15 7.9	. .	− 11 3.8
37	−18 28.5	+ 14 53.7	. .	− 3 34.8
38	−15 45.5	+ 14 49.5	. .	− 0 56.0

DATE.	Number.	OBJECT.	Observer.	SECONDS OF TRANSIT OVER WIRES.										CORRECTIONS.			Apparent Right Ascension.	Miscellan'us Corrections.
				I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	Mean wire.	Inst.	Clock appar'nt.	Clock adopted.		
1871.													m. s.	s.	s.	s.	h. m. s.	s.
Oct. 3	1	51 Cephei	F.	. .	. .	50.0	33.5	15.0	57.5	40.5	. .	. .	39 15.30	+15.12	. .	— 4.61	6 39 25.81	— 0.84
	2	ε Canis Majoris. .	F.	26.3	29.4	31.0	38.0	40.3	42.7	49.6	51.4	54.3	53 40.33	— 1.49	— 4.54	— 4.61	6 53 34.23	— 0.12
	3	δ Canis Majoris. .	F.	2.2	4.9	6.6	13.5	15.7	18.0	24.9	26.7	29.4	3 15.77	— 1.46	— 4.65	— 4.61	7 3 9.70	— 0.01
	4	δ Geminorum . .	F.	18.5	21.3	22.9	29.4	31.7	33.8	40.6	42.1	44.9	12 31.69	— 0.70	— 4.67	— 4.61	7 26 26.38	0.00
6	5	Moon II . . .	F.	51.0	54.0	55.9	2.7	5.0	7.2	14.1	15.8	18.6	38 4.92	— 0.69	. .	— 4.54	7 37 59.71	—67.71
	6	ε Hydræ	F.	50.5	53.0	54.6	0.8	2.7	4.9	11.0	12.6	15.2	40 2.81	— 0.99	— 4.44	— 4.53	8 39 57.29	— 0.13
7	7	Polaris, S. P. . .	F.	. .	. .	4.0	41.0	. .	. .	28.0	. .	. .	13 16.32	—37.32	. .	— 4.52	1 12 34.48	— 0.72
	8	α Coronæ Borealis .	F.	5.0	7.8	9.5	16.5	18.7	21.0	27.9	29.7	32.5	29 18.73	— 0.61	— 4.58	— 4.51	15 29 13.61	+ 0.07
	9	α Serpentis . . .	F.	. .	. .	56.5	58.6	0.6	2.7	4.7	. .	. .	38 0.62	— 0.97	— 4.51	— 4.51	15 37 55.14	+ 0.02
	10	ε Serpentis . . .	F.	16.7	19.3	20.9	27.0	29.0	31.0	37.2	38.8	41.5	44 29.04	— 1.00	— 4.53	— 4.51	15 44 23.53	+ 0.02
8	11	ε Hydræ	F.	50.4	53.0	54.5	0.7	2.7	4.8	11.0	12.5	15.0	40 2.73	— 0.98	— 4.32	— 4.30	8 39 57.45	+ 0.02
	12	α Hydræ	F.	8.6	11.2	12.7	18.9	20.9	23.0	29.2	30.8	33 3	21 20.96	— 1.22	— 4.35	— 4.30	9 21 15.44	+ 0.02
	13	Moon II . . .	F.	16.8	19.6	21.0	27.7	29.9	32.1	38.7	40.4	43.2	25 29.93	— 0.79	. .	— 4.30	9 25 24.84	—66.90
	14	ε Leonis	F.	23.7	26.4	27.9	34.8	37.0	39.4	46.0	47.7	50.6	38 37.06	— 0.71	— 4.27	— 4.30	9 38 32.05	— 0.10
	15	μ Leonis	F.	. .	. .	. .	30.8	33.0	35.5	39.9	41.7	44.5	45 30.81	— 0.65	— 4.27	— 4.30	9 45 25.86	— 0.04
9	16	Polaris, S. P. . .	F.	. .	. .	6.0	40.0	14.5	49.0	24.0	. .	. .	13 14.70	. .	. .	. .	. . . .	. .
10	17	μ Capricorni. . .	F.	13.4	15.0	19.3	21.4	23.5	25.6	27.7	31.8	33.5	46 23.47	— 1.37	— 4.22	— 4.18	21 46 17.92	+ 0.07
	18	79 Draconis . . .	F.	. .	. .	. .	. .	. .	. .	49.3	54.5	3.3	51 21.23	+ 1.89	. .	— 4.18	21 51 18.94	+ 0.44
	19	α Aquarii . . .	F.	4.7	7.3	8.7	14.8	16.8	18.9	25.0	26.6	29.1	59 16.88	— 1.15	— 4.14	— 4.18	21 59 11.55	— 0.01
	20	32 Ursæ Majoris, S.P.	F.	. .	. .	55.7	50.6	45.4	40.6	35.5	. .	. .	8 45.56	— 3.07	. .	— 4.18	10 8 38.31	+ 0.14
12	21	Weisse 1016 . .	F.	27.8	30.5	32.0	38.1	40.1	42.2	48.5	50.0	52.5	50 40.19	— 1.26	. .	— 4.25	23 50 34.68	— 2.53
	22	Weisse 1029 . .	F.	6.3	8.8	10.3	16.6	. .	20.7	26.6	28.3	31.0	51 18.58	— 1.26	. .	— 4.25	23 51 13.07	— 2.53
	23	α Andromedæ . .	F.	36.8	39.7	41.5	48.6	51.0	53.2	0.2	1.9	4.8	1 50.86	— 0.55	— 4.31	— 4.25	0 1 46.06	+ 0.08
	24	γ Pegasi	F.	30.6	33.2	34.8	41.2	43.3	45.5	51.7	53.3	56.0	6 43.29	— 0.85	— 4.24	— 4.25	0 6 38.19	— 0.01
	25	Weisse 127 . .	F.	. .	55.3	57.5	. .	1.8	3.4	7.8	9.3	11.8	8 59.46	— 1.21	. .	— 4.25	0 8 54.00	— 2.50
	26	κ Draconis, S. P. .	F.	40.2	32.0	27.8	15.7	3.7	51.4	39.2	34.7	26.9	28 3.51	— 3.98	. .	— 4.25	12 27 55.28	— 0.28
	27	α Cassiopeæ. . .	F.	57.6	2.0	4.8	15.7	19.2	23.0	34.0	36.5	41.0	33 19.31	+ 0.42	. .	— 4.25	0 33 15.48	— 0.05
	28	Polaris	F.	. .	. .	9.0	33.5	57.5	23.0	49.0	. .	. .	11 58.40	. .	. .	. .	. . . .	. .
	29	θ¹ Ceti	F.	30.3	32.7	34.4	40.5	42.6	44.6	50.9	52.3	55.0	17 42.59	— 1.29	— 4.19	— 4.25	1 17 37.05	— 0.04
	30	η Piscium . . .	F.	30.1	32.7	34.4	40.7	42.8	44.7	51.1	52.7	55.4	24 42.73	— 0.84	— 4.26	— 4.25	1 24 37.64	+ 0.08
	31	Neptune . . .	F.	40.2	42.8	44.2	50.3	52.4	54.5	0.6	2.2	4.8	26 52.44	— 0.99	. .	— 4.25	1 26 47.20	. .
	32	ο Piscium . . .	F.	30.4	33.0	34.6	40.8	42.9	44.9	51.2	52.7	55.4	38 42.88	— 0.97	— 4.27	— 4.25	1 38 37.66	— 0.01
	33	Anonymous . .	F.	. .	. .	15.0	17.8	20.6	23.3	26.4	. .	. .	46 20.62	— 0.05	. .	— 4.25	1 46 16.32	— 3.14
	34	α Arietis	F.	. .	. .	. .	. .	. .	. .	. .	. .	. .	. . . .	. .	. .	. .	. . . .	. .
	35	ξ¹ Ceti.	F.	7.9	9.4	13.6	15.7	17.7	19.8	21.9	25.9	27.5	6 17.71	— 0.97	— 4.29	— 4.25	2 6 12.49	+ 0.08
	36	ι Cassiopeæ. . .	F.	. .	. .	25.9	31.0	36.2	41.3	46.8	. .	. .	18 36.24	+ 1.33	. .	— 4.25	2 18 33.32	+ 0.34
	37	Anonymous . .	F.	56.6	59.1	1.1	7.1	9.4	11.7	17.7	19.6	22.0	26 9.37	— 0.84	. .	— 4.25	2 26 4.28	— 2.64
	38	γ Ceti.	F.	32.6	35.2	36.8	42.9	44.9	47.0	53.0	54.4	57.0	36 44.87	— 1.07	— 4.21	— 4.25	2 36 39.55	— 0.04
13	39	κ Aquilæ . . .	Ha.	51.5	54.2	55.7	1.9	3.9	5.9	12.2	13.7	16.3	30 3.92	— 1.18	— 4.32	— 4.34	19 29 58.40	+ 0.02
	40	γ Aquilæ . . .	Ha.	1.6	4.3	5.8	12.0	14.0	16.0	22.3	23.9	26.5	40 14.04	— 0.87	— 4.28	— 4.34	19 40 8.83	— 0.03
	41	λ Ursæ Minoris. .	Ha.	. .	. .	. .	25.0	12.0	1.0	53.0	. .	. .	52 12.98	. .	. .	. .	. . . .	. .
	42	20 Vulpeculæ. . .	Ha.	28.7	31.5	33.0	40.0	42.4	44.7	51.4	53.1	56.0	6 42.31	— 0.55	. .	— 4.34	20 6 37.42	— 1.28
	43	α² Capricorni. . .	Ha.	48.5	51.0	52.6	58.8	1.0	3.0	9.4	11.0	13.5	11 1.09	— 1.28	— 4.41	— 4.34	20 11 55.47	+ 0.11
	44	Anonymous . .	Ha.	. .	. .	55.3	57.3	59.4	1.4	3.7	. .	. .	40 59.42	— 1.38	. .	— 4.34	20 40 53.70	— 1.87
	45	Anonymous . .	Ha.	. .	. .	19.3	21.4	23.4	25.6	27.7	. .	. .	41 23.48	— 1.38	. .	— 4.34	20 41 17.76	— 1.87
	46	ζ Cygni	Ha.	19.2	22.1	23.7	31.0	33.2	35.6	42.8	44.5	47.3	7 33.27	— 0.48	— 4.35	— 4.34	21 7 28.45	+ 0.02
	47	1 Pegasi	Ha.	1.2	3.8	5.5	11.8	14.0	16.3	22.7	24.4	27.0	16 14.08	— 0.69	— 4.36	— 4.34	21 16 9.05	— 0.03

18, 20, 36. Bisections at sets B and D.
33. Observed for Niobe ; wire A used.
37. Observed for Euphrosyne ; wire A used.

Number.	Circle Division.	MICROSCOPE MICROMS.				TELESCOPE MICROMETER.						Zenith Point Correction.	Apparent Zenith Distance, South.	Sympiesometer.	Refraction.	Apparent North Polar Distance.	Miscellan'us Corrections.
		V.	VI.	VII.	VIII.	Rev.	1.	2.	3.	4.	5.						
	° ′	r. ″	″	″	″							″	° ′ ″		′ ″	° ′ ″	″
1	48 16	12.1	6.8	2.9	5.8	38	320	306	276	300	336	61.4	311 40 44.2	. .	− 1 4.9	2 46 0.5	+ 0.5
2	292 16	9.2	3.8	28.8	1.0	31	. .	568	. .	586	. .	61.4	67 38 56.8	. .	+ 2 19.8	118 47 37.8	+ 0.3
3	294 54	10.3	5.3	1.0	3.2	38	. .	506	. .	470	. .	61.4	65 2 44.7	. . .	+ 2 3.7	116 11 9.6	+ 1.6
4	343 16	11.7	6.3	2.8	2.2	36	. .	725	. .	695	. .	61.4	16 40 18.5	. .	+ 17.3	67 46 57.0	− 0.4
5																	
6																	
7	52 24	19.5	17.9	11.8	14.9	35	. .	970	. .	. .	022	60.9	307 32 17.0	. .	− 1 14.0	358 37 24.2	− 0.9
8	348 12	23.0	20.2	16.0	17.2	35	. .	990	. .	000	. .	60.9	11 44 20.4	. .	+ 11.8	62 50 53.4	+ 1.5
9	327 54	16.2	13.1	11.0	12.4	39	. .	. .	. .	016	014	60.9	32 3 0.8	. .	+ 35.6	83 9 57.6	+ 1.5
10	325 56	20.8	18.7	14.2	15.8	38	280	. .	. .	. .	296	60.9	34 0 53.9	. .	+ 38.4	85 7 53.5	+ 1.4
11	327 56	20.5	16.4	12.0	15.2	33	. .	. .	. .	160	150	62.7	31 59 35.3	. .	+ 36.7	83 6 33.2	+ 0.9
12	312 58	21.7	17.2	14.9	16.7	36	. .	. .	. .	910	924	62.7	46 58 34.6	. .	+ 1 2.5	98 5 58.3	+ 0.8
13																	
14	345 24	17.9	13.4	8.9	12 3	32	. .	834	. .	802	. .	62.7	14 31 27.4	. .	+ 15.1	65 38 3.7	+ 0.3
15	347 40	22.1	16.1	12.0	15.7	37	. .	. .	. .	690	. .	62.7	12 16 45.6	. .	+ 12.7	63 23 19.5	+ 1.9
16	52 24	19.3	13.3	10.1	13.9	36	126	125	146	160	188	62.7	307 32 19.3	. .	− 1 13.3	358 37 27.2	+ 1.3
17	306 54	22.0	15.6	11.0	13.9	33	. .	. .	. .	865	854	59.3	53 1 42.2	. .	+ 1 14.6	104 9 18.0	+ 1.9
18	34 8	10 25.7	20.6	15.4	16.6	36	. .	. .	. .	160	. .	59.3	325 48 21.9	. .	− 38.2	16 54 4.9	− 1.0
19	320 6	23.0	17.9	12.8	15.3	32	. .	386	. .	372	. .	59.3	39 49 21.2	. .	+ 46.9	90 56 29.3	+ 0.1
20	75 14	10 25.4	21.8	16.2	17.3	34	. .	376	. .	372	. .	59.3	284 41 54.6	. .	− 3 30.9	335 44 44.9	0.0
21	314 52	10 1.3	26.7	22.5	23.9	31	. .	. .	. .	618	. .	63.7	45 2 52.8	. .	+ 59.9	96 10 13.9	+14.9
22	314 52	10 1.3	26.7	22.5	23.9	32	. .	. .	. .	080	084	63.7	45 2 59.9	. .	+ 59.9	96 10 21.0	+14.9
23	349 26	8.4	3.0	29.6	0.6	37	. .	356	. .	360	. .	63.7	10 30 28.0	. .	+ 11.0	61 37 0.2	+ 0.6
24	335 30	10 0.3	25.2	21.2	21.5	31	. .	940	. .	948	. .	63.7	24 24 56.4	. .	+ 27.0	75 31 44.6	+ 1.5
25	316 42	9.5	4.7	1.5	2.6	38	. .	. .	. .	356	348	63.7	43 14 44.7	. .	+ 56.0	94 22 1.9	+15.7
26	70 30	12.5	7.6	4.0	6.4	36	. .	298	. .	298	. .	63.7	289 26 15.4	. .	− 2 47.5	340 29 49.1	+ 2.3
27	16 52	10.4	4.4	0.2	1.2	35	. .	205	. .	205	. .	63.7	343 3 56.4	. .	− 18.2	34 9 59.4	+ 1.5
28	49 38	12.7	8.1	4.5	5.3	32	762	756	734	735	730	63.7	310 17 21.8	. .	− 1 10.4	1 22 32.6	− 0.4
29	312 12	10 18.6	14.2	9.4	11.0	32	. .	060	. .	042	. .	63.7	47 43 16.9	. .	+ 1 5.6	98 50 43.7	+ 1.7
30	335 44	10 4.4	29.4	25.6	26.5	36	. .	320	. .	324	. .	63.7	24 12 8.1	. .	+ 26.8	75 18 56.1	+ 0.8
31	328 16	10.2	5.7	1.8	3.1	33	. .	. .	. .	920	886	63.7	31 39 37.1	. .	+ 36.8	82 46 35.1	
32	329 34	16.9	11.5	6.9	9.3	36	. .	410	. .	392	. .	63.7	30 22 21.4	. .	+ 35.0	81 29 17.6	+ 0.7
33	6 12	15.0	10.9	6.1	6.4	33	. .	916	. .	912	. .	63.7	353 41 7.3	. .	− 6.6	44 47 21.9	+11.5
34	343 54	14.8	10.3	5.6	6.4	35	. .	350	. .	370	. .	63.7	16 2 3.7	. .	+ 17.2	67 8 42.1	+ 1.0
35	329 18	10 7.3	1.1	27.6	29.0	37	. .	. .	. .	136	144	63.7	30 38 22.9	. .	+ 35.5	81 45 19.6	+ 0.1
36	27 52	14.5	9.0	4.8	6.1	38	. .	494	. .	498	. .	63.7	332 4 51.2	. .	− 31.8	23 10 40.6	− 0.5
37	335 44	11.5	7.3	4.5	3.7	28	. .	. .	. .	. .	424	63.7	24 7 40.8	. .	+ 26.9	75 14 28.9	+10.6
38	323 44	12.4	7.6	7.1	6.8	32	. .	296	. .	272	. .	63.7	36 11 15.5	. .	+ 43.9	87 18 20.6	+ 2.4
39	313 44	4.3	0.6	26.0	25.4	32	830	. .	. .	. .	900	62.5	46 11 13.7	. .	+ 1 1.0	97 18 35.9	+ 1.1
40	331 22	7.1	2.2	28.1	27.6	39	. .	080	. .	090	. .	62.5	28 34 51.6	. .	+ 32.0	79 41 44.8	+ 1.1
41	49 56	29.5	25.4	21.2	22.0	33	. .	170	150	190	. .	62.5	309 59 14.0	. .	− 1 10.0	1 4 25.2	+ 0.5
42	347 8	1.2	27.6	22.0	23.6	33	. .	690	. .	730	. .	62.5	12 47 24.4	. .	+ 13.4	63 53 59.0	+18.4
43	308 8	6.4	1.0	26.5	28.5	39	. .	025	. .	010	. .	62.5	51 48 49.8	. .	+ 1 14.8	102 56 25.8	− 0.6
44	303 38	6.5	0.8	25.5	28.0	27	130	105	. .	. .	. .	62.5	56 15 46.9	. .	+ 1 28.1	107 23 36.2	+ 6.4
45	. .	6.5	0.8	25.5	28.0	36	. .	. .	. .	. .	693	62.5	56 18 13.4	. .	+ 1 28.2	107 26 2.8	+ 6.4
46	350 44	1.2	26.0	21.6	22.7	33	. .	000	. .	010	. .	62.5	9 11 12.4	. .	+ 9.5	60 17 43.1	+ 0.1
47	340 18	10 1.0	27.2	20.7	22.5	35	. .	190	. .	200	. .	62.5	19 37 46.0	. .	+ 21.0	70 44 28.2	+ 1.7

No.	Barom.	At. Ther.	Ex. Ther.
	in.	°	°
3	29.888	67.0	51.0
8	30.064	69.0	63.0
14	30.326	61.0	56.5
16	. .	. .	73.0
19	. .	. .	67.2
20	30.014	68.0	67.0
25	30.406	67.0	45.0
28	. .	. .	43.5
31	30.406	67.0	43.8
38	30.430	67.0	41.0
39	30.510	69.0	55.0
43	. .	. .	52.0
45	. .	. .	51.5
46	. .	. .	52.0

For summary of the elements of reduction see page 3.

No.	Parallax.	Semi-diam.	Defective Illumination.	Sum.
	′ ″	′ ″	′ ″	′ ″
31	− 0.2	. .	. .	− 0.2

DATE.	Number.	OBJECT.	Observer.	SECONDS OF TRANSIT OVER WIRES.										CORRECTIONS.			Apparent Right Ascension.	Miscellan'us Corrections.
				I.	II	III.	IV.	V.	VI.	VII.	VIII	IX.	Mean wire.	Inst.	Clock appar'nt.	Clock adopted.		
1871.													m. s.	s.	s.	s.	h. m. s.	
Oct. 13	1	β Cephei, (R.)	Ha.	27.3	34.5	39.3	51.2	2.7	15.3	27.0	31.4	38.8	27 3.06	+ 2.28	. .	− 4.34	21 27 1.00	− 0.14
	2	ε Pegasi	Ha.	45.8	48.3	50.0	56.1	58.0	0.1	6.5	8.0	10.6	37 58.16	− 0.88	− 4.32	− 4.34	21 37 52.94	− 0.01
	3	α Aquarii, (R.)	Ha.	. .	. .	12.6	14.6	16.7	18.7	20.8	. .	. .	59 16.68	− 0.88	. .	− 4.34	21 59 11.46	− 0.07
14	4	λ Ursæ Minoris	F.	. .	. .	. .	23.0	9.0	59.0	49.0	. .	. .	52 10.22	. .	. .	. .	. . . .	. .
	5	α^2 Capricorni	F.	48.6	51.2	52.9	59.2	1.2	3.3	9.6	11.2	13.8	11 1.22	− 1.41	− 4.42	− 4.42	20 11 55.39	+ 0.04
	6	π Capricorni	F.	50.9	53.5	55.2	1.7	3.9	6.0	12.6	14.1	16.8	20 3.86	− 1.53	− 4.44	− 4.42	20 19 57.91	+ 0.05
	7	ε Delphini	F.	57.5	0.0	1.5	7.8	10.0	12.0	18.2	19.8	22.3	27 9.90	− 0.98	− 4.40	− 4.42	20 27 4.50	+ 0.03
17	8	ζ Ophiuchi	F.	56.5	58.9	0.6	6.8	8.8	10.9	17.3	18.8	21.3	30 8.88	− 0.44	− 4.56	− 4.60	16 30 3.84	− 0.04
	9	Moon I.	F.	55.7	58.5	0.4	7.0	9.5	11.8	18.5	20.3	23.0	42 9.41	− 0.52	. .	− 4.60	16 42 4.29	+73.33
	10	κ Ophiuchi	F.	26.7	29.2	30.6	36.9	39.0	41.0	47.3	48.8	51.5	51 39.00	− 0.32	− 4.56	− 4.60	16 51 34.08	0.00
	11	ε Ursæ Minoris	F.	. .	. .	. .	. .	11.0	25.5	41.3	. .	. .	59 10.80	+ 1.79	. .	− 4.60	16 59 7.99	+ 0.34
	12	α Herculis	F.	38.6	41.2	42.7	49.0	51.2	53.2	59.7	1.2	3.9	8 51.19	− 0.29	− 4.57	− 4.60	17 8 46.30	− 0.01
	13	λ Ursæ Minoris	F.	. .	. .	. .	55.0	43.0	31.0	19.0	. .	. .	52 42.30	. .	. .	. .	. . . .	. .
	14	20 Vulpeculæ	F.	28.5	31.4	33.1	39.9	42.1	44.4	51.2	53.0	55.8	6 42.16	− 0.22	. .	− 4.61	20 6 37.33	− 1.20
	15	π Capricorni	F.	50.1	52.5	54.2	0.9	2.8	5.0	11.5	13.0	15.8	20 2.87	− 0.50	− 4.53	− 4.61	20 19 57.76	− 0.05
	16	ε Delphini, (R.)	F.	56.8	59.5	1.1	7.3	9.3	11.3	17.8	19.3	22.0	27 9.38	− 0.26	. .	− 4.61	20 27 4.51	+ 0.09
	17	Anonymous	F.	. .	. .	. .	. .	. .	. .	31.7	33.3	35.8	41 23.08	− 0.49	. .	− 4.61	20 41 17.98	− 1.81
	18	β Cephei, (R.)	F.	. .	. .	52.8	58.9	4.8	10.6	16.6	. .	. .	27 4.74	+ 0.60	. .	− 4.61	21 27 0.73	− 0.19
	19	ε Pegasi	F.	45.5	48.0	49.6	56.0	57.9	0.0	6.3	7.7	10.3	37 57.92	− 0.32	− 4.69	− 4.62	21 37 52.98	+ 0.08
	20	μ Capricorni	F.	10.2	12.9	14.5	20.9	22.9	25.0	31.4	33.0	35.5	46 22.92	− 0.47	− 4.66	− 4.62	21 46 17.83	+ 0.07
	21	α Pegasi	F.	14.7	17.5	19.0	25.2	27.4	29.5	35.9	37.4	40.1	58 27.41	− 0.29	− 4.68	− 4.62	22 58 22.50	+ 0.09
18	22	Moon I.	Ha.	20.8	23.8	25.5	32.4	34.7	37.0	44.0	45.7	48.7	46 34.73	− 0.47	. .	− 4.67	17 46 29.59	+74.45
	23	γ Aquilæ	Ha.	1.4	3.8	5.4	11.7	13.8	15.8	22.0	23.6	26.2	40 13.74	− 0.23	− 4.71	− 4.68	19 40 8.83	+ 0.06
	24	λ Ursæ Minoris	Ha.	. .	. .	. .	52.0	40.0	28.0	16.0	. .	. .	52 39.48	. .	. .	. .	. . . .	. .
	25	20 Vulpeculæ	Ha.	28.5	31.3	33.2	39.9	42.2	44.4	51.3	52.9	55.8	6 42.17	− 0.12	. .	− 4.68	20 6 37.37	− 1.18
	26	κ Cephei	Ha.	. .	. .	55.8	5.2	14.3	23.5	33.1	. .	. .	13 14.38	+ 1.15	. .	− 4.68	20 13 10.85	+ 0.05
	27	π Capricorni	Ha.	50.0	52.5	54.2	0.9	3.0	5.2	11.5	13.0	15.8	20 2.90	− 0.42	− 4.66	− 4.68	20 19 57.80	+ 0.01
	28	ε Delphini	Ha.	56.9	59.4	1.0	7.3	9.4	11.5	17.7	19.4	21.8	27 9.38	− 0.23	− 4.70	− 4.68	20 27 4.47	+ 0.07
	29	Groombridge 3241	Ha.	. .	. .	23.9	30.5	37.2	43.9	50.4	. .	. .	30 37.18	+ 0.73	. .	− 4.68	20 30 33.23	0.00
	30	Anonymous	Ha.	. .	46.6	49.0	50.5	54.7	56.9	58.9	1.1	3.8	40 59.03	− 0.42	. .	− 4.68	20 40 53.93	− 1.79
	31	Anonymous	Ha.	. .	. .	18.6	20.7	22.8	24.9	27.0	. .	. .	41 22.80	− 0.42	. .	− 4.68	20 41 17.70	− 1.80
	32	ν Cygni	Ha.	11.8	15.2	17.2	25.3	27.9	30.7	38.7	40.8	44.0	52 27.96	+ 0.01	− 4.68	− 4.68	20 52 23.29	+ 0.06
	33	ζ Cygni	Ha.	19.0	22.0	23.7	30.7	33.0	35.3	42.6	44.2	47.2	7 33.08	− 0.09	− 4.64	− 4.68	21 7 28.31	− 0.03
	34	1 Pegasi	Ha.	0.7	3.6	5.1	11.7	13.8	15.8	22.5	24.0	26.8	16 13.78	− 0.17	− 4.66	− 4.68	21 16 8.93	− 0.07
	35	1 Draconis, S. P.	Ha.	. .	. .	7.3	52.5	38.0	24.4	8.7	. .	. .	18 38.18	− 2.45	. .	− 4.68	9 18 31.05	+ 0.52
19	36	β Lyræ	F.	. .	. .	. .	. .	. .	. .	34.3	36.2	39.2	45 24.56	− 0.24	− 4.63	− 4.71	18 45 19.61	+ 0.05
	37	Moon I, S.	F.	. .	. .	56.9	59.3	1.6	. .	6.4	8.0	10.9	51 56.85	− 0.94	. .	− 4.71	18 51 51.20	+74.49
	38	d Sagittarii	F.	59.1	1.7	3.4	9.8	12.0	14.1	20.6	22.3	24.9	10 11.99	− 0.85	− 4.66	− 4.72	19 10 6.42	− 0.04
	39	κ Aquilæ	F.	51.5	54.0	55.6	1.8	3.8	5.9	12.0	13.6	16.2	30 3.82	− 0.71	− 4.78	− 4.72	19 29 58.39	+ 0.10
	40	γ Aquilæ	F.	4.0	5.7	9.8	12.0	14.0	16.0	18.1	22.4	23.9	40 13.99	− 0.52	− 4.68	− 4.72	19 40 8.75	− 0.01
	41	α Aquilæ	F.	23.5	26.0	27.6	33.9	35.9	38.0	44.2	45.8	48.4	44 35.92	− 0.54	− 4.78	− 4.72	19 44 30.66	+ 0.10
	42	β Aquilæ	F.	52.9	55.4	56.8	3.2	5.2	7.2	13.4	15.0	17.6	49 5.19	− 0.57	− 4.76	− 4.72	19 48 59.90	+ 0.07
	43	λ Ursæ Minoris	F.	. .	. .	. .	. .	24.0	16.0	4.0	. .	. .	52 25.59	. .	. .	. .	. . . .	. .
	44	20 Vulpeculæ	F.	28.9	31.7	33.3	40.2	42.4	44.8	51.6	53.4	56.0	6 42.48	− 0.34	. .	− 4.72	20 6 37.42	− 1.11
	45	α^2 Capricorni	F.	48.3	50.9	52.4	58.8	0.8	2.9	9.2	10.8	13.4	11 0.83	− 0.78	− 4.74	− 4.72	20 10 55.33	+ 0.06
	46	κ Cephei	F.	. .	. .	55.0	4.5	14.2	23.4	33.0	. .	. .	13 14.02	+ 1.91	. .	− 4.72	20 13 11.21	+ 0.51
	47	π Capricorni	F.	50.4	53.1	54.6	1.1	3.3	5.5	12.0	13.4	16.2	20 3.29	− 0.85	− 4.63	− 4.72	20 19 57.72	− 0.06
	48	ε Delphini, (R.)	F.	57.1	59.9	1.1	5.5	7.6	9.6	11.8	13.5	. .	27 9.60	− 0.41	. .	− 4.72	20 27 4.47	+ 0.08

41, 46. Bisections at sets B and D.

Number.	Circle Division.	MICROSCOPE MICROMS.				TELESCOPE MICROMETER.						Zenith Point Correction.	Apparent Zenith Distance, South.	Sympiesometer.	Refraction.	Apparent North Polar Distance.	Miscellan'us Corrections.
		V.	VI.	VII.	VIII.	Rev.	1.	2.	3.	4.	5.						
	° ′	r. ″	″	″	″							″	° ′ ″		′ ″	° ′ ″	″
1	148 50	9 23.4	17.7	13.0	15.2	36	115	020	. .	975	110	62.5	211 5 49.6	. .	+ 35.6	19 9 54.0	− 2.4
2	330 20	10 9.9	5.5	3.0	1.1	34	. .	450	. .	440	. .	62.5	29 35 43.9	. .	+ 33.5	80 42 38.6	+ 0.6
3	219 46	10 13.4	10.3	3.9	5.6	37	. .	640	. .	640	. .	62.5	140 10 36.4	. .	− 49.1	90 56 33.9	+ 4.7
4	49 56	15.7	11.3	8.4	8.1	31	. .	. .	970	. .	. .	61.1	309 59 10.4	. .	− 1 8.5	1 4 23.1	− 1.6
5	308 6	12.3	5.0	0.6	4.2	31	. .	. .	. .	216	218	61.1	51 48 53.4	. .	+ 1 13.0	102 56 27.6	+ 1.1
6	302 26	10.7	6.2	29.1	0.8	35	810	. .	. .	. .	800	61.1	57 30 2.4	. .	+ 1 30.0	108 37 53.6	+ 2.4
7	331 56	8.9	3.2	28.9	28.0	39	350	. .	. .	. .	350	61.1	28 0 55.3	. .	+ 30.6	79 7 47.1	+ 1.7
8	310 46	11.4	8.9	6.5	5.7	38	. .	. .	. .	608	590	60.1	49 10 48.3	. .	+ 1 5.2	100 18 14.7	+ 3.8
9																	
10	330 38	12.4	8.9	5.7	6.5	36	. .	928	. .	938	. .	60.1	29 18 23.4	. .	+ 31.6	80 25 16.2	+ 2.4
11	43 16	15.3	15.0	11.1	11.6	33	. .	. .	. .	. .	678	60.1	316 39 38.1	. .	− 53.1	7 45 6.2	+ 1.7
12	335 36	14.1	11.8	9.7	6.0	38	. .	248	. .	254	. .	60.1	24 20 45.5	. .	+ 25.5	75 27 32.2	+ 2.3
13	49 56	10 24.3	21.0	16.0	15.0	31	. .	. .	620	595	554	60.1	309 59 12.0	. .	− 1 8.2	1 4 25.0	+ 0.7
14	347 8	10 8.2	4.0	27.7	28.2	33	. .	640	. .	686	. .	60.1	12 47 26.7	. .	+ 13.0	63 54 0.9	+18.5
15	302 26	20.1	15.5	9.4	10.4	35	. .	172	. .	164	. .	60.1	57 30 1.4	. .	+ 1 30.1	108 37 52.7	+ 1.3
16	207 58	10 25.8	22.9	17.0	15.2	38	. .	820	. .	860	. .	60.1	151 59 4.2	. .	− 30.7	79 7 47.7	+ 2.3
17	303 38	15.5	10.3	5.0	6.0	36	. .	. .	. .	580	580	60.1	56 18 18.3	. .	+ 1 26.8	107 26 6.3	+ 6.2
18	148 50	20.8	15.0	9.4	11.1	34	. .	. .	. .	616	600	60.1	211 5 51.6	. .	+ 35.2	19 59 54.4	− 1.2
19	330 20	16.2	12.4	8.0	7.4	34	. .	248	. .	234	. .	60.1	29 35 44.4	. .	+ 33.2	80 42 38.8	+ 0.8
20	306 54	20.7	16.9	11.3	10.7	33	. .	730	. .	745	. .	60.1	53 1 40.5	. .	+ 1 17.6	104 9 19.3	+ 2.8
21	335 34	20.4	17.5	12.2	10.9	35	. .	730	. .	. .	. .	60.1	24 22 11.6	. .	+ 26.3	75 28 59.1	+ 0.5
22																	
23	331 22	10.5	6.9	1.4	1.2	38	. .	930	. .	945	. .	61.2	28 34 51.8	. .	+ 31.9	79 41 44.9	+ 1.1
24	49 56	8.8	5.8	0.5	0.2	32	. .	625	640	675	. .	61.2	309 59 14.0	. .	− 1 9.7	1 4 25.5	+ 1.3
25	347 8	9.1	6.0	0.0	0.0	33	. .	435	. .	410	. .	61.2	12 47 25.9	. .	+ 13.3	63 54 0.4	+17.8
26	38 22	6.8	4.0	28.0	28.3	38	. .	. .	672	. .	. .	61.2	321 34 44.4	. .	− 46.4	12 40 19.2	+ 0.2
27	302 26	10.5	5.8	29.8	0.9	35	. .	630	. .	610	. .	61.2	57 29 59.9	. .	+ 1 31.7	108 37 52.8	+ 1.4
28	331 56	9.4	6.0	0.5	0.0	39	110	130	. .	. .	. .	61.2	28 0 53.7	. .	+ 31.2	79 7 46.1	+ 0.7
29	33 8	11.0	8.7	2.0	1.9	36	. .	. .	. .	360	. .	61.2	326 48 14.0	. .	− 38.4	17 53 56.8	+ 1.6
30	303 38	12.0	7.4	1.6	3.0	26	890	955	. .	. .	. .	61.2	56 15 48.4	. .	+ 1 27.6	107 23 37.2	+ 6.2
31	. .	12.0	7.4	1.6	3.0	36	. .	. .	. .	500	480	61.2	56 18 14.9	. .	+ 1 27.7	107 26 3.8	+ 6.1
32	1 42	7.0	4.7	28.2	27.0	31	. .	890	. .	920	. .	61.2	358 13 0.7	. .	− 1.8	49 19 20.1	+ 1.7
33	350 44	6.5	2.5	26.4	25.6	32	. .	765	. .	800	. .	61.2	9 11 12.6	. .	+ 9.5	60 17 43.3	+ 0.7
34	340 18	8.2	5.1	27.2	28.7	34	. .	800	. .	825	. .	61.2	19 37 45.7	. .	+ 21.0	70 44 27.9	+ 1.6
35	59 8	9.0	5.8	29.4	0.9	37	. .	. .	605	. .	. .	61.2	300 48 30.0	. .	− 1 38.2	351 53 13.0	+ 0.2
36	354 16	3.6	0.5	25.7	24.7	37	. .	. .	. .	626	640	61.2	5 40 25.5	. .	+ 5.7	56 46 52.4	+ 1.0
37	295 23	8 16.1 12 17.2	11.6 12.4	7.2 7.0	6.9 7.5	37	960	930	840	824	776	61.2	64 33 40.7	. .	+ 1 59.4	115 42 1.3	
38	301 54	9.2	5.1	28.8	0.2	39	. .	186	. .	180	. .	61.2	58 2 53.6	. .	+ 1 31.5	109 10 46.3	+ 3.6
39	313 44	2.2	29.2	25.0	24.4	33	. .	290	. .	264	. .	61.2	46 11 17.3	. .	+ 59.8	97 18 38.3	+ 3.3
40	331 22	1.3	28.6	22.5	22.5	39	. .	. .	. .	560	554	61.2	28 34 52.4	. .	+ 31.3	79 41 44.9	+ 1.1
41	329 34	11.5	6.9	2.3	2.2	32	. .	060	. .	076	. .	61.2	30 21 6.8	. .	+ 33.6	81 28 1.6	+ 1.2
42	327 8	7.3	3.5	29.2	29.4	34	. .	360	. .	380	. .	61.2	32 47 38.8	. .	+ 37.0	83 54 37.1	+ 0.5
43	49 56	15.9	13.2	8.2	7.6	31	. .	. .	975	962	962	61.2	309 59 11.0	. .	− 1 8.4	1 4 23.8	− 0.4
44	347 8	10 1.0	26.9	22.0	21.2	33	. .	942	. .	950	. .	61.2	12 47 25.4	. .	+ 13.0	63 53 59.6	+18.4
45	308 8	10 2.2	28.4	24.0	24.5	39	. .	522	. .	524	. .	61.2	51 48 52.8	. .	+ 1 12.9	102 56 26.9	+ 0.2
46	38 22	9.2	6.0	1.3	0.7	38	. .	. .	. .	380	382	61.2	321 34 42.6	. .	− 45.6	12 40 18.2	− 0.8
47	302 26	5.4	0.0	26.2	26.9	35	. .	978	. .	990	. .	61.2	57 30 0 8	. .	+ 1 29.9	108 37 51.9	+ 0.4
48	207 58	5.6	2.0	26.3	26.8	40	. .	080	. .	086	. .	61.2	151 59 4.4	. .	− 30.6	79 7 47.4	+ 2.0

No.	Barom.	At. Ther.	Ex. Ther.
	in.	°	°
6	. .	. .	61.0
7	30.300	70.0	61.0
10	30.090	69.0	68.5
12	. .	. .	69.0
14	30.032	67.0	57.5
20	. .	. .	48.0
21	30.052	70.0	52.5
23	. .	. .	51.0
24	30.206	68.0	50.5
29	. .	. .	50.0
35	30.240	68.0	49.0
39	30.028	67.0	57.5

For summary of the elements of reduction see page 3.

No.	Parallax.	Semi-diam.	Defective Illumination.	Sum.
	′ ″	′ ″	′ ″	° ′ ″
37	−53 29.1	− 16 12.7	. .	−1 9 41.8

DATE.	Number.	OBJECT.	Observer.	SECONDS OF TRANSIT OVER WIRES.										CORRECTIONS.			Apparent Right Ascension.	Miscellan'us Corrections.
				I.	II:	III.	IV.	V.	VI.	VII.	VIII	IX.	Mean wire.	Inst.	Clock appar'nt.	Clock adopted.		
1871.													m. s.	s.	s.	s.	h. m. s.	s.
Oct. 19	1	α Cygni, (R.)	F.	. .	. .	. .	. .	. .	. .	. .	. .	. .	. . .	. .	. .	. .	. . . .	. .
	2	Anonymous	F.	46.6	49.2	50.9	57.2	59.4	1.5	8.0	9.6	12.3	40 59.41	− 0.83	. .	− 4.73	20 40 53.85	− 1.78
	3	Anonymous	F.	. .	18.9	21.0	23.2	25.2	27.3	31.7	. .	36.0	41 23.13	− 0.83	. .	− 4.73	20 41 17.57	− 1.78
	4	ν Cygni	F.	12.1	15.4	17.3	25.6	28.2	30.9	39.0	41.0	44.3	52 28.20	− 0.12	− 4.82	− 4.73	20 52 23.35	+ 0.15
20	5	λ Ursæ Minoris	Ha.	. .	57.0	22.0	55.0	41.0	. .	. .	. .	. .	52 34.42	. .	. .	. .	. . . .	. .
	6	Moon I, S.	Ha.	2.1	4.9	6.4	13.4	15.8	18.1	25.0	26.8	29.5	56 15.78	− 0.62	. .	− 5.00	19 56 10.16	+73.29
	7	20 Vulpeculæ	Ha.	28.8	31.8	33.5	40.2	42.6	44.8	51.7	53.3	56.0	6 42.52	− 0.22	. .	− 5.00	20 6 37.30	− 1.14
	8	Anonymous	Ha.	46.6	49.2	51.0	57.3	59.4	1.6	8.3	9.7	12.2	40 59.48	− 0.56	. .	− 5.00	20 40 53.92	− 1.76
	9	Anonymous	Ha.	. .	19.0	21.0	23.0	25.0	27.2	32.2	33.5	36.0	41 23.15	− 0.56	. .	− 5.00	20 41 17.59	− 1.76
	10	61^1 Cygni	Ha.	58.3	1.3	3.3	11.2	13.8	16.4	24.0	26.1	29.3	1 13.74	− 0.11	− 4.98	− 5.01	21 1 8.62	− 0.07
	11	ζ Cygni	Ha.	19.5	22.3	24.1	31.0	33.5	35.9	42.9	44.6	47.7	7 33.50	− 0.19	− 4.99	− 5.01	21 7 28.30	− 0.01
	12	α Cephei	Ha.	. .	. .	27.0	31.4	35.8	40.2	44.7	. .	. .	15 35.82	+ 0.30	. .	− 5.01	21 15 31.11	− 0.27
	13	β Aquarii	Ha.	40.9	43.7	45.2	51.4	53.5	55.5	1.6	3.0	5.6	24 53.49	− 0.47	− 5.12	− 5.01	21 24 48.01	+ 0.14
	14	ξ Aquarii	Ha.	47.9	50.5	52.1	58.2	0.4	2.4	8.7	10.2	12.8	31 0.36	− 0.48	− 4.97	− 5.01	21 31 54.87	− 0.02
	15	11 Cephei	Ha.	. .	. .	. .	. .	. .	. .	31.7	36.5	44.5	40 7.31	+ 0.65	. .	− 5.01	21 40 2.95	− 0.39
	16	α Aquarii	Ha.	4.7	7.4	8.7	14.8	17.0	19.0	25.0	26.6	29.3	59 16.94	− 0.43	− 5.04	− 5.01	21 59 11.50	+ 0.06
	17	θ Aquarii	Ha.	56.8	59.4	0.9	7.0	9.0	11.2	17.4	18.9	21.4	10 9.11	− 0.48	− 4.99	− 5.01	22 10 3.62	0.00
	18	π Aquarii	Ha.	36.5	39.0	40.6	46.8	48.8	50.8	57.0	58.5	1.1	18 48.79	− 0.42	− 4.96	− 5.01	22 18 43.36	− 0.03
	19	9 Draconis, S. P.	Ha.	. .	. .	27.7	18.7	9.8	1.8	53.2	. .	. .	24 10.24	− 1.83	. .	− 5.01	10 24 3.40	+ 0.22
	20	η Aquarii	Ha.	39.0	41.5	43.2	49.2	51.2	53.3	59.4	0.9	3.5	28 51.24	− 0.43	− 5.04	− 5.01	22 28 45.80	+ 0.06
21	21	λ Ursæ Minoris	F.	. .	. .	. .	. .	. .	. .	40.0	58.0	17.0	52 22.30	. .	. .	. .	. . . .	. .
	22	20 Vulpeculæ	F.	29.2	31.9	33.6	40.4	42.7	45.0	51.8	53.5	56.2	6 42.70	− 0.45	. .	− 4.97	20 6 37.28	− 1.12
	23	α^2 Capricorni	F.	48.5	51.2	52.9	59.1	1.1	3.2	9.6	11.0	13.8	11 1.16	− 0.89	− 4.98	− 4.97	20 10 55.30	+ 0.05
	24	π Capricorni	F.	50.8	53.3	55.0	1.4	3.5	5.8	12.2	13.9	16.6	20 3.61	− 0.96	− 4.87	− 4.97	20 19 57.68	− 0.07
	25	Anonymous	F.	. .	. .	55.5	57.6	59.9	2.0	4.0	. .	. .	40 59.80	− 0.95	. .	− 4.97	20 40 53.88	− 1.74
	26	Anonymous	F.	10.7	13.3	15.0	21.3	23.4	25.5	31.8	33.7	36.3	41 23.44	− 0.95	. .	− 4.97	20 41 17.52	− 1.75
	27	Moon I, S.	F.	36.4	39.3	40.9	47.7	50.0	52.3	59.0	0.7	3.6	57 49.99	− 1.01	. .	− 4.97	20 57 44.01	+71.23
	28	1 Pegasi	F.	1.5	4.2	5.8	12.4	14.5	16.7	23.2	24.8	27.4	16 14.50	− 0.53	− 5.06	− 4.97	21 16 9.00	+ 0.04
22	29	12-Year Cat. 1879.	Ha.	14.0	28.8	37.5	13.3	25.4	37.0	12.5	21.6	36.3	53 25.16	+ 2.86	. .	− 5.06	20 53 22.98	+ 1.33
	30	ζ Cygni	Ha.	19.7	22.6	24.4	31.4	33.6	36.0	43.2	44.9	47.8	7 33.73	− 0.29	− 5.16	− 5.06	21 7 28.38	+ 0.11
	31	1 Draconis, S. P.	Ha.	6.3	48.3	37.3	53.3	38.9	25.0	41.5	30.4	12.7	18 39.30	− 4.89	. .	− 5.06	9 18 29.35	− 1.75
	32	β Aquarii	Ha.	41.2	43.9	45.3	51.5	53.6	55.6	1.8	3.3	6.0	25 53.58	− 0.74	− 4.97	− 5.06	21 25 47.78	− 0.06
	33	ξ Aquarii	Ha.	48.4	50.9	52.5	58.7	0.7	2.7	9.0	10.5	13.0	31 0.72	− 0.77	− 5.06	− 5.06	21 30 54.89	+ 0.02
	34	Moon I, S.	Ha.	33.8	36.6	38.3	44.9	47.0	49.2	55.9	57.4	0.2	55 47.01	− 0.89	. .	− 5.06	21 55 41.06	+68.85
27	35	Groombridge 4163	Ha.	. .	. .	28.4	35.5	42.7	49.9	57.0	. .	. .	48 42.70	+ 1.20	. .	− 4.29	23 48 39.61	+ 0.12
	36	ω Piscium	Ha.	36.3	38.8	40.3	46.5	48.5	50.6	56.8	58.4	0.8	52 48.56	- 0.54	− 4.32	− 4.29	23 52 43.73	+ 0.04
	37	4 Draconis, S. P.	Ha.	. .	. .	31.7	21.2	11.8	1.6	51.5	. .	. .	6 11.56	− 2.99	. .	− 4.29	12 6 4.28	+ 0.02
	38	32^2 Camelopard., S.P.	Ha.	. .	. .	52.4	32.0	11.9	52.3	31.7	. .	. .	48 12.06	− 5.49	. .	− 4.28	12 48 2.29	+ 0.40
	39	ε Piscium	Ha.	10.2	12.7	14.1	20.2	22.3	24.4	30.6	32.2	34.8	56 22.39	− 0.53	− 4.25	− 4.28	0 56 17.58	− 0.01
	40	Polaris	Ha.	. .	. .	27.0	53.0	19.0	43.0	9.0	. .	. .	12 18.20	. .	. .	. .	. . . .	. .
	41	θ^1 Ceti	Ha.	29.7	32.2	33.8	39.9	42.0	44.2	50.2	51.9	54.5	17 42.04	− 0.69	− 4.17	− 4.28	1 17 37.07	− 0.09
	42	Neptune	Ha.	6.4	8.8	10.3	16.6	18.6	20.7	26.9	28.5	31.0	25 18.64	− 0.53	. .	− 4.28	1 25 13.83	. .
	43	ο Piscium	Ha.	30.2	32.8	34.4	40.5	42.6	44.7	50.8	52.5	55.0	38 42.61	− 0.51	− 4.36	− 4.28	1 38 37.82	+ 0.05
	44	β Arietis, (R.)	Ha.	. .	. .	34.0	36.2	38.4	40.5	42.8	. .	. .	47 38.38	− 0.27	. .	− 4.28	1 47 33.83	− 0.04
	45	α Arietis	Ha.	48.6	51.3	53.0	59.7	1.9	4.1	10.8	12.5	15.0	0 1.88	− 0.36	− 4.29	− 4.28	1 59 57.24	+ 0.02
	46	Moon I, S.	Ha.	20.3	22.8	24.3	30.8	32.8	34.9	41.4	43.0	45.6	6 32.88	− 0.52	. .	− 4.28	2 6 28.08	+63.29
	47	ι Cassiopeæ	Ha.	5.9	12.7	16.7	32.2	37.3	42.4	58.4	1.8	8.5	18 37.32	+ 0.64	. .	− 4.28	2 18 33.68	+ 0.37
	48	5 Ursæ Minoris, S.P.	Ha.	43.0	32.3	26.0	59.9	51.0	43.0	17.0	10.3	0.0	27 51.39	− 2.62	. .	− 4.27	14 27 44.50	+ 0.13
	49	γ Ceti	Ha.	. .	. .	. .	. .	. .	. .	. .	. .	. .	. . .	. .	. .	. .	. . . .	. .

6, 34, 46. Bisections at sets B and D.
37. Bisections at wires VI and V.
38. Bisection at wire VI.

Number.	Circle Division.	MICROSCOPE MICROMS.				TELESCOPE MICROMETER.						Zenith Point Correction.	Apparent Zenith Distance, South.	Sympiesometer.	Refraction.	Apparent North Polar Distance.	Miscellan'us Corrections.
		V.	VI.	VII.	VIII.	Rev.	1.	2.	3.	4.	5.						
	° ′	r. ″	″	″	″							″	° ′ ″		′ ′	° ′ ″	″
1	174 0	13.7	9.6	3.5	5.2	35	. .	. .	088	. .	. .	61.2	185 55 55.5	. .	+ 6.0	45 10 19.7	− 4.0
2	303 38	8.0	3.4	28.5	0.4	27	. .	300	. .	. .	. .	61.2	56 15 50.7	. .	+ 1 25.8	107 23 37.7	+ 6.1
3	303 38	8.0	3.4	28.5	0.4	36	. .	. .	. .	. .	845	61.2	56 18 16.8	. .	+ 1 25.9	107 26 3.9	+ 6.1
4	1 42	15.0	13.0	6.5	5.0	31	. .	284	. .	. .	. .	61.2	358 12 59.3	. .	− 1.8	49 19 18.7	+ 0.3
5	49 56	3.4	1.2	24.8	23.5	32	. .	985	. .	. .	. .	60.1	309 59 12.4	. .	− 1 9.7	1 4 23.9	− 0.2
6	296 20	2.5	0.0	23.5	22.6	34	495	. .	445	. .	355	60.1	63 35 33.4	. .	+ 1 57.3	114 43 51.9	
7	347 8	10.0	7.4	29.8	28.6	33	395	. .	. .	. .	405	60.1	12 47 24.8	. .	+ 13.3	63 53 59.3	+18.4
8	303 38	10.7	8.0	1.0	0.7	27	110	130	. .	. .	. .	60.1	56 15 48.9	. .	+ 1 27.7	107 23 37.8	+ 6.0
9	303 38	10.7	8.0	1.0	0.7	36	. .	. .	. .	. .	570	60.1	56 18 13.5	. .	+ 1 27.8	107 26 2.5	+ 6.0
10	359 10	4.1	2.0	25.0	23.4	37	. .	025	. .	030	. .	60.1	0 46 15.1	. .	+ 0.8	51 52 37.1	+ 1.3
11	350 44	12.6	9.5	3.0	1.1	32	. .	340	. .	385	. .	60.1	9 11 11.3	. .	+ 9.5	60 17 42.0	− 0.5
12	23 4	9.6	7.5	0.1	29.8	32	740	770	. .	. .	. .	60.1	336 51 15.9	. .	− 25.2	27 57 11.9	− 1.9
13	314 56	7.0	4.4	28.9	27.5	38	535	. .	. .	. .	635	60.1	45 0 42.0	. .	+ 59.0	96 8 2.2	+ 0.3
14	312 38	10.8	8.2	2.5	2.0	36	645	. .	. .	. .	655	60.1	47 18 16.2	. .	+ 1 3.9	98 25 41.3	− 0.1
15	31 46	. .	4.1	. .	26.0	38	. .	. .	. .	920	855	60.1	328 10 47.1	. .	− 36.7	19 16 31.6	− 0.2
16	320 6	7.6	4.4	28.9	29.4	33	. .	. .	. .	075	105	60.1	39 49 18.2	. .	+ 49.4	90 56 28.8	− 0.6
17	312 38	7.5	5.5	29.5	28.2	35	. .	. .	. .	190	200	60.1	47 17 50.6	. .	+ 1 4.2	98 25 16.0	− 0.2
18	321 46	8.5	6.0	29.8	28.9	32	640	. .	. .	. .	615	60.1	38 9 12.0	. .	+ 46.6	89 16 19.8	+ 0.3
19	64 38	10.1	7.4	1.8	3.0	35	. .	445	. .	. .	. .	60.1	295 17 56.1	. .	− 2 5.0	346 22 12.3	− 0.5
20	320 16	8.6	5.4	29.0	29.3	33	690	. .	. .	. .	655	60.1	39 39 27.7	. .	+ 49.2	90 46 38.1	− 0.6
21																	
22	347 8	10 1.2	26.7	19.8	19.8	34	. .	110	. .	090	. .	60.7	12 47 26.4	. .	+ 13.3	63 54 0.9	+18.4
23	308 8	10 11.0	6.1	29.7	1.2	39	. .	040	. .	940	. .	60.7	51 48 51.4	. .	+ 1 14.1	102 56 26.7	− 0.1
24	302 26	2.8	29.5	22.5	24.1	36	. .	188	. .	146	. .	60.7	57 30 0.7	. .	+ 1 31.4	108 37 53.3	+ 1.7
25	303 38	13.5	8.2	1.7	3.4	27	080	. .	. .	. .	. .	60.7	56 15 51.0	. .	+ 1 27.3	107 23 39.5	+ 6.0
26	303 38	13.5	8.2	1.7	3.4	36	. .	614	. .	. .	. .	60.7	56 18 17.2	. .	+ 1 27.4	107 26 5.8	+ 6.0
27	298 52	12.0	7.9	1.1	2.3	24	. .	400	180	140	. .	60.7	61 3 39.8	. .	+ 1 45.3	112 11 46.3	
28	340 18	16.5	13.9	7.6	6.6	34	270	276	. .	262	264	60.7	19 37 45.8	. .	+ 20.8	70 44 27.8	+ 1.6
29	41 6	11.2	8.7	2.9	1.4	35	. .	630	. .	625	. .	60.1	318 50 2.7	. .	− 49.9	9 55 34.0	− 0.4
30	350 44	13.5	9.8	3.5	1.0	32	390	. .	. .	. .	415	60.1	9 11 12.6	. .	+ 9.2	60 17 43.0	+ 0.6
31	59 8	8.5	4.4	29.5	28.9	37	. .	535	. .	545	. .	60.1	300 48 24.7	. .	− 1 35.6	351 53 10.3	− 1.8
32	314 56	12.0	8.5	2.2	1.5	38	. .	470	. .	500	. .	60.1	45 0 44.7	. .	+ 57.2	96 8 3.1	+ 1.1
33	312 28	12.0	7.5	1.0	1.3	36	. .	. .	. .	870	890	60.1	47 18 19.3	. .	+ 1 2.0	98 35 42.5	+ 1.0
34	302 38	13.0	9.3	2.4	2.6	28	875	. .	805	. .	570	60.1	57 16 16.1	. .	+ 1 28.9	108 24 6.2	
35	34 44	13.5	10.6	2.3	3.9	36	. .	. .	940	. .	. .	62.3	325 12 24.7	. .	− 40.2	16 18 5.7	+ 0.7
36	327 12	10.9	6.6	0.0	1.0	34	. .	825	. .	840	. .	62.3	32 43 49.4	. .	+ 37.2	83 50 47.8	+ 2.4
37	62 40	7.6	3.1	26.4	28.6	32	. .	. .	. .	675	795	62.3	297 15 12.9	. .	− 1 51.9	348 19 42.2	+ 3.0
38	56 54	8.0	4.4	27.0	28.8	34	. .	. .	. .	822	. .	62.3	303 1 43.4	. .	− 1 28.8	354 6 35.8	+ 2.8
39	328 14	10.4	6.7	29.6	0.0	31	960	. .	. .	. .	920	62.3	31 41 4.6	. .	+ 35.7	82 48 1.5	+ .08
40	49 38	6.0	2.6	25.5	26.0	32	. .	915	910	935	. .	62.3	310 17 15.3	. .	− 1 8.2	1 32 28.3	+ 1.2
41	312 12	11.2	7.4	0.0	1.3	32	. .	945	. .	935	. .	62.3	47 43 20.6	. .	+ 1 3.6	98 50 45.4	+ 2.2
42	328 8	10.8	6.9	29.9	0.9	38	. .	890	. .	875	. .	62.3	31 48 51.6	. .	+ 35.9	82 55 48.7	
43	329 34	8.0	4.0	26.7	27.0	37	. .	160	. .	130	. .	62.3	30 22 21.7	. .	+ 33.9	81 29 16.8	+ 0.2
44	198 40	8.1	5.4	26.1	27.1	41	645	. .	. .	. .	640	62.3	161 17 30.8	. .	− 19.6	69 49 10.0	+ 2.0
45	343 54	7.6	4.9	26.3	26.6	35	865	. .	. .	. .	875	62.3	16 2 2.3	. .	+ 16.6	67 8 40.1	+ 0.6
46	329 4	6.0	1.6	24.1	25.5	37	. .	845	655	525	. .	62.3	30 52 27.7	. .	+ 34.6	81 59 23.5	
47	27 52	8.0	4.4	26.1	27.1	38	. .	610	. .	630	. .	62.3	332 4 45.1	. .	− 30.7	23 10 35.6	− 0.6
48	64 44	6.4	3.1	26.0	28.5	35	. .	000	. .	960	. .	62.3	295 11 46.6	. .	− 2 2.5	346 16 5.3	+ 3.1
49	323 44	6.6	3.0	24.9	27.0	32	910	. .	. .	. .	975	62.3	36 11 16.1	. .	+ 42.4	87 18 19.7	+ 1.3

No.	Barom.	At. Ther.	Ex. Ther.
	in.	°	°
3	30.000	68.0	56.5
7	30.360	70.5	53.5
10	. .	. .	50.5
16	. .	. .	47.5
20	30.416	69.5	46.5
23	. .	. .	54.5
24	30.358	63.0	54.5
28	30.360	65.0	54.0
29	30.162	72.5	62.0
34	30.160	72.0	60.5
36	29.875	69.5	50.5
37	. .	. .	50.5
38	. .	. .	50.5
44	. .	. .	50.5
48	. .	. .	49.5

For summary of the elements of reduction see page 3.

No.	Parallax.	Semi-diam.	Defective Illumination.	Sum.
	′ ″	′ ″	′ ″	° ′ ″
6	−52 38.9	− 16 5.3	. .	−1 8 44.2
27	−51 0.2	− 15 57.2	. .	−1 6 57.4
34	−48 35.1	− 15 49.0	. .	−1 4 24.1
42	− 0.2	. . .	. .	− 0.2
46	−28 15.7	− 15 8.8	. .	− 43 24.5

DATE.	Number.	OBJECT.	Observer.	SECONDS OF TRANSIT OVER WIRES.										CORRECTIONS.			Apparent Right Ascension.	Miscellan'us corrections.
				I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	Mean wire.	Inst.	Clock appar'nt.	Clock adopted.		
1871.													m. s.	s.	s.	s.	h. m. s.	s.
Oct. 27	1	β Ursæ Minoris, S.P.	Ha.	54.6	44.6	39.4	15.7	8.5	1.0	37.3	31.7	22.1	51 8.32	− 2.38	. .	− 4.27	14 51 1.67	+ 0.03
	2	α Ceti	Ha.	27.5	30.3	31.6	37.8	39.8	41.9	48.0	49.5	52.0	55 39.82	− 0.56	− 4.28	− 4.27	2 55 34.99	+ 0.03
Nov. 2	3	51 Cephei	Ha.	. .	. .	7.5	50.0	32.5	11.5	56.0	. .	. .	39 31.50	. .	. .	. .	. . . .	. .
	4	δ Geminorum . .	Ha.	18.3	21.0	22.8	29.2	31.6	33.9	40.2	41.9	44.9	12 31.53	− 0.50	− 3.73	− 3.69	7 12 27.34	− 0.02
	5	Moon II and S. .	Ha.	20.0	22.6	24.4	31.2	33.5	36.0	42.7	44.7	47.5	16 33.62	− 0.46	. .	− 3.69	7 16 29.47	−67.50
	6	α^2 Geminorum . .	Ha.	. .	. .	23.5	26.0	28.3	30.8	33.0	. .	. .	26 28.32	− 0.31	− 3.71	− 3.69	7 26 24.32	+ 0.26
	7	α Canis Minoris .	Ha.	26.9	29.5	31.0	37.0	39.2	41.2	47.4	48.8	51.4	32 39.16	− 0.75	− 3.66	− 3.69	7 32 34.72	− 0.17
	8	β Geminorum . .	Ha.	17.4	20.4	22.0	29.0	31.5	33.8	40.7	42.6	45.3	37 31.41	− 0.39	− 3.65	− 3.69	7 37 27.33	− 0.07
	9	ε Hydræ	Ha.	50.3	53.0	54.3	0.4	2.6	4.7	11.0	12.4	15.0	40 2.63	− 0.74	− 3.71	− 3.69	8 39 58.20	− 0.02
	10	12-y'r Cat. 1879, S.P.	Ha.	. .	. .	52.8	40.7	29.0	16.9	5.4	. .	. .	53 28.96	− 5.36	. .	− 3.69	10 53 19.91	− 0.19
	11	κ Cancri	Ha.	38.8	41.5	43.0	49.3	51.4	53.4	59.7	1.1	3.8	0 51.33	− 0.67	− 3.69	− 3.69	9 0 46.97	− 0.01
6	12	λ Aquarii . . .	F.	47.9	50.5	51.9	58.3	0.3	2.3	8.6	10.0	12.8	46 0.29	− 1.14	− 4.05	− 4.15	22 45 55.00	− 0.02
	13	α Piscis Australis .	F.	24.7	27.6	29.5	36.5	39.0	41.3	48.6	50.2	53.0	50 38.93	− 1.60	− 3.91	− 4.15	22 50 33.18	− 0.20
	14	α Pegasi	F.	14.3	17.0	18.7	25.0	27.1	29.1	35.5	37.2	39.8	58 27.08	− 0.73	− 4.10	− 4.15	22 58 22.20	− 0.02
	15	λ Draconis, S. P. .	F.	26.5	18.9	14.6	56.6	50.7	44.6	27.0	22.3	14.9	23 50.68	− 3.58	. .	− 4.15	11 23 42.95	+ 0.15
	16	ι Piscium . . .	F.	14.2	16.7	18.2	24.4	26.3	28.4	34.6	36.2	38.7	33 26.41	− 0.90	− 4.25	− 4.15	23 33 21.36	+ 0.10
	17	Weisse 895. . .	F.	. .	11.4	13.5	15.6	17.6	19.7	23.8	25.2	27.8	45 15.54	− 1.11	. .	− 4.15	23 45 10.28	− 2.33
	18	Weisse 958. . .	F.	39.1	41.7	43.2	49.3	51.4	53.5	59.7	1.3	3.8	47 51.44	− 1.11	. .	− 4.15	23 47 46.18	− 2.34
	19	Weisse 1029 . .	F.	. .	14.3	16.2	18.2	20.4	22.5	26.6	28.0	30.5	51 18.30	− 1.10	. .	− 4.15	23 51 13.05	− 2.35
	20	α Andromedæ . .	F.	36.8	39.6	41.3	48.4	50.7	53.0	59.8	1.6	4.6	1 50.64	− 0.44	− 4.32	− 4.15	0 1 46.05	+ 0.19
	21	γ Pegasi	F.	30.5	33.2	34.7	41.0	43.0	45.2	51.6	53.0	55.8	6 43.11	− 0.73	− 4.27	− 4.15	0 6 38.23	+ 0.12
	22	Weisse 127. . .	F.	46.9	49.5	51.0	57.0	59.2	1.3	7.4	9.0	11.8	8 59.23	− 1.07	. .	− 4.15	0 8 54.01	− 2.42
	23	Anonymous . .	F.	23.2	25.6	27.2	33.5	35.5	37.5	43.8	45.2	47.8	14 35.48	− 1.06	. .	− 4.15	0 14 30.27	− 2.44
	24	Polaris	F.	. .	. .	6.0	32.0	57.5	. .	. .	. .	. .	11 56.67	. .	. .	. .	. . . .	. .
7	25	λ Ursæ Minoris, S.P.	Ha.	. .	. .	58.8	10.9	19.4	33.0	41.9	. .	. .	53 20.60	. .	. .	. .	. . . .	. .
	26	Uranus. . . .	Ha.	12.3	15.0	16.8	23.2	25.3	27.5	34.2	35.8	38.4	14 25.39	− 0.56	. .	− 4.27	8 14 20.56	. .
	27	Groom. 3241, S. P.	Ha.	. .	. .	53.3	46.5	39.6	32.9	26.2	. .	. .	30 39.70	− 3.99	. .	− 4.27	20 30 31.44	− 0.27
	28	ε Hydræ	Ha.	51.2	53.7	55.2	1.2	3.3	5.4	11.7	13.1	15.7	40 3.39	− 0.83	− 4.22	− 4.27	8 39 58.29	− 0.09
	29	ι Ursæ Majoris . .	Ha.	9.6	13.5	15.7	25.0	28.0	31.1	40.6	42.8	46.8	50 28.12	+ 0.22	. .	− 4.27	8 50 24.07	− 0.04
	30	κ Cancri	Ha.	39.7	42.5	43.9	50.1	52.2	54.3	0.5	2.1	4.7	0 52.22	− 0.73	− 4.36	− 4.28	9 0 47.21	+ 0.07
	31	I Draconis . . .	Ha.	. .	. .	3.0	18.0	31.8	47.7	1.6	. .	. .	18 32.42	+ 6.14	. .	− 4.28	9 18 34.28	+ 0.25
	32	α Hydræ	Ha.	9.2	11.7	13.3	19.4	21.5	23.6	29.8	31.3	33.8	21 21.51	− 1.11	− 4.16	− 4.28	9 21 16.12	− 0.15
	33	ε Leonis	Ha.	24.3	27.0	28.8	35.5	37.8	40.0	46.8	48.5	51.3	38 37.78	− 0.48	− 4.29	− 4.28	9 38 33.02	− 0.05
	34	μ Leonis	Ha.	17.8	20.7	22.3	29.3	31.6	33.9	40.8	42.3	45.0	45 31.52	− 0.43	− 4.27	− 4.28	9 45 26.81	− 0.02
	35	α Leonis	Ha.	23.8	26.4	27.9	33.9	36.3	38.5	44.7	46.2	48.8	1 36.28	− 0.72	− 4.28	− 4.29	10 1 31.27	− 0.05
	36	γ^1 Leonis	Ha.	44.6	47.3	48.9	55.5	57.6	59.7	6.4	7.9	10.7	12 57.62	− 0.56	− 4.36	− 4.29	10 12 52.77	+ 0.05
	37	Moon II . . .	Ha.	35.9	38.5	40.2	46.5	48.6	50.8	57.0	59.0	1.3	36 48.64	− 0.83	. .	− 4.30	11 36 42.51	−65.48
10	38	Anonymous . .	F.	53.0	55.7	57.2	3.3	5.5	7.6	14.0	15.5	18.0	16 5.53	− 1.09	. .	− 5.06	22 15 59.38	− 1.90
	39	η Aquarii . . .	F.	. .	. .	47.5	49.6	51.5	53.5	55.6	. .	. .	28 51.54	− 0.92	− 5.09	− 5.06	22 28 45.56	+ 0.06
	40	ζ Pegasi	F.	56.9	1.2	5.2	7.5	9.4	11.5	13.5	17.8	21.9	35 9.43	− 0.74	− 5.09	− 5.06	22 35 3.63	+ 0.09
	41	α Pegasi	F.	. .	. .	23.7	25.8	28.0	30.0	32.2	. .	. .	58 27.94	− 0.67	− 5.06	− 5.06	22 58 22.21	+ 0.03
	42	Radcliffe 5999 . .	F.	51.0	55.8	58.4	9.4	13.1	16.9	28.2	30.8	35.4	6 13.22	+ 0.42	. .	− 5.06	23 6 8.58	− 2.20
	43	O. Arg. S. 22712 .	F.	45.7	48.7	50.4	56.9	59.1	1.4	8.0	9.7	12.5	8 59.16	− 1.29	. .	− 5.06	23 8 52.81	− 2.23
	44	O. Arg. S. 22721 .	F.	. .	. .	49.6	51.9	54.0	56.3	58.5	. .	. .	9 54.06	− 1.27	. .	− 5.06	23 9 47.73	− 2.24
	45	Anonymous . .	F.	29.0	32.4	34.1	41.5	44.1	46.6	54.3	56.2	59.2	21 44.16	− 1.57	. .	− 5.06	23 21 37.53	− 2.45
	46	ι Piscium . . .	F.	14.8	17.3	18.9	25.0	27.0	29.0	35.2	36.8	39.2	33 27.02	− 0.82	− 4.97	− 5.06	23 33 21.14	− 0.09
	47	Weisse 853. . .	F.	23.9	26.6	28.0	34.2	36.2	38.2	44.1	45.9	48.5	42 36.18	− 0.88	. .	− 5.06	23 42 30.24	− 2.26

23. Telescope micrometer reading diminished one revolution in reduction.
31. Bisection at wire B_1.

Number.	Circle Division.	MICROSCOPE MICROMS.				TELESCOPE MICROMETER.						Zenith Point Correction.	Apparent Zenith Distance, South.	Sympiesometer.	Refraction.	Apparent North Polar Distance.	Miscellan'us Corrections.
		V.	VI.	VII.	VIII.	Rev.	1.	2.	3.	4.	5.						
	° ′	r. ″	″	″	″							″	° ′ ″		′ ″	° ′ ″	″
1	66 20	0.2	26.5	19.8	20.2	39	. .	210	. .	115	. .	62.3	293 36 44.2	. .	− 2 11.7	344 40 53.7	+ 1.2
2	324 38	7.9	3.8	27.5	28.4	34	935	. .	. .	. .	905	62.3	35 17 48.0	. .	+ 41.0	86 24 50.2	− 0.3
3																	
4	343 16	8.0	3.0	26.9	27.6	36	990	985	. .	. .	. .	63.1	16 40 20.3	. .	+ 17.9	67 46 59.4	+ 0.1
5	345 4	7.8	3.0	27.0	27.0	32	. .	090	120	140	. .	63.1	14 51 5.8	. .	+ 15.9	65 57 42.9	
6	353 12	11.1	5.9	29.6	1.1	33	. .	. .	. .	510	490	63.1	6 43 29.9	. .	+ 7.1	57 49 58.2	− 0.9
7	326 36	7.6	3.0	27.4	29.1	34	. .	685	. .	700	. .	63.1	33 19 45.2	. .	+ 39.4	84 26 45.8	− 0.7
8	349 22	8.7	3.8	28.3	29.0	33	. .	315	. .	325	. .	63.1	10 33 24.9	. .	+ 11.2	61 39 57.3	− 0.6
9	327 56	4.5	0.3	24.0	25.5	34	320	. .	. .	. .	320	63.1	31 59 36.3	. .	+ 37.5	83 6 35.0	0.0
10	60 56	4.0	0.2	23.7	25.0	35	. .	. .	430	. .	. .	63.1	298 59 52.9	. .	− 1 48.0	350 4 26.1	− 0.4
11	332 14	6.0	2.0	25.0	26.1	35	. .	860	. .	830	. .	63.1	27 42 0.9	. .	+ 31.5	78 48 53.6	− 0.4
12	312 48	10 1.3	26.4	20.5	21.9	37	. .	260	. .	240	. .	62.2	47 8 16.7	. .	+ 1 4.6	98 15 42.5	+ 0.2
13	290 46	9 26.2	21.2	14.1	17.4	33	. .	700	. .	684	. .	62.2	69 9 16.6	. .	+ 2 36.5	120 18 14.3	+ 1.0
14	335 34	11.2	6.5	1.1	1.5	36	148	140	. .	. .	. .	62.2	24 22 10.0	. .	+ 27.2	75 28 58.4	+ 0.4
15	70 56	5.2	1.4	24.8	27.9	30	. .	900	. .	944	. .	62.2	288 58 43.6	. .	− 2 53.2	340 2 11.6	+ 1.7
16	326 0	7.3	2.2	27.1	28.5	39	. .	860	. .	870	. .	62.2	33 57 3.3	. .	+ 40.5	85 4 5.0	+ 0.2
17	314 40	5.9	0.2	26.8	27.5	36	. .	495	. .	500	. .	62.2	45 16 10.3	. .	+ 1 0.7	96 23 32.2	+13.8
18	314 40	5.9	0.2	26.8	27.5	46	. .	. .	. .	. .	200	62.2	45 18 39.1	. .	+ 1 0.8	96 26 1.1	+13.8
19	314 52	0.7	26.0	20.8	22.8	32	. .	. .	. .	. .	305	62.2	45 3 0.7	. .	+ 1 0.2	96 10 22.1	+13.9
20	349 26	6.7	0.3	25.6	26.1	37	464	448	. .	442	430	62.2	10 30 25.0	. .	+ 11.2	61 36 57.4	+ 0.9
21																	
22	316 42	0.2	25.9	21.8	22.7	39	. .	. .	. .	058	090	62.2	43 14 44.8	. .	+ 56.5	94 22 2.5	+13.6
23	317 16	10 8.6	3.3	28.9	0.0	34	. .	. .	. .	670	750	62.2	42 39 30.0	. .	+ 55.4	93 46 46.6	+14.8
24	49 38	8.2	2.9	27.7	28.4	32	500	510	515	. .	. .	62.2	310 17 10.9	. .	− 1 10.8	1 22 21.3	− 2.0
25	52 6	9 25.5	22.0	14.1	16.0	38	. .	575	545	640	. .	64.6	307 50 34.0	. .	− 1 17.4	358 55 37.8	+ 2.2
26	341 28	9 26.7	23.0	15.5	16.3	31	. .	870	. .	865	. .	64.6	18 26 52.0	. .	+ 20.1	69 33 33.3	
27	68 54	7.1	2.6	25.9	29.1	36	. .	. .	765	. .	. .	64.6	291 2 17.9	. .	− 2 35.5	342 6 3.6	− 2.0
28	327 56	8.6	4.0	25.0	29.6	34	060	. .	. .	. .	080	64.6	31 59 37.2	. .	+ 37.6	83 6 36.0	+ 0.3
29	9 34	11.2	8.0	0.6	1.6	32	610	. .	. .	. .	645	64.6	350 21 19.3	. .	− 10.2	41 27 30.3	− 0.9
30	332 14	8.0	4.8	28.1	28.6	35	670	. .	. .	. .	665	64.6	27 42 2.4	. .	+ 31.6	78 48 55.2	+ 0.5
31	42 54	6.5	2.6	25.6	28.1	33	385	. .	. .	. .	. .	64.6	317 1 26.0	. .	− 56.1	8 6 51.1	+ 0.8
32	312 58	10.9	6.2	1.4	3.1	37	. .	655	. .	640	. .	64.6	46 58 35.6	. .	+ 1 4.5	98 6 1.3	+ 1.0
33	345 24	12.6	9.5	2.3	3 2	33	370	. .	. .	. .	375	64.6	14 31 31.8	. .	+ 15.6	65 38 8.6	+ 0.1
34	347 40	8.3	3.5	27.2	28.8	38	700	. .	. .	. .	735	64.6	12 16 49.0	. .	+ 13.1	63 23 23.3	+ 0.2
35	333 38	12.2	7.7	1.9	2.2	33	110	. .	. .	. .	105	64.6	26 17 26.7	. .	+ 29.8	77 24 17.7	+ 0.2
36	341 32	8.3	3.7	27.0	28.9	35	065	. .	. .	. .	100	64.6	18 23 53.1	. .	+ 20.0	69 30 34.3	+ 0.8
37																	
38	309 10	9 28.7	21.2	15.2	18.0	35	310	. .	. .	. .	276	63.3	50 45 40.9	. .	+ 1 10.8	101 53 12.9	+ 9.6
39	320 16	10 8.6	2.5	24.9	28.5	33	. .	. .	. .	880	846	63.3	39 39 31.8	. .	+ 48.0	90 46 41.0	+ 1.6
40	331 12	12.9	7.2	0.9	2.4	32	. .	702	. .	720	. .	63.3	28 43 19.0	. .	+ 31.7	79 50 11.9	+ 1.6
41	335 34	10.2	4.1	28.5	28.9	36	. .	. .	. .	418	414	63.3	24 22 13.0	. .	+ 26.2	75 29 0.4	+ 2.4
42	17 28	10 5.3	29.8	23.0	24.2	39	. .	712	. .	. .	. .	63.3	342 28 59.3	. .	− 18.2	33 35 2.3	+26.9
43																	
44	299 10	7.0	1.8	25.9	29.7	31	. .	. .	. .	954	964	63.3	60 45 2.4	. .	+ 1 42.7	111 53 6.3	+ 7.7
45	285 8	10 21.8	15.8	9.2	11.1	34	. .	938	. .	876	. .	63.3	74 48 1.1	. .	+ 3 29.3	125 57 51.6	+ 3.8
46	325 58	10 20.4	18.2	7.8	9.9	31	. .	400	. .	362	. .	63.3	33 57 6.8	. .	+ 38.9	85 4 6.9	+ 2.0
47	322 46	9.5	3.5	27.7	29.2	33	870	890	. .	. .	. .	63.3	37 9 33.6	. .	+ 43.8	88 16 38.6	+15.5

No.	Barom.	At. Ther.	Ex. Ther.
	in.	°	°
2	29.836	69.5	49.5
3	30.184	73.0	38.5
5	. .	. .	38.0
8	30.200	72.5	38.0
9	. .	. .	38.0
11	30.226	72.0	37.5
13	30.164	66.0	37.0
16	. .	. .	36.2
24	30.180	66.0	37.0
25	29.970	65.5	32.0
28	. .	. .	32.0
30	. .	. .	31.5
34	. .	. .	30.5
36	29.930	61.0	31.5
39	. .	. .	48.5
40	29.750	67.5	48.5
45	. .	. .	49.8

For summary of the elements of reduction see page 3.

No.	Parallax.	Semi-diam.	Defective Illumination.	Sum.
	′ ″	′ ″	′ ″	′ ″
5	−13 42.2	−14 47.6	. .	−28 29.8
26	− 0.2	. .	. .	− 0.2

DATE.	Number.	OBJECT.	Observer.	SECONDS OF TRANSIT OVER WIRES.										CORRECTIONS.			Apparent Right Ascension.	Miscellan'us Corrections.
				I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	Mean wire.	Inst.	Clock appar'nt.	Clock adopted.		
1871.													m. s.	s.	s.	s.	h. m. s.	s.
Nov. 10	1	Weisse 895 . .	F.	3.6	6.4	7.9	13.9	16.2	18.2	24.4	25.9	28.4	45 16.10	− 1.00	. .	− 5.06	23 45 10.04	− 2.30
	2	Weisse 958 . .	F.	39.8	42.4	43.9	50.1	52.1	54.2	0.3	1.8	4.5	47 52.12	− 1.00	. .	− 5.06	23 47 46.06	− 2.31
	3	Weisse 1016 . .	F.	28.3	31.0	32.4	38.5	40.6	42.8	49.0	50.6	53.0	50 40.69	− 1.00	. .	− 5.06	23 50 34.63	− 2.32
	4	Weisse 1029 . .	F.	6.4	9.4	10.9	17.0	19.0	21.0	27.0	28.9	31.4	51 19.00	− 1.00	. .	− 5.06	23 51 12.94	− 2.32
	5	α Andromedæ . .	F.	37.5	40.3	42.1	49.1	51.3	53.7	0.6	2.3	5.3	1 51.36	− 0.41	− 5.10	− 5.06	0 1 45.89	+ 0.06
	6	γ Pegasi	F.	. .	. .	. .	. .	. .	. .	52.3	53.8	56.5	6 43.82	− 0.67	− 5.06	− 5.06	0 6 38.09	0.00
	7	Weisse 127 . .	F.	47.5	50.2	51.6	57.8	59.8	1.9	8.0	9.5	12.2	8 59.83	− 0.97	. .	− 5.06	0 8 53.80	− 2.39
	8	Anonymous . .	F.	23.9	26.5	28.0	34.0	36.2	38.3	44.2	46.0	48.5	14 36.18	− 0.96	. .	− 5.06	0 14 30.14	− 2.41
	9	α Cassiopeæ, (R.) .	F.	57.7	2.2	4.6	15.9	19.2	23.0	. .	. .	. .	33 19.36	+ 0.68	. .	− 5.06	0 33 14.98	− 0.34
	10	Polaris, S. P. . .	F.	42.0	. .	52.0	. .	. .	. .	30.0	. .	. .	13 10.67	. .	. .	. .	. . . . .	. .
11	11	β Aquarii . . .	Ha.	41.3	43.8	45.3	51.4	53.5	55.5	1.7	3.2	5.8	24 53.50	− 1.05	− 4.86	− 4.88	21 24 47.57	+ 0.01
	12	ξ Aquarii . . .	Ha.	48.3	50.8	52.3	58.5	0.6	2.7	8.8	10.3	12.9	31 0.58	− 1.09	− 4.89	− 4.88	21 30 54.61	+ 0.03
	13	Anonymous . .	Ha.	. .	. .	49.2	51.7	54.0	56.6	59.2	. .	. .	35 54.14	− 0.36	. .	− 4.88	21 35 48.90	− 1.30
	14	79 Draconis . . .	Ha.	. .	. .	5.0	12.3	19.6	26.5	33.5	. .	. .	51 19.38	+ 1.95	. .	− 4.89	21 51 16.44	+ 0.08
	15	α Aquarii. . . .	Ha.	4.9	7.5	8.9	15.0	17.0	19.0	25.2	26.7	29.2	59 17.04	− 0.97	− 4.89	− 4.89	21 59 11.18	+ 0.03
	16	B. A. C. 7757 . .	Ha.	37.3	40.2	41.8	48.8	51.0	53.4	0.3	2.0	5.0	7 51.09	− 0.46	. .	− 4.89	22 7 45.74	− 1.59
	17	Anonymous . .	Ha.	52.9	55.3	57.0	3.2	5.3	7.4	13.6	15.4	17.8	16 5.32	− 1.15	. .	− 4.89	22 15 59.28	− 1.89
	18	Anonymous . .	Ha.	4.7	7.5	9.2	16.4	18.6	21.0	27.9	29.7	32.6	19 18.62	− 1.48	. .	− 4.89	22 19 12.25	− 2.06
	19	ζ Pegasi	Ha.	56.8	59.5	1.0	7.3	9.3	11.3	17.5	19.3	21.7	35 9.30	− 0.78	− 4.93	− 4.89	22 35 3.63	+ 0.10
	20	λ Aquarii. . . .	Ha.	48.7	51.3	52.8	59.0	1.0	3.0	9.3	10.8	13.4	46 1.03	− 1.09	− 4.90	− 4.89	22 45 55.05	+ 0.09
	21	α Piscis Australis .	Ha.	25.4	28.4	30.2	37.2	39.7	42.0	49.0	50.8	53.7	50 39.60	− 1.51	− 4.74	− 4.89	22 50 33.20	− 0.11
	22	α Pegasi	Ha.	15.2	17.9	19.5	25.7	27.8	29.9	36.3	37.8	40.4	58 27.83	− 0.71	− 4.93	− 4.89	22 58 22.23	+ 0.07
	23	Radcliffe 5999. .	Ha.	49.7	54.0	56.8	8.0	11.9	15.5	26.6	29.3	33.9	7 11.74	+ 0.40	. .	− 4.89	23 7 7.25	− 1.20
	24	O. Arg. S. 22721 .	Ha.	. .	. .	49.4	51.6	53.8	56.0	58.3	. .	. .	9 53.82	− 1.33	. .	− 4.89	23 9 47.60	− 2.28
	25	Anonymous . .	Ha.	. .	. .	3.4	5.6	7.7	10.0	12.3	. .	. .	10 7.80	− 1.33	. .	− 4.89	23 10 1.58	− 2.23
	26	Anonymous . .	Ha.	29.0	32.0	33.9	41.6	43.9	46.6	54.3	56.2	59.3	21 44.09	− 1.64	. .	− 4.89	23 21 37.56	− 2.44
	27	ι Piscium . . .	Ha.	14.7	17.2	18.8	24.8	26.9	29.0	35.2	36.8	39.3	33 26.97	− 0.87	− 4.88	− 4.89	23 33 21.21	− 0.01
	28	Weisse 853 . .	Ha.	23.9	26.4	28.0	34.0	36.1	38.1	44.3	45.9	48.3	42 36.11	− 0.93	. .	− 4.89	23 42 30.29	− 2.25
	29	Weisse 895 . .	Ha.	. .	. .	. .	. .	. .	. .	24.4	25.9	28.4	45 16.13	− 1.06	. .	− 4.89	23 45 10.18	− 2.29
	30	Weisse 958 . .	Ha.	39.8	42.4	44.0	49.9	51.9	53.9	0.4	1.9	4.5	47 52.08	− 1.06	. .	− 4.89	23 47 46.13	− 2.32
	31	Weisse 1016 . .	Ha.	. .	. .	36.4	38.6	40.5	42.6	44.7	. .	. .	50 40.56	− 1.06	. .	− 4.89	23 50 34.61	− 2.31
	32	γ Pegasi	Ha.	31.0	33.8	35.3	41.6	43.8	45.8	52.2	53.8	56.4	6 43.74	− 0.72	− 4.94	− 4.90	0 6 38.12	+ 0.04
	33	Anonymous . .	Ha.	24.0	26.4	28.0	34.0	36.0	38.1	44.3	45.8	48.3	14 36.10	− 1.01	. .	− 4.90	0 14 30.19	− 2.41
	34	ε Piscium . . .	Ha.	11.0	13.6	15.1	21.2	23.3	25.4	31.6	33.1	35.7	56 23.33	− 0.84	− 4.91	− 4.90	0 56 17.59	+ 0.03
	35	Polaris	Ha.	. .	. .	10.0	36.5	1.0	27.0	52.0	. .	. .	12 1.30	. .	. .	. .	. . . . .	. .
17	36	Moon S. . . .	F.	. .	. .	. .	. .	. .	. .	. .	. .	. .	. . .	. .	. .	. .	. . . . .	. .
	37	ζ Cygni	F.	19.9	22.7	24.6	31.6	34.0	36.4	43.4	45.1	48.0	7 33.97	− 0.38	− 5.80	− 5.68	21 7 27.91	+ 0.13
	38	B. A. C 7430 . .	F.	. .	. .	. .	. .	24.3	28.4	36.6	39.6	44.9	17 20.18	+ 0.75	. .	− 5.68	21 17 15.25	− 0.92
	39	B. A. C. 7524 . .	F.	29.1	31.0	36.4	39.0	41.6	44.2	46.7	52.0	53.9	32 41.54	− 0.16	. .	− 5.68	21 32 35.70	− 1.08
	40	Anonymous . .	F.	40.3	. .	50.0	. .	. .	. .	. .	6.5	. .	35 54.92	− 0.31	. .	− 5.68	21 35 48.93	− 1.19
	41	B. A. C. 7602 . .	F.	49.7	53.0	55.0	3.0	5.5	7.9	15.9	17.6	21.0	43 5.40	− 0.17	. .	− 5.68	21 42 59.55	− 1.18
	42	α Aquarii . . .	F.	5.5	8.2	13.7	15.7	17.8	19.8	21.8	. .	. .	59 17.88	− 0.96	− 5.81	− 5.68	21 59 11.24	+ 0.16
	43	B. A. C. 7757 . .	F.	. .	. .	47.0	. .	51.7	54.0	1.0	. .	. .	7 51.69	− 0.42	. .	− 5.68	22 7 45.59	− 1.26
	44	Anonymous . .	F.	53.6	56.2	57.9	3.9	6.0	8.1	14.4	15.9	18.5	16 6.06	− 1.15	. .	− 5.68	22 15 59.23	− 1.81
	45	Anonymous . .	F.	5.3	8.3	10.0	17.0	19.4	21.8	28.7	30.4	33.5	19 19.38	− 1.50	. .	− 5.68	22 19 12.20	− 1.97
	46	9 Draconis, S. P. .	F.	. .	. .	32.8	24.6	15.5	7.3	58.7	. .	. .	24 15.78	− 4.91	. .	− 5.69	10 24 5.18	− 0.77
	47	η Aquarii. . . .	F.	39.8	42.4	43.9	50.0	52.0	54.0	0.2	1.7	4.3	28 52.03	− 0.96	− 5.63	− 5.69	22 28 45.38	− 0.03
	48	ζ Pegasi	F.	0.0	1.7	5.8	8.0	10.0	12.0	14.2	18.3	19.8	35 9.98	− 0.76	− 5.71	− 5.69	22 35 3.53	+ 0.08
	49	B. A. C. 7937 . .	F.	. .	. .	6.9	11.0	24.2	30.2	32.9	. .	. .	39 19.85	− 0.61	. .	− 5.69	22 39 13.55	− 1.77

3, 48. Bisections at wires V and VI.
36. Bisections at wires III–V.
43. Transits observed over wires C_1, C_3, C_4, and D_1.
48. Bisections at wires V and VI.
49. Transits observed over wires B_1, B_3, C_5, D_2, and D_3.

Number.	Circle Division.	MICROSCOPE MICROMS. V.	VI.	VII.	VIII.	TELESCOPE MICROMETER. Rev.	1.	2.	3.	4.	5.	Zenith Point Correction.	Apparent Zenith Distance, South.	Sympiesometer.	Refraction.	Apparent North Polar Distance.	Miscellan's Corrections.
	° '	r. "	"	"	"							"	° ' "		' "	° ' "	"
1	314 38	21.3	15.1	10.2	11.8	27	966	950	. .	. .	. .	63.3	45 16 17.3	. .	+ 58.3	96 23 36.8	+13.2
2	314 38	21.3	15.1	10.2	11.8	37	. .	. .	. .	466	470	63.3	45 18 43.3	. .	+ 58.4	96 26 2.9	+13.2
3	314 52	2.4	0.5	25.2	28.2	31	. .	. .	580	572	. .	63.3	45 2 54.7	. .	+ 57.9	96 10 13.8	+13.3
4	314 52	2.4	0.5	25.2	28.2	32	. .	. .	. .	120	118	63.3	45 3 3.0	. .	+ 57.9	96 10 22.1	+13.3
5	349 26	13.0	6.3	1.8	2.5	36	970	996	. .	004	014	63.3	10 30 25.1	. .	+ 10.7	61 36 57.0	+ 0.8
6	335 30	5.7	29.3	23.5	24.8	31	. .	. .	. .	712	. .	63.3	24 24 56.1	. .	+ 26.3	75 31 41.6	− 0.1
7	316 42	1.4	24.9	21.1	21.7	39	. .	368	. .	350	. .	63.3	43 14 50.0	. .	+ 55.6	94 21 26.8	+14.0
8	317 16	6.5	0.7	24.5	27.0	34	100	108	. .	130	140	63.3	42 39 34.4	. .	+ 53.3	93 46 48.9	+14.2
9	163 0	11.6	4.2	28.3	1.6	36	580	. .	. .	. .	532	63.3	196 56 15.0	. .	+ 18.0	34 9 48.2	− 2.0
10																	
11	314 56	10 3.7	28.9	23.5	23.6	38	870	. .	. .	. .	900	62.7	45 0 44.8	. .	+ 59.4	96 8 5.4	+ 2.4
12	312 38	2.4	28.4	22.8	23.0	37	220	. .	. .	. .	225	62.7	47 18 18.4	. .	+ 1 4.4	98 25 44.0	+ 1.4
13	353 48	5.8	1.0	26.1	25.1	27	. .	. .	. .	. .	520	62.7	6 5 53.0	. .	+ 6.4	57 12 20.6	+22.6
14	34 8	7.0	2.0	25.7	27.6	37	. .	. .	120	. .	. .	62.7	325 48 20.9	. .	− 40.5	16 54 1.6	+ 1.1
15	320 6	3.9	29.8	23.6	25.5	33	360	. .	. .	. .	380	62.7	39 49 23.4	. .	+ 49.7	90 56 34.3	+ 4.1
16	349 0	9 18.7	14.5	8.7	9.0	32	550	. .	. .	. .	610	62.7	10 54 53.7	. .	+ 11.5	62 1 26.4	+22.1
17	309 10	10 11.0	4.6	29.6	1.5	34	245	225	. .	. .	. .	62.7	50 45 40.1	. .	+ 1 13.0	101 53 14.3	+ 9.7
18	292 4	6.2	1.9	25.1	27.0	33	. .	. .	. .	665	635	62.7	67 51 26.7	. .	+ 2 25.7	119 0 13.6	+ 0.7
19	331 12	6.9	2.0	26.4	27.0	33	030	. .	. .	. .	030	62.7	28 43 18.2	. .	+ 32.7	79 50 12.1	+ 1.7
20	312 48	7.4	3.0	27.7	28.0	36	. .	915	. .	940	. .	62.7	47 8 18.8	. .	+ 1 4.3	98 15 44.3	+ 1.7
21	290 46	7.9	3.4	26.9	28.5	32	. .	975	. .	955	. .	62.7	69 9 18.0	. .	+ 2 35.7	120 18 14.9	+ 1.0
22	335 34	9.3	4.5	29.4	29.1	36	. .	335	. .	355	. .	62.7	24 22 11.6	. .	+ 27.1	75 28 59.9	+ 1.9
23	17 28	6.7	2.0	26.4	27.5	28	. .	. .	430	. .	. .	62.7	342 26 7.7	. .	− 18.7	33 32 10.2	+27.3
24	299 10	9.5	4.0	28.9	1.7	31	. .	. .	. .	530	. .	62.7	60 44 57.8	. .	+ 1 46.4	111 53 5.4	+ 7.8
25	299 10	9.5	4.0	28.9	1.7	35	. .	. .	. .	. .	775	62.7	60 46 2.8	. .	+ 1 46.5	111 54 10.5	+ 7.8
26	285 8	9.1	3.6	27.0	0.4	35	. .	. .	. .	247	. .	62.7	74 47 53.7	. .	+ 3 37.0	125 57 51.9	+ 3.8
27	325 58	10.1	4.6	0.0	1.0	31	. .	. .	. .	880	880	62.7	33 57 3.7	. .	+ 40.3	85 4 5.2	+ 0.3
28	322 46	10.4	5.7	0.0	0.0	33	. .	610	. .	590	. .	62.7	37 9 30.2	. .	+ 45.4	88 16 36.8	+15.3
29	314 38	9.0	3.5	28.0	29.8	28	. .	. .	. .	. .	590	62.7	45 16 11.9	. .	+ 1 0.4	96 23 33.5	+13.4
30	314 38	9.0	3.5	28.0	29.8	38	. .	. .	. .	. .	100	62.7	45 18 37.8	. .	+ 1 0.5	96 25 59.5	+13.2
31	314 52	8.0	2.8	28.2	29.0	31	. .	. .	. .	400	390	62.7	45 2 54.3	. .	+ 1 0.0	96 10 15.5	+13.4
32	335 30	3.7	28.6	23.1	23.9	31	660	680	. .	. .	. .	62.7	24 24 54.1	. .	+ 27.2	75 31 42.5	+ 0.8
33	317 16	10 14.8	9.4	4.2	4.6	33	. .	320	. .	400	. .	62.7	42 39 30.8	. .	+ 55.3	93 46 47.3	+14.3
34	328 14	10.0	4.0	29.0	29.2	31	880	. .	. .	. .	905	62.7	31 41 3.4	. .	+ 37.1	82 48 1.7	+ 1.0
35	49 38	8.2	3.7	28.0	29.1	32	. .	480	505	500	. .	62.7	310 17 11.6	. .	− 1 10.9	1 22 21.9	+ 0.3
36	297 42	9 2.7	26.7	21.0	23.7	37	. .	550	486	442	. .	62.3	62 13 51.6	. .	+ 1 53.4	113 22 6.2	. .
37	350 44	10 1.8	25.6	19.8	20.7	33	070	058	. .	108	092	62.3	9 11 12.5	. .	+ 9.7	80 17 43.4	+ 0.6
38	21 16	2.9	27.5	21.6	22.5	40	. .	. .	. .	145	155	62.3	338 41 3.4	. .	− 23.5	29 47 1.1	+26.6
39	359 46	26.7	21.7	15.6	15.2	32	. .	555	. .	565	. .	62.3	0 8 59.6	. .	+ 0.2	51 15 21.0	+23.7
40	353 50	14.3	7.7	4.0	3.7	34	. .	884	. .	908	. .	62.3	6 5 53.3	. .	+ 6.4	57 12 20.9	+22.4
41	359 24	9.1	2.8	27.4	28.2	34	802	816	. .	814	816	62.3	0 31 46.7	. .	+ 0.6	51 38 8.5	+24.0
42	320 6	3.8	27.9	22.2	25.6	33	. .	466	. .	450	. .	62.3	39 49 21.0	. .	+ 50.3	90 56 32.5	+ 1.9
43	349 0	9.8	3.6	28.8	29.9	31	. .	320	. .	320	. .	62.3	10 54 54.0	. .	+ 11.6	62 1 26.8	+22.1
44	309 10	15.7	8.7	4.2	6.5	33	. .	958	. .	964	. .	62.3	50 45 40.1	. .	+ 1 13.8	101 53 15.1	+ 9.2
45																	
46	64 38	12.1	6.4	1.9	5.1	34	. .	950	. .	960	. .	62.3	295 17 51.6	. .	− 2 7.0	346 22 5.8	− 0.5
47	320 16	5.7	28.7	23.5	26.4	33	. .	980	. .	978	. .	62.3	39 39 30.2	. .	+ 50.0	90 46 41.4	+ 1.5
48	331 12	9.1	3.3	28.3	29.3	32	. .	. .	970	966	. .	62.3	28 43 18.6	. .	+ 33.1	79 50 12.9	+ 2.4
49	339 44	0.7	23.1	19.0	20.0	35	. .	240	. .	240	. .	62.3	20 11 44.3	. .	+ 22.2	71 18 27.7	+20.0

No.	Barom.	At. Ther.	Ex. Ther.
	in.	°	°
8	29.790	69.0	49.5
11	. .	. .	45.5
13	30.370	68.0	44.5
18	. .	. .	44.5
22	. .	. .	43.0
26	. .	. .	42.5
33	30.428	68.5	41.5
35	30.444	69.0	40.5
36	. .	. .	39.0
38	30.278	69.5	37.2
39	30.278	69.5	36.5
40	. .	. .	36.5

For summary of the elements of reduction see page 3.

No.	Parallax.	Semi-diam.	Defective Illumination.	Sum.
	' "	' "	' "	° ' "
36	−52 16.6	− 16 10.3	. .	−1 8 26.9

DATE.	Number.	OBJECT.	Observer.	SECONDS OF TRANSIT OVER WIRES.										CORRECTIONS.			Apparent Right Ascension.	Miscellan'us Corrections.
				I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	Mean wire.	Inst.	Clock appar'nt.	Clock adopted.		
1871.													m. s.	s.	s.	s.	h. m. s.	s.
Nov. 17	1	B. A. C. 7953 . .	F.	0.3	4.8	7.8	. .	23.0	. .	46.0	. .	. .	42 23.09	+ 0.60	. .	− 5.69	22 42 18.00	− 1.68
	2	α Pegasi	F.	. .	. .	24.4	26.4	28.5	30.6	. .	. .	. .	58 28.53	− 0.69	− 5.72	− 5.69	22 58 22.15	+ 0.06
	3	Radcliffe 5999. .	F.	. .	. .	6.5	10.1	. .	. .	21.3	. .	. .	6 13.85	+ 0.52	. .	− 5.69	23 6 8.68	− 2.02
	4	O. Arg. S. 22712 .	F.	. .	. .	. .	57.3	59.9	2.0	. .	. .	13.0	8 59.71	− 1.37	. .	− 5.69	23 8 52.65	− 2.16
	5	Anonymous . .	F.	29.5	32.8	34.7	42.2	44.9	47.2	55.0	56.8	59.8	21 44.77	− 1.66	. .	− 5.69	23 21 37.42	− 2.35
	6	ι Piscium . . .	F.	. .	. .	. .	25.5	27.7	29.8	31.8	. .	. .	33 27.67	− 0.86	− 5.65	− 5.69	23 33 21.12	− 0.04
	7	Weisse 853 . .	F.	. .	24.6	28.8	. .	32.8	34.9	. .	45.0	49.0	42 36.87	− 0.91	. .	− 5.69	23 42 30.27	− 2.20
	8	ω Piscium . . .	F.	37.7	41.9	45.9	48.0	50.0	52.0	54.0	58.2	2.4	52 50.01	− 0.84	− 5.62	− 5.70	23 42 43.47	− 0.07
	9	ε Piscium . . .	F.	11.6	14.1	15.7	21.9	24.0	25.9	32.2	33.8	36.4	56 23.96	− 0.82	− 5.58	− 5.70	0 56 17.44	− 0.10
	10	Polaris	F.	. .	. .	13.0	30.0	56.0	22.0	49.0	. .	. .	11 56.00	. .	. .	. .	. . . .	. .
	11	Neptune . . .	F.	9.4	12.0	13.5	19.6	21.7	23.8	29.9	31.4	34.0	23 21.70	− 0.82	. .	− 5.71	1 23 15.17	. .
	12	Anonymous . .	F.	29.3	32.3	34.2	. .	. .	. .	51.2	53.0	55.5	44 42.58	− 0.64	. .	− 5.71	1 44 36.23	. .
	13	α Arietis, (R.) .	F.	50.3	53.1	54.7	1.0	3.0	5.5	14.2	15.9	17.7	0 3.38	− 0.36	. .	− 5.71	1 59 57.31	0.00
	14	ι Cassiopeæ, (R.) .	F.	6.7	12.9	16.5	32.4	37.6	42.9	59.0	2.3	8.8	18 37.67	+ 1.67	. .	− 5.71	2 18 33.63	+ 0.17
	15	Anonymous . .	F.	. .	. .	. .	. .	. .	. .	. .	. .	. .	. . .	. .	. .	. .	. . . .	. .
18	16	β Aquarii . . .	E.	. .	. .	. .	. .	. .	. .	. .	. .	. .	. . .	. .	. .	. .	. . . .	. .
	17	ξ Aquarii . . .	E.	49.2	51.8	53.2	59.5	1.5	3.6	9.9	11.3	14.0	31 1.56	− 1.04	− 6.01	− 5.94	21 30 54.58	+ 0.09
	18	Anonymous . .	E.	40.5	43.5	45.5	52.7	55.1	57.5	4.9	6.6	9.9	35 55.13	− 0.31	. .	− 5.94	21 35 48.88	− 1.17
	19	Moon I, S.	E.	21.2	25.3	29.9	32.0	34.3	36.7	38.8	43.3	47.7	38 34.36	− 1.06	. .	− 5.94	21 38 27.36	+70.16
	20	79 Draconis . . .	E.	37.8	46.7	52.1	13.0	20.3	27.2	48.1	53.4	2.0	51 20.07	+ 2.04	. .	− 5.94	21 51 16.17	+ 0.32
	21	α Aquarii . . .	E.	5.7	8.3	9.8	15.9	18.0	20.0	26.0	27.7	30.2	59 17.96	− 0.91	− 5.96	− 5.94	21 59 11.11	+ 0.05
	22	B. A. C. 7757 . .	E.	38.0	41.0	42.8	49.5	51.9	54.3	1.2	2.9	5.8	7 51.93	− 0.42	. .	− 5.94	22 7 45.57	− 1.47
	23	Anonymous . .	E.	53.5	56.3	57.9	4.1	6.3	8.4	14.6	16.0	18.6	16 6.19	− 1.09	. .	− 5.94	22 15 59.16	− 1.80
	24	Anonymous . .	E.	5.4	8.5	10.4	17.4	19.6	22.0	29.0	30.7	33.8	19 19.64	− 1.41	. .	− 5.94	22 19 12.29	− 1.95
	25	9 Draconis, S. P. .	E.	8.0	57.2	50.7	33.0	24.5	17.0	. .	. .	. .	24 16.03	− 4.55	. .	− 5.94	10 24 5.54	− 0.52
	26	η Aquarii . . .	E.	40.0	42.6	44.2	50.3	52.4	54.4	0.5	2.0	4.6	28 52.33	− 0.91	− 5.99	− 5.95	22 28 45.47	+ 0.07
	27	ζ Pegasi	E.	57.7	0.4	1.9	8.0	10.1	12.2	18.5	20.0	22.7	35 10.17	− 0.74	− 5.94	− 5.95	22 35 3.48	+ 0.05
	28	B. A. C. 7953 . .	E.	0.2	5.0	8.0	19.4	23.4	27.2	38.4	41.5	46.3	42 23.27	+ 0.53	. .	− 5.95	22 42 17.85	− 1.65
	29	α Piscis Australis .	E.	29.3	31.2	35.8	38.2	40.6	43.0	45.5	50.0	51.9	50 40.61	− 1.44	− 5.93	− 5.95	22 50 33.22	+ 0.02
	30	α Pegasi	E.	. .	. .	24.4	26.6	28.6	30.9	33.0	. .	. .	58 28.70	− 0.66	− 5.93	− 5.95	22 58 22.09	+ 0.01
	31	θ Piscium . . .	E.	22.0	24.6	26.1	32.3	34.4	36.5	42.5	44.1	46.6	21 34.34	− 0.81	− 5.95	− 5.95	23 21 27.58	+ 0.06
	32	ι Piscium . . .	E.	15.6	18.3	19.8	25.9	28.0	30.0	36.0	37.7	40.3	33 27.96	− 0.83	− 5.98	− 5.95	23 33 21.18	+ 0.03
	33	Groombridge 4163	E.	. .	. .	27.6	34.6	42.8	49.5	56.6	. .	. .	48 42.22	+ 2.16	. .	− 5.95	23 48 38.43	− 0.01
	34	ω Piscium . . .	E.	38.1	40.6	42.0	48.3	50.3	52.4	58.5	0.0	2.7	52 50.32	− 0.80	− 5.98	− 5.95	23 52 43.57	+ 0.04
	35	β Ceti.	E.	3.4	6.2	7.8	14.3	16.4	18.6	25.0	26.6	29.3	37 16.40	− 1.21	− 5.88	− 5.96	0 37 9.23	− 0.03
	36	32^1 Camelopard., S. P.	E.	. .	. .	52.3	33.0	12.4	52.5	33.0	. .	. .	48 12.64	− 9.47	. .	− 5.96	0 47 57.21	− 7.05
	37	32^2 Camelopard., S. P.	E.	. .	. .	0.5	40.7	20.1	0.6	39.6	. .	. .	48 20.30	− 9.47	. .	− 5.96	0 48 4.87	+ 0.61
	38	ε Piscium . . .	E.	11.8	14.5	16.1	22.2	24.4	26.4	32.5	34.0	36.5	56 24.27	− 0.78	− 5.93	− 5.96	0 56 17.53	− 0.01
	39	Polaris	E.	. .	. .	6.0	31.0	58.5	24.5	50.0	. .	. .	11 58.00	. .	. .	. .	. . . .	. .
	40	θ^1 Ceti	E.	31.7	34.3	35.8	42.0	44.1	46.2	52.4	54.0	56.5	17 44.11	− 1.04	− 5.91	− 5.96	1 17 37.11	− 0.03
25	41	32^1 Camelopard., S. P.	E.	. .	. .	54.0	33.0	13.3	53.8	35.0	. .	. .	48 13.82	− 9.41	. .	− 6.79	0 47 57.62	− 7.70
	42	32^2 Camelopard., S. P.	E.	. .	. .	1.8	41.8	22.2	0.6	42.6	. .	. .	48 21.80	− 9.41	. .	− 6.79	0 48 5.60	+ 0.28
	43	ε Piscium . . .	E.	12.8	15.5	21.0	23.0	25.0	27.0	29.1	35.0	37.5	56 25.10	− 0.84	− 6.74	− 6.79	0 56 17.47	− 0.03
	44	Polaris	E.	. .	. .	2.0	29.5	53.0	23.0	50.0	. .	. .	11 55.50	. .	. .	. .	. . . .	. .
	45	θ^1 Ceti.	E.	32.6	35.2	36.7	43.0	45.0	47.1	53.1	54.9	57.5	17 45.01	− 1.10	− 6.78	− 6.79	1 17 37.12	+ 0.01
	46	η Piscium . . .	E.	. .	. .	. .	45.4	47.4	49.3	53.6	55.4	57.9	24 45.27	− 0.71	− 6.86	− 6.79	1 24 37.77	+ 0.14
29	47	δ Persei	E.	38.0	41.6	44.0	53.0	56.0	59.0	8.1	10.3	14.0	33 56.00	+ 0.22	. .	− 6.99	3 33 49.23	+ 0.19
	48	η Tauri	E.	46.4	49.4	51.0	57.7	0.0	2.2	8.9	10.6	13.5	39 59.97	− 0.40	− 7.05	− 6.99	3 39 52.58	+ 0.06
	49	ζ Persei	E.	58.0	1.1	3.0	10.2	12.5	14.9	22.0	24.0	27.0	46 12.52	− 0.24	− 7.06	− 7.00	3 46 5.28	+ 0.05

12. Observed for Euphrosyne; wire A used.
12–14. Entire seconds assumed.
15. Observed for Concordia; wire A used.
36. Bisections at wires B_1 and D_3.
37. Bisections at wires C_5–C_1.
41, 42. Bisections at set C.

Number.	Circle Division.	MICROSCOPE MICROMS. V.	VI.	VII.	VIII.	TELESCOPE MICROMETER. Rev.	1.	2.	3.	4.	5.	Zenith Point Correction.	Apparent Zenith Distance, South.	Sympiesometer.	Refraction.	Apparent North Polar Distance.	Miscellan'us Corrections.
	° ′	r. ″	″	″	″							″	° ′ ′		′ ″	° ′ ″	″
1	18 50	13.9	9.1	3.2	4.5	32	..	800	..	800	..	62.3	341 5 21.7	..	− 20.7	32 11 22.2	+28.3
2	335 34	8.9	2.5	28.2	29.0	36	..	434	..	418	..	62.3	24 22 11.4	..	+ 27.4	75 29 0.0	+ 2.0
3	17 28	11.1	5.0	29.5	0.5	39	..	400	..	400	..	62.3	342 28 59.1	..	− 19.1	33 35 1.2	+28.1
4	298 6	0.0	22.1	18.2	19.8	34	..	612	..	628	..	62.3	61 49 33.8	..	+ 1 52.5	112 57 47.5	+ 6.9
5	285 8	13.3	6.2	1.5	3.8	35	..	002	..	958	..	62.3	74 47 53.0	..	+ 3 39.3	125 57 53.5	+ 3.0
6	325 58	12.4	5.6	1.3	2.4	31	..	825	..	821	..	62.3	33 57 4.0	..	+ 40.7	85 4 5.9	+ 0.8
7	322 46	12.7	5.2	1.1	3.2	33	..	592	..	588	..	62.3	37 9 31.2	..	+ 45.8	88 16 38.2	+15.4
8	327 12	9.4	2.9	27.5	0.0	34	..	800	..	794	..	62.3	32 43 46.7	..	+ 38.8	83 50 46.7	+ 1.0
9	328 14	5.5	28.5	23.3	25.5	32	..	240	..	206	..	62.3	31 41 2.9	..	+ 37.4	82 48 1.3	+ 0.5
10	49 38	8.1	2.3	26.5	28.3	32	..	380	380	375	..	62.3	310 17 8.4	..	− 1 11.5	1 22 18.1	− 1 3
11	327 56	13.6	6.3	2.0	3.9	35	..	870	..	860	..	62.3	32 0 7.1	..	+ 37.9	83 7 6.2	
12	338 22	10.0	3.6	28.5	29.6	24	..	296	..	236	..	62.3	21 28 29.2	..	+ 23.9	72 35 14.3	− 1.9
13	195 58	13.6	8.8	2.9	3.1	35	..	260	..	274	..	62.3	163 57 58.4	..	− 17.5	67 8 42.1	+ 4.3
14	152 0	7.8	29.4	23.7	26.4	33	454	426	..	430	430	62.3	207 55 21.3	..	+ 32.2	23 10 26.7	− 3.0
15	328 40	14.6	8.5	4.5	5.7	29	..	170	..	060	..	62.3	31 11 50.7	..	+ 36.8	82 18 8.7	+11.0
16	314 56	9 24.2	17.8	14.4	13.9	39	..	..	..	650	690	62.2	45 0 46.4	..	+ 1 0.0	96 8 7.6	+ 4.2
17	312 38	9 22.6	17.8	13.8	14.2	37	..	848	..	895	..	62.2	47 18 18.3	..	+ 1 5.0	98 25 44.5	+ 1.5
18	353 50	9 17.7	12.0	8.0	8.5	36	..	580	..	600	..	62.2	6 5 53.3	..	+ 6.4	57 12 20.9	+22.4
19	301 12	10 9.5	1.4	26.2	29.2	35	..	490	278.	950	..	62.2	48 43 52.3	..	+ 1 38.3	109 51 52.1	
20	34 8	10 8.3	2.8	26.5	29.2	37	..	008	..	010	..	62.2	325 48 19.8	..	− 40.8	16 54 0.2	+ 0.2
21	320 8	10 12.2	4.1	29.6	0.0	33	..	018	..	080	..	62.2	39 49 21.1	..	+ 50.1	90 56 32.4	+ 1.8
22	349 0	10 6.5	29.8	23.5	22.0	31	..	620	..	650	..	62.2	10 54 53.6	..	+ 11.6	62 1 26.4	+21.0
23	309 10	10 5.3	28.3	24.8	25.2	34	..	680	..	695	..	62.2	50 45 40.7	..	+ 1 13.6	101 53 15.5	+ 9.2
24	292 4	10 4.0	27.2	21.2	23.1	33	..	945	..	960	..	62.2	67 51 27.2	..	+ 2 26.9	119 0 15.3	+ 3.3
25	64 38	10 3.2	28.0	23.0	28.1	35	..	500	..	400	..	62.2	295 17 50.8	..	− 2 6.7	346 22 5.3	− 0.9
26	320 16	10 5.7	28.6	25.0	24.5	34	..	000	..	060	..	62.2	39 39 30.7	..	+ 49.9	90 46 41.8	+ 1.9
27	331 12	10 6.8	0.0	24.8	24.5	33	..	150	..	180	..	62.2	28 43 18.0	..	+ 33.0	79 50 12.2	+ 1.6
28	18 50	9 27.3	22.0	16.9	16.6	33	..	840	..	892	..	62.2	341 5 20.9	..	− 20.6	32 11 21.5	+28.4
29	290 46	10 4.2	29.5	23.5	22.5	33	..	500	..	576	..	62.2	69 9 21.9	..	+ 2 37.1	120 18 20.2	+ 5.6
30	335 34	10 8.6	2.3	27.5	29.6	36	..	568	..	580	..	62.2	24 22 13.4	..	+ 27.3	75 29 1.9	+ 3.9
31	326 44	10 4.1	28.1	23.0	24.0	37	..	960	..	965	..	62.2	33 12 30.0	..	+ 39.7	84 19 30.9	− 1.1
32	325 58	13.4	5.7	1.2	0.5	31	..	820	..	900	..	62.2	33 57 4.2	..	+ 40.8	85 4 6.2	+ 1.0
33	34 44	10 8.1	1.3	24.5	24.3	37	..	110	..	170	..	62.2	325 12 20.7	..	− 42.3	16 17 59.6	+ 0.2
34	327 12	10 4.1	28.6	21.0	19.8	35	..	150	..	210	..	62.2	32 43 45.8	..	+ 39.1	83 50 46.1	+ 0.3
35	302 22	10 7.2	29.2	24.5	21.0	34	..	384	..	398	..	62.2	57 33 35.6	..	+ 1 35.7	108 41 32.5	+ 0.5
36	56 54	10 9.1	2.2	26.7	27.7	35	..	632	..	700	..	62.2	303 1 58.4	..	− 1 33.6	354 6 46.0	+20.8
37	56 54	10 9.1	2.2	26.7	27.7	34	..	408	..	500	..	62.2	303 1 40.1	..	− 1 33.6	354 6 27.7	+ 2.5
38	328 14	12.0	7.3	2.0	1.8	31	..	710	..	732	..	62.2	31 41 2.6	..	+ 37.7	82 48 1.5	+ 0.6
39	49 38	10 9.0	3.0	27.9	28.2	32	390	..	418	..	435	62.2	310 17 9.7	..	− 1 12.0	1 22 18.9	− 0.2
40	312 12	10 11.0	4.0	29.0	0.0	32	..	972	..	990	..	62.2	47 43 19.6	..	+ 1 7.1	98 50 47.9	+ 2.6
41	56 54	10 3.5	27.5	22.3	19.8	35	670	..	..	..	715	62.7	303 1 54.0	..	− 1 32.9	354 6 42.3	+19.3
42	56 54	10 3.5	27.5	22.3	19.8	34	..	475	..	510	..	62.7	303 1 35.6	..	− 1 33.0	354 6 23.8	+ 0.8
43	328 14	10 8.3	2.5	27.5	27.5	31	..	920	..	990	..	62.7	31 41 2.4	..	+ 37.4	82 48 1.0	− 0.1
44	49 38	11.3	5.4	0.0	29.5	32	..	065	015	065	..	62.7	310 17 6.5	..	− 1 11.4	1 22 16.3	− 0.7
45	312 12	5.2	29.0	23.3	24.0	33	..	342	..	..	..	62.7	47 43 20.1	..	+ 1 6.6	98 50 47.9	+ 1.8
46	335 44	10 3.8	27.7	22.5	20.0	36	..	..	..	412	..	62.7	24 12 5.4	..	+ 27.2	75 18 53.8	+ 0.3
47	8 24	10 4.5	29.1	24.5	22.6	32	..	760	..	795	..	63.7	351 31 12.6	..	− 9.2	42 37 24.6	− 1.2
48	344 46	10 4.5	29.9	22.8	23.8	39	..	425	..	432	..	63.7	15 10 54.6	..	+ 16.7	66 17 32.5	+ 0.4
49	352 32	9 29.5	24.4	19.0	18.8	33	..	960	..	945	..	63.7	7 23 25.7	..	+ 8.0	58 29 54.9	+ 0.5

No.	Barom.	At. Ther.	Ex. Ther.
	in.	°	°
1	..	..	36.2
2	..	..	35.8
5	30.296	67.0	35.5
8	30.296	66.6	35.8
15	30.326	67.0	33.5
20	30.412	70.0	40.5
29	..	..	39.0
34	..	..	34.0
39	30.416	68.0	32.5
43	..	..	35.0
44	30.324	70.5	35.0

For summary of the elements of reduction see page 3.

No.	Parallax.	Semi-diam.	Defective Illumination.	Sum.
	′ ″	′ ″	′ ″	′ ″
11	− 0.2	...	..	− 0.2
19	−49 50.3	− 15 58.0	..	−1 5 48.3

DATE.	Number.	OBJECT.	Observer.	SECONDS OF TRANSIT OVER WIRES.										CORRECTIONS.			Apparent Right Ascension.	Miscellan'us Corrections.
				I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	Mean wire.	Inst.	Clock appar'nt.	Clock adopted.		
1871.													m. s.	s.	s.	s.	h. m. s.	s.
Nov. 29	1	γ^1 Eridani. . . .	E.	59.0	1.5	3.3	9.5	11.6	13.7	20.1	21.6	24.4	52 11.63	− 1.05	− 6.94	− 7.00	3 52 3.58	− 0.02
	2	Groom. 2320, S. P.	E.	38.8	31.9	27.8	11.3	5.6	0.0	43.8	39.3	32.6	6 5.68	− 3.24	. .	− 7.00	16 5 55.44	− 0.29
	3	γ Tauri	E.	25.4	28.0	29.6	36.0	38.1	40.2	46.5	48.2	50.8	12 38.09	− 0.56	− 7.01	− 7.00	4 12 30.53	+ 0.02
	4	ε Tauri	E.	3.0	5.7	7.4	13.9	16.0	18.0	24.5	26.3	29.0	21 15.98	− 0.50	− 6.99	− 7.00	4 21 8.48	− 0.02
	5	α Tauri	E.	29.2	32.1	33.6	40.0	42.0	44.2	50.7	52.2	54.8	28 42.09	− 0.54	− 7.04	− 7.00	4 28 34.55	+ 0.02
	6	α Columbæ . . .	E.	55.2	58.3	0.1	7.6	10.1	12.3	19.6	21.5	24.9	35 9.96	− 1.46	− 7.01	− 7.00	5 35 1.50	− 0.03
	7	ψ^1 Draconis, S. P. .	E.	. .	. .	33.5	26 8	20.3	13.5	6.8	. .	. .	44 20.18	− 3.84	. .	− 7.00	17 44 9.34	− 0.06
	8	22 Camelopardalis .	E.	. .	. .	38.7	44.5	50.4	56.4	2.0	. .	. .	4 50.40	+ 1.74	. .	− 7.00	6 14 45.14	+ 0.47
	9	δ Ursæ Minoris, S.P.	E.	. .	. .	59.0	23.5	49.0	14.0	39.0	. .	. .	13 48.90	−15.42	. .	− 7.00	18 13 26.48	+ 1.18
	10	51 Cephei	E.	. .	. .	19.0	1.0	42.0	26.0	8.0	. .	. .	39 43.20	+19.02	. .	− 7.00	6 39 55.22	+ 0.72
	11	ε Canis Majoris .	E.	30.1	33.2	35.0	41.9	44.3	46.6	53.5	55.4	58.2	53 44.24	− 1.34	− 6.93	− 7.00	6 53 35.90	− 0.12
	12	δ Geminorum . .	E.	22.4	25.0	26.7	33.3	35.5	37.7	44.5	46.0	48.8	12 35.54	− 0.43	− 6.96	− 7.01	7 12 28.10	− 0.11
Dec. 5	13	Anonymous . .	F.	24.0	26.6	28.2	34.3	36.5	38.5	44.8	46.3	48.8	3 36.44	− 0.55	. .	− 7.94	11 3 27.95	− 1.82
	14	Anonymous . .	F.	39.7	42.2	44.7	52.1	54.5	57.2	4.4	6.4	9.5	12 54.52	− 1.53	. .	− 7.94	11 12 45.05	− 1.56
	15	Moon II, S. . .	F.	7.6	10.2	11.8	18.1	20.2	22.3	28.6	30.1	32.7	4 20.18	− 0.66	. .	− 7.94	12 4 11.58	−64.74
	16	η Virginis . . .	F.	16.3	18.7	20.2	26.4	28.5	30.5	36.5	38.0	40.6	13 28.41	− 0.75	− 7.92	− 7.94	12 13 19.72	− 0.04
	17	β Corvi	F.	33.8	36.6	38.4	44.9	47.2	49.5	56.0	57.8	0.5	27 47.19	− 1.23	− 7.88	− 7.94	12 27 38.02	− 0.10
	18	α Canum Venat. .	F.	52.3	55.6	57.5	5.4	8.0	10.7	18.6	20.5	23.8	50 8.04	+ 0.20	− 7.96	− 7.94	12 50 0.30	+ 0.02
	19	θ Virginis . . .	F.	14.0	16.6	18.2	24.2	26.3	28.5	34.3	35.9	38.5	3 26.28	− 0.85	− 8.00	− 7.94	13 3 17.49	+ 0.02
	20	Polaris, S. P. . .	F.	. .	. .	6.0	40.0	15.0	49.0	22.0	. .	. .	13 14.40	. .	. .	. .	. . . .	. .
6	21	β Corvi	E.	34.2	37.0	38.7	45.4	47.6	49.7	56.4	58.2	0.8	27 47.56	− 1.47	− 7.98	− 7.98	12 27 38.11	− 0.04
	22	12 Canum Venat. .	E.	52.6	55.9	57.8	5.7	8.4	11.0	18.8	21.0	24.3	50 8.39	− 0.05	− 8.02	− 7.98	12 50 0.36	− 0.04
	23	Moon II, S. . .	E.	. .	. .	23.7	25.8	27.9	30.0	32.0	. .	. .	54 27.88	− 1.01	. .	− 7.98	12 54 18.89	−65.62
	24	Polaris, S. P. . .	E.	. .	. .	4.0	37.0	13.0	48.0	21.0	. .	. .	13 12.60	. .	. .	. .	. . . .	. .
	25	α Virginis . . .	E.	21.6	24.4	26.0	32.0	34.2	36.3	42.5	44.0	46.8	18 34.20	− 1.20	− 7.97	− 7.98	13 18 25.02	− 0.03
	26	ζ Virginis . . .	E.	4.9	7.5	9.0	15.0	17.2	19.3	25.5	27.0	29.6	28 17.22	− 0.99	− 7.97	− 7.98	13 28 8.25	− 0.01
	27	Venus II, S. . .	E.	33.3	36.0	37.5	43.8	45.9	47.9	54.0	55.7	58.3	48 45.82	− 1.17	. .	− 7.98	13 48 36.67	− 0.86
7	28	Anonymous . .	H.	32.2	35.5	37.0	44.7	47.2	49.7	57.5	59.3	2.5	19 47.29	− 1.84	. .	− 7.86	11 19 37.59	− 1.57
	29	ν Leonis	H.	18.9	21.6	23.0	29.0	31.2	33.2	39.3	40.9	43.5	30 31.18	− 1.02	− 7.85	− 7.86	11 30 22.30	− 0.05
	30	β Leonis	H.	26.1	28.7	30.3	36.9	39.0	41.0	47.4	49.0	51.6	42 38.89	− 0.73	− 7.88	− 7.86	11 42 30.30	0.00
	31	Polaris, S. P. . .	F.	41.5	53.0	50.5	. .	. .	. .	. .	. .	. .	13 8.50	−44.26	. .	− 8.00	1 13 16.24	− 0.10
8	32	Polaris	F.	. .	. .	52.0	16.0	40.0	29.0	. .	. .	. .	11 40.20	+43.74	. .	− 7.88	1 11 16.06	+ 0.02
	33	θ Ceti. . . .	F.	33.5	36.3	37.5	44.0	46.0	48.0	54.3	55.8	58.6	17 46.00	− 1.12	− 7.83	− 7.88	1 17 37.00	− 0.03
	34	Neptune . . .	F.	. .	. .	. .	58.2	0.3	2.5	6.5	8.0	10.5	21 58.25	− 0.82	. .	− 7.88	1 21 49.55	. .
	35	ο Piscium . . .	F.	34.0	36.6	38.2	44.3	46.5	48.5	54.7	56.3	58.8	38 46.43	− 0.78	− 7.94	− 7.88	1 38 37.77	+ 0.03
	36	β Arietis, (R.) . .	F.	29.2	31.9	33.5	40.0	41.9	44.3	50.9	52.6	55.3	47 42.18	− 0.52	. .	− 7.88	1 47 33.78	− 0.08
	37	α Arietis, (R.) . .	F.	52.2	55.0	56.7	3.3	5.6	7.7	14.3	16.0	18.8	0 5.51	− 0.45	. .	− 7.88	1 59 57.18	− 0.09
	38	ξ^1 Ceti. . . .	F.	9.0	11.6	13.0	19.3	21.4	23.5	29.7	31.3	33.8	6 21.40	− 0.78	− 7.95	− 7.88	2 6 12.74	+ 0.13
	39	ζ Arietis	F.	28.1	30.6	32.3	38.9	41.0	43.3	49.8	51.4	54.0	7 41.04	− 0.52	− 7.93	− 7.87	3 7 32.65	+ 0.02
	40	Danæ	F.	. .	. .	. .	. .	. .	. .	. .	. .	. .	. . .	. .	. .	. .	. . . .	. .
	41	δ Persei	F.	38.6	42.3	44.7	53.8	56.8	59.8	8.9	11.0	14.8	33 56.74	+ 0.26	. .	− 7.87	3 33 49.13	+ 0.04
	42	η Tauri	F.	47.5	50.4	52.0	58.7	0.8	3.1	9.8	11.5	14.3	40 0.90	− 0.46	− 7.86	− 7.87	3 39 52.57	− 0.01
	43	ζ Persei	F.	. .	. .	11.0	13.4	15.7	18.1	23.0	24.7	27.8	46 13.36	− 0.26	− 7.81	− 7.87	3 46 5.23	− 0.07
	44	γ^1 Eridani. . . .	F.	0.0	2.8	4.3	10.6	12.7	14.9	31.2	32.8	35.3	52 12.73	− 1.21	− 7.84	− 7.87	3 52 3.65	+ 0.01
	45	Groom. 2320, S. P.	F.	. .	. .	18.0	12.4	7.0	1.3	55.7	. .	. .	6 6.88	− 3.60	. .	− 7.87	16 5 55.41	+ 0.18
	46	Egeria	F.	8.5	11.6	13.4	20.9	23.4	25.9	33.7	35.5	38.7	21 23.51	− 0.15	. .	− 7.87	4 21 15.49	. .
	47	α Tauri	F.	. .	38.9	41.0	43.0	45.0	47.0	51.6	53.1	55.9	28 43.06	− 0.62	− 7.83	− 7.87	4 28 34.57	− 0.06
	48	Pomona . . .	F.	17.3	20.2	21.7	. .	. .	. .	39.2	40.6	43.0	39 30.33	− 0.59	. .	− 7.86	4 39 21.88	. .

40, 46, 48. Wire A used.
45. Bisections at sets B and D.

Number.	Circle Division.	MICROSCOPE MICROMS.				TELESCOPE MICROMETER.						Zenith Point Correction.	Apparent Zenith Distance, South.	Sympiesometer.	Refraction.	Apparent North Polar Distance.	Miscellan's Corrections.
		V.	VI.	VII.	VIII.	Rev.	1.	2.	3.	4.	5.						
	° ′	r. ″	″	″	″							″	° ′ ″		′ ″	° ′ ″	″
1	307 12	10 4.1	29.3	23.0	24.6	28	. .	918	. .	952	. .	63.7	52 44 46.8	. .	+ 1 21.0	103 52 29.0	+ 0.9
2	72 50	10 0.0	25.0	18.2	19.1	35	. .	480	. .	455	. .	63.7	287 5 48.1	. .	− 3 18.6	338 8 50.7	− 2.4
3	336 22	10 4.1	28.0	22.5	23.5	36	. .	605	. .	640	. .	63.7	23 34 10.7	. .	+ 27.0	74 40 58.9	− 0.8
4	339 56	10 3.3	26.8	21.4	22.1	34	. .	472	. .	478	. .	63.7	19 59 36.6	. .	+ 22.5	71 6 20.3	+ 1.3
5	337 18	10 6.2	0.0	25.7	26.2	36	. .	632	. .	640	. .	63.7	22 38 13.4	. .	+ 25.8	73 45 0.4	+ 1.1
6	286 56	10 7.2	0.1	24.2	25.8	31	. .	378	. .	330	. .	63.7	72 58 51.8	. .	+ 3 19.6	124 8 32.6	+ 1.3
7	68 48	10 0.5	26.0	19.2	20.5	40	. .	145	. .	160	. .	63.7	291 9 0.9	. .	− 2 38.6	342 12 43.5	− 2.4
8	30 24	10 3.3	27.0	21.0	21.2	38	. .	730	. .	810	. .	63.7	329 32 43.1	. .	− 36.3	20 38 28.0	+ 0.3
9	54 24	10 2.0	26.5	21.5	21.8	34	550	. .	460	. .	420	63.7	305 31 36.0	. .	− 1 26.3	356 36 30.9	+ 0.1
10	48 16	10 5.5	0.3	24.5	25.4	38	430	. .	430	. .	435	63.7	311 40 40.4	. .	− 1 9.3	2 45 52.3	− 0.3
11	292 16	8.0	1.9	26.3	26.8	31	. .	550	. .	552	. .	63.7	67 38 56.3	. .	+ 2 29.2	118 47 46.7	+ 0.2
12	343 16	10.0	3.6	27.5	28.2	36	. .	960	. .	010	. .	63.7	16 40 21.6	. .	+ 18.5	67 47 1.3	+ 0.3
13	330 52	9 23.0	15.2	12.5	12.0	40	. .	. .	. .	408	404	64.4	29 4 58.2	. .	+ 35.3	80 11 54.7	−12.3
14	286 38	9 17.5	9.7	5.8	8.8	44	. .	. .	. .	540	544	64.4	73 19 56.0	. .	+ 3 29.5	124 29 46.7	+ 2.2
15	325 40	10 12.2	4.4	0.8	2.4	37	. .	220	558	880	. .	64.4	34 16 33.6	. .	+ 43.3	85 23 38.1	
16	321 6	10 20.3	12.2	8.3	10.0	34	. .	580	. .	570	. .	64.4	38 49 55.6	. .	+ 51.2	89 57 8.0	+ 0.3
17	298 24	10 7.2	29.9	26.0	29.2	38	358	350	. .	. .	. .	64.4	61 32 41.4	. .	+ 1 57.0	112 40 59.6	0.0
18	0 4	10 2.5	29.1	23.0	24.1	39	. .	. .	. .	970	986	64.4	359 53 3.2	. .	− 0.1	50 59 24.3	− 0.4
19	316 12	10 2.5	1.0	24.4	25.6	34	. .	880	. .	790	. .	64.4	43 43 45.2	. .	+ 1 0.8	94 51 7.2	+ 1.5
20	52 22	10 18.2	14.1	8.4	11.2	30	184	162	148	130	114	64.4	307 32 47.8	. .	− 1 22.5	358 37 46.5	+ 0.5
21	298 24	10 5.1	1.0	21.2	20.3	39	. .	092	. .	145	. .	63.8	61 32 48.8	. .	+ 1 51.2	112 41 1.2	+ 1.4
22	0 4	9 27.5	22.3	15.8	15.2	40	. .	510	. .	490	. .	63.8	359 53 3.7	. .	− 0.1	51 59 24.8	− 0.2
23	319 52	27.8	24.5	19.8	21.6	39	775	085	352	760	002	63.8	40 5 5.1	. .	+ 50.7	91 12 17.0	
24	52 24	9 24.8	20.0	14.2	17.0	39	090	. .	100	. .	122	63.8	307 32 40.6	. .	− 1 18.2	358 37 43.6	− 2.6
25	310 34	25.0	21.5	20.2	20.9	35	. .	580	. .	660	. .	63.8	49 21 50.1	. .	+ 1 10.0	100 29 21.3	+ 2.2
26	321 6	9 29.0	25.0	21.0	24.0	32	. .	615	. .	690	. .	63.8	38 49 7.4	. .	+ 48.3	89 56 16.9	+ 1.2
27	312 30	9 10.2	7.3	3.5	3.0	42	808	822	. .	855	900	63.8	47 27 25.2	. .	+ 1 5.2	98 34 51.6	
28	284 56	24.0	18.3	13.6	12.7	43	. .	316	. .	338	. .	61.9	75 1 41.7	. .	+ 3 37.9	126 11 40.8	+ 2.2
29	320 56	20.7	15.5	9.3	12.3	35	. .	994	. .	924	. .	61.9	38 59 46.1	. .	+ 47.9	90 6 55.2	+ 4.2
30	336 20	16.1	11.2	6.4	6.5	36	794	808	. .	823	848	61.9	23 35 55.1	. .	+ 25.9	74 42 42.2	+ 3.3
31																	
32	49 38	9 29.5	25.1	17.6	18.6	32	530	495	490	470	470	62.2	310 17 1.5	. .	− 1 11.4	1 22 11.3	− 2.1
33	312 12	10 8.0	2.0	26.8	26.4	32	. .	278	. .	268	. .	62.2	47 43 21.4	. .	+ 1 6.6	98 50 49.2	+ 1.8
34	327 48	10 8.6	3.6	28.5	28.9	34	. .	. .	. .	844	836	62.2	32 7 47.1	. .	+ 38.0	83 14 46.3	
35	329 34	12.5	6.0	1.1	1.2	36	. .	920	. .	914	. .	62.2	30 22 21.8	. .	+ 35.5	81 29 18.5	+ 1.2
36	198 38	10 13.7	10.1	1.5	2.5	33	. .	860	. .	814	. .	62.2	161 17 36.1	. .	− 20.5	69 49 5.6	− 0.6
37	195 58	10 7.1	2.5	25.2	25.0	35	. .	820	. .	828	. .	62.2	163 57 59.6	. .	− 17.4	67 8 39.0	+ 2.2
38	329 18	10 8.3	1.6	26.4	26.4	37	. .	292	. .	318	. .	62.2	30 38 23.3	. .	+ 35.9	81 45 20.4	+ 0.3
39	341 36	5.1	28.5	21.8	22.3	33	. .	000	. .	970	. .	62.2	18 19 13.2	. .	+ 20.2	69 26 54.6	+ 2.2
40	7 4	3.5	27.7	20.2	21.0	40	. .	396	. .	. .	. .	62.2	352 50 31.0	. .	− 7.7	43 56 44.5	+ 0.1
41	8 24	10 4.7	0.0	23.2	21.9	32	. .	812	. .	800	. .	62.2	351 31 11.2	. .	− 9.1	42 37 23.3	− 1.2
42	344 46	9 29.7	26.8	19.1	19.2	39	. .	712	. .	698	. .	62.2	15 10 53.3	. .	+ 16.5	66 17 31.0	− 1.6
43	352 32	9.1	3.1	28.1	27.5	33	. .	. .	. .	430	446	62.2	7 23 25.3	. .	+ 7.9	58 29 54.4	+ 0.8
44	307 10	10 5.6	29.5	23.3	24.8	31	. .	490	. .	498	. .	62.2	52 44 51.5	. .	+ 1 20.1	103 52 32.8	+ 3.1
45	72 50	9 28.6	23.7	16.1	17.5	35	. .	224	. .	230	. .	62.2	287 5 41.9	. .	− 3 16.0	338 8 47.1	− 2.4
46	356 30	29.0	24.0	17.9	17.5	36	190	250	. .	160	170	62.2	3 23 23.3	. .	+ 3.6	54 29 48.1	0.0
47	337 18	1.5	26.7	20.5	20.1	37	. .	. .	. .	158	148	62.2	22 38 15.0	. .	+ 25.4	73 44 1.6	+ 2.2
48	338 32	10 1.7	26.0	20.5	19.5	39	690	. .	. .	. .	580	62.2	21 22 18.4	. .	+ 23.9	72 29 3.5	− 0.2

No.	Barom.	At. Ther.	Ex. Ther.
	in.	°	°
1	. .	. .	24.0
3	30.194	66.0	23.0
9	. .	. .	23.5
12	30.188	67.0	
14	30.280	59.0	12.5
18	30.292	54.5	11.0
19	30.290	54.5	11.5
21	29.800	65.8	27.5
27	29.820	64.5	32.5
29	29.86	65.0	39.3
34	30.100	67.0	31.5
38	. .	. .	31.0
40	. .	. .	29.0
44	30.122	68.0	28.5

For summary of the elements of reduction see page 3.

No.	Parallax.	Semi-diam.	Defective Illumination.	Sum.
	′ ″	′ ′	′ ″	° ′ ″
15	−31 55.9	− 15 34.7	. .	− 47 30.6
23	−37 11.3	− 15 50.6	. .	− 53 1.9
27	− 9.6	− 12.6	. .	− 22.1
34	− 0.2	. . .	. .	− 0.2

DATE.	Number.	OBJECT.	Observer.	SECONDS OF TRANSIT OVER WIRES.										CORRECTIONS.			Apparent Right Ascension.	Miscellan'us Corrections.
				I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	Mean wire.	Inst.	Clock appar'nt.	Clock adopted.		
1871.													m. s.	s.	s.	s.	h. m. s.	s.
Dec. 8	1	Anonymous	F.	. .	. .	28.0	30.1	32.2	34.5	36.5	. .	. .	39 32.26	— 0.59	. .	— 7.86	4 39 23.81	— 3.44
	2	ι Aurigæ.	F.	33.1	36.0	37.8	45.3	47.9	50.2	57.5	59.4	2.4	48 47.73	— 0.22	— 7.95	— 7.86	4 48 39.65	+ 0.05
	3	11 Orionis	F.	11.0	13.8	15.4	21.7	23.8	25.9	32.2	33.9	36.9	57 23.84	— 0.64	— 7.86	— 7.86	4 57 15.44	+ 0.03
	4	ε Orionis.	F.	39.6	42.3	43.8	49.8	51.9	54.0	0.1	1.6	4.3	29 51.93	— 0.97	— 7.74	— 7.86	5 29 43.10	— 0.13
	5	Cybele.	F.	. .	. .	. .	. .	. .	. .	. .	. .	. .	. . .	. .	. .	. .	. . . .	. .
	6	β Libræ	S.	1.0	3.6	5.2	11.3	13.4	15.5	21.7	23.2	25.9	10 13.42	— 1.05	— 7.62	— 7.56	15 10 4.81	+ 0.06
	7	α Coronæ Borealis.	S.	7.9	10.8	12.5	19.4	21.7	24.2	31.0	32.6	35.4	29 21.72	— 0.39	— 7.59	— 7.55	15 29 13.78	+ 0.04
	8	α Serpentis	S.	51.5	54.0	55.5	1.7	3.8	5.9	12.0	13.7	16.1	38 3.80	— 0.78	— 7.62	— 7.55	15 37 55.47	+ 0.09
9	9	Sun II, S.	S.	36.3	39.4	41.0	47.6	49.7	52.2	58.8	0.3	3.0	5 49.81	— 1.32	. .	— 7.54	17 5 40.95	—70.78
	10	α Lyræ	S.	25.7	29.0	30.9	38.5	41.4	44.0	51.9	53.9	57.2	32 41.39	— 0.11	— 7.46	— 7.52	18 32 33.76	— 0.04
	11	γ Aquilæ.	S.	. .	12.2	14.3	16.4	18.5	20.6	24.8	26.3	28.8	40 16.41	— 0.72	— 7.50	— 7.51	19 40 8.18	+ 0.02
	12	α Aquilæ.	S.	25.8	28.4	29.9	36.3	38.3	40.4	46.7	48.0	50.7	44 38.28	— 0.75	— 7.53	— 7.51	19 44 30.02	+ 0.06
	13	η Tauri	S.	47.0	49.8	51.5	58.2	0.5	2.7	9.3	11.0	13.8	40 0.42	— 0.44	— 7.40	— 7.43	3 40 52.55	— 0.03
	14	ζ Persei	S.	58.4	1.6	3.5	10.7	13.2	15.4	22.5	24.3	27.3	46 12.99	— 0.27	— 7.43	— 7.43	3 46 5.29	— 0.01
	15	Egeria	S.	50.9	53.9	55.9	3.4	6.0	8.7	15.9	17.8	20.9	20 5.93	— 0.17	. .	— 7.43	4 19 58.33	. .
	16	Pomona	S.	. .	. .	. .	. .	. .	. .	40.0	41.8	44.2	38 31.47	— 0.56	. .	— 7.43	4 38 23.48	. .
	17	ι Aurigæ.	S.	32.5	35.6	37.4	44.7	47.3	49.6	56.9	58.6	1.8	48 47.16	— 0.23	— 7.36	— 7.42	4 48 39.51	— 0.10
	18	ε Ursæ Minoris, S.P.	S.	49.9	30.0	19.4	. .	. .	. .	. .	. .	. .	59 18.67	— 8.15	. .	— 7.42	16 59 3.10	+ 0.36
10	19	Anonymous	H.	31.4	34.8	36.5	44.0	46.5	49.0	56.7	58.7	1.8	19 46.60	— 1.77	. .	— 7.29	11 19 37.54	— 1.67
	20	Lacaille 4852	H.	53.5	57.0	59.3	7.6	10.2	13.0	21.4	23.4	26.8	35 10.24	— 1.96	. .	— 7.29	11 35 0.99	— 1.56
	21	β Leonis	H.	25.6	28.3	29.9	36.3	38.4	40.5	46.9	48.4	51.0	42 38.37	— 0.69	— 7.30	— 7.29	11 42 30.39	— 0.01
	22	ο Virginis	H.	35.6	38.1	39.6	45.9	47.8	50.0	56.2	57.8	0.4	58 47.93	— 0.81	— 7.28	— 7.29	11 58 39.83	— 0.03
11	23	Polaris	E.	. .	. .	45.2	11.9	36.7	4.2	26.0	. .	. .	11 36.80	. .	. .	. .	. . . .	. .
	24	η Piscium	E.	32.9	35.6	37.2	43.5	45.6	47.7	54.3	55.7	58.5	24 45.67	— 0.76	— 7.30	— 7.29	1 24 37.62	+ 0.08
	25	ο Piscium	E.	33.5	36.0	37.7	43.8	45.8	47.9	54.0	55.7	58.4	38 45.87	— 0.89	— 7.28	— 7.29	1 38 37.69	— 0.04
	26	β Arietis	E.	28.8	31.4	33.2	39.6	41.9	43.9	50.5	52.2	54.9	47 41.82	— 0.65	— 7.30	— 7.29	1 47 33.88	+ 0.03
12	27	α Coronæ Borealis.	S.	. .	. .	16.7	18.7	21.2	23.4	25.8	. .	. .	29 21.16	— 0.39	— 6.95	— 6.95	15 29 13.82	0.00
	28	α Serpentis	S.	. .	. .	. .	3.3	5.2	7.5	11.6	13.1	15.8	38 3.34	— 0.82	— 7.04	— 6.95	15 37 55.57	+ 0.11
	29	α Scorpii	S.	. .	. .	. .	39.3	41.4	43.8	48.2	49.9	. .	21 39.18	— 1.49	— 6.87	— 6.95	16 21 30.74	— 0.09
13	30	Sun I, N.	S.	52.1	54.8	56.3	3.0	5.2	7.6	14.2	15.4	18.5	21 5.23	— 1.42	. .	— 6.94	17 20 56.87	. .
	31	Sun II, S.	S.	14.2	17.2	18.7	25.8	27.7	30.0	36.5	38.6	41.2	23 27.77	— 1.42	. .	— 6.94	17 23 19.41	. .
	32	α Lyræ	S.	25.0	28.4	30.4	38.2	40.8	43.4	51.2	53.2	56.4	32 40.78	— 0.08	— 6.89	— 6.93	18 32 33.77	— 0.02
	33	β Lyræ	S.	11.2	14.5	16.2	23.5	26.0	28.5	35.7	37.6	40.8	45 26.00	— 0.24	— 6.92	— 6.93	18 45 18.83	+ 0.02
	34	ζ Aquilæ.	S.	24.3	26.9	28.5	34.7	36.9	39.0	45.2	46.9	49.5	59 36.88	— 0.68	— 6.97	— 6.93	18 59 29.27	+ 0.12
	35	δ Draconis	S.	. .	. .	22.7	27.9	33.4	38.6	44.0	. .	. .	12 33.32	+ 1.60	. .	— 6.93	19 12 27.99	+ 0.05
	36	γ Aquilæ.	S.	. .	. .	11.6	13.9	16.0	18.0	20.0	. .	. .	40 15.90	— 0.75	— 6.97	— 6.93	19 40 8.22	+ 0.07
	37	α Aquilæ.	S.	25.3	28.0	29.4	35.6	37.7	39.8	45.9	47.5	50.2	44 37.71	— 0.78	— 6.95	— 6.93	19 44 30.00	+ 0.06
15	38	Polaris	E.	. .	. .	. .	. .	. .	. .	. .	19.5	3.5	11 33.30	. .	. .	. .	. . . .	. .
	39	ο Piscium	E.	32.7	35.4	36.9	43.0	45.0	47.0	53.4	54.9	57.6	38 45.10	— 0.64	— 6.79	— 6.85	1 38 37.61	— 0.09
	40	β Arietis	E.	28.0	30.8	32.4	39.0	41.2	43.4	49.8	51.5	54.3	47 41.16	— 0.41	— 6.91	— 6.85	1 47 33.90	— 0.08
	41	50 Cassiopeæ	E.	58.4	6.4	11.5	31.0	38.0	44.5	3.9	8.7	16.8	52 37.69	+ 2.36	. .	— 6.85	1 52 33.20	— 0.06
	42	α Arietis	E.	51.0	53.9	55.6	2.1	4.5	6.7	13.4	15.0	17.7	0 4.42	— 0.36	— 6.82	— 6.85	1 59 57.21	— 0.02
	43	ξ^1 Ceti.	E.	7.8	10.4	11.9	18.0	20.2	22.2	28.4	30.0	32.6	6 20.17	— 0.64	— 6.89	— 6.85	2 6 12.68	+ 0.08
	44	ι Cassiopeæ	E.	7.2	13.9	17.9	33.4	38.6	43.6	59.3	3.2	9.8	18 38.54	+ 1.64	. .	— 6.85	2 18 33.33	+ 0.25

1. Observed for Pomona.

1, 5, 15, 16. Wire A used.

December 10. Zenith point correction obtained from the mean of the miscellaneous corrections of β Leonis and ο Virginis observed during the year 1870.

Number.	Circle Division.	MICROSCOPE MICROMS.				TELESCOPE MICROMETER.						Zenith Point Correction.	Apparent Zenith Distance, South.	Sympiesometer.	Refraction.	Apparent North Polar Distance.	Miscellan'us Corrections.
		V.	VI.	VII.	VIII.	Rev.	1.	2.	3.	4.	5.						
	° ′	r. ″	″	″	″							″	° ′ ″		′ ″	° ′ ″	″
1	338 32	10 1.7	26.0	20.5	19.5	39	. .	790	. .	840	. .	62.2	21 22 21.0	. .	+ 23.9	72 29 6.1	+ 7.5
2	354 0	9 26.5	19.9	13.9	16.1	36	. .	. .	. .	166	154	62.2	5 55 54.4	. .	+ 6.3	57 2 21.9	+ 2.6
3	336 16	9 27.1	22.0	15.0	16.0	35	. .	666	. .	664	. .	62.2	23 39 47.5	. .	+ 26.8	74 46 35.5	+ 1.8
4	319 46	9 26.5	22.5	15.7	16.9	36	. .	112	. .	138	. .	62.2	40 9 54.8	. .	+ 51.5	91 17 7.5	+ 0.8
5	339 50	7.4	2.0	26.9	26.4	37	. .	860	. .	860	. .	62.2	20 3 57.2	. .	+ 22.3	71 10 40.7	— 0.1
6	312 10	9 16.5	13.7	8.0	6.4	40	735	700	. .	730	670	63.7	47 46 57.5	. .	+ 1 6.8	98 54 25.5	+ 2.9
7	348 12	9 27.1	25.0	18.3	16.4	38	630	620	. .	630	650	63.7	11 44 36.4	. .	+ 12.6	62 51 10.2	+ 1.8
8																	
9	297 58	9 23.2	13.0	8.5	6.8	39	. .	. .	. .	790	850	63.7	61 58 45.3	. .	+ 1 53.1	113 6 59.6	
10	359 42	10 5.5	3.9	27.6	25.7	34	. .	320	. .	340	. .	63.7	0 13 39.3	. .	+ 0.2	51 20 0.7	+ 1.5
11																	
12	329 34	10 13.8	11.7	1.5	3.1	31	965	925	. .	920	965	63.7	30 21 9.3	. .	+ 35.4	81 28 5.9	+ 0.9
13	344 44	10 3.3	28.5	21.9	22.2	31	. .	685	. .	655	. .	63.4	15 10 53.8	. .	+ 17.0	66 17 32.0	— 0.6
14	352 32	10 3.3	28.8	23.0	23.3	33	. .	680	. .	710	. .	63.4	7 23 28.1	. .	+ 8.1	58 29 57.4	+ 3.8
15	356 34	10 7.6	3.3	27.0	26.7	38	035	000	. .	920	940	63.4	3 20 0.9	. .	+ 3.6	54 26 25.7	0.0
16	338 28	10 1.0	27.3	19.5	19.9	37	. .	110	. .	060	. .	63.4	21 25 40.3	. .	+ 24.6	72 32 26.1	— 0.2
17	354 0	10 5.3	29.9	23.8	24.7	35	. .	385	. .	381	. .	63.4	5 55 52.9	. .	+ 6.5	57 2 20.6	+ 1.4
18																	
19	284 54	9 18.1	12.9	4.5	4.6	35	. .	634	. .	610	. .	62.5	75 1 36.8	. .	+ 3 43.1	126 11 41.1	+ 1.7
20	278 48	9 14.1	9.1	0.4	2.5	45	. .	. .	. .	997	940	62.5	81 10 11.9	. .	+ 6 13.2	132 22 46.3	+ 3.2
21	336 20	9 13.0	8.5	1.5	2.7	36	. .	874	. .	911	. .	62.5	23 35 53.1	. .	+ 26.5	74 42 40.8	+ 1.2
22	330 30	9 9.5	4.2	28.8	0.1	38	830	830	. .	840	874	62.5	29 26 19.8	. .	+ 34.2	80 23 15.2	+ 0.7
23	49 38	10 4.3	1.8	26.5	23.7	31	945	. .	980	. .	020	62.6	310 17 0.6	. .	— 1 10.9	1 22 10.9	— 2.1
24	335 44	10 3.4	28.5	22.5	20.2	36	. .	480	. .	510	. .	62.6	24 12 6.8	. .	+ 27.0	75 18 55.0	+ 1.3
25	329 34	7.5	1.6	25.4	27.0	37	. .	158	. .	172	. .	62.6	30 22 21.3	. .	+ 35.3	81 29 17.8	+ 0.4
26	341 14	10 8.5	2.7	25.8	26.3	37	. .	435	. .	405	. .	62.6	18 42 25.7	. .	+ 20.4	69 49 7.3	+ 1.2
27	348 12	10 8.5	6.1	0.1	28.8	38	. .	. .	. .	020	000	62.9	11 44 37.7	. .	+ 12.2	62 51 11.1	+ 1.4
28	327 52	10 10.7	7.0	28.5	29.5	32	. .	. .	. .	180	260	62.9	32 3 9.1	. .	+ 36.0	83 10 6.3	— 0.8
29																	
30	298 10	9 28.2	25.2	21.5	19.5	35	875	890	. .	. .	. .	62.9	61 45 55.0	. .	+ 1 48.0	112 54 4.2	
31	297 38	9 22.5	20.8	11.5	11.1	38	. .	. .	. .	165	215	62.9	62 18 23.0	. .	+ 1 50.5	113 26 34.7	
32	359 42	9.3	7.6	1.6	26.9	34	150	175	. .	165	140	62.9	0 13 39.2	. .	+ 0.2	51 20 0.6	+ 0.3
33	354 14	10 12.1	5.9	1.3	28.0	30	055	060	. .	100	050	62.9	5 40 36.9	. .	+ 5.7	56 47 3.8	+ 2.0
34	334 42	3.8	2.4	27.6	23.7	30	680	660	. .	710	710	62.9	25 12 41.3	. .	+ 27.2	76 19 29.7	+ 0.8
35	28 28	4.2	4.8	28.1	24.0	35	280	315	. .	325	290	62.9	331 27 52.9	. .	— 31.4	22 33 42.7	— 1.5
36	331 20	6.2	6.8	. .	27.4	.	. .	. .	. .	465	490	62.9	28 34 56.9	. .	+ 31.5	79 41 49.6	+ 0.2
37	329 34	8.8	7.3	1.3	28.3	32	280	350	. .	395	360	62.9	30 21 11.1	. .	+ 33.8	81 28 6.1	+ 0.4
38	49 38	10 8.0	3.5	27.4	27.0	31	. .	. .	. .	720	695	63.7	310 16 59.8	. .	— 1 13.2	1 22 7.8	— 3.9
39	329 34	9 28.5	24.3	16.3	14.6	37	. .	578	. .	635	. .	63.7	30 22 19.7	. .	+ 36.4	81 29 17.3	— 0.3
40	341 14	10 2.5	27.7	20.7	20.5	37	. .	540	. .	600	. .	63.7	18 42 23.6	. .	+ 21.1	69 49 5.9	— 0.2
41	32 50	9 26.8	23.8	15.1	15.0	36	. .	765	. .	830	. .	63.7	327 6 7.5	. .	— 40.2	18 11 48.5	— 1.8
42	343 54	10 0.7	26.9	19.4	18.9	35	. .	940	. .	963	. .	63.7	16 1 57.4	. .	+ 17.9	67 8 36.5	— 0.2
43	329 18	10 3.8	29.4	22.8	23.4	37	. .	275	. .	282	. .	63.7	30 38 21.1	. .	+ 36.9	81 45 19.2	— 1.2
44	27 52	10 1.8	26.7	19.0	19.8	38	. .	160	. .	175	. .	63.7	332 4 32.4	. .	— 33.0	13 10 20.6	— 1.9

No.	Barom.	At. Ther.	Ex. Ther.
	in.	°	°
3	30.120	68.5	28.0
6	30.294	64.5	34.2
9	. .	. .	36.0
10	30.300	66.0	37.0
12	. .	. .	36.5
13	30.404	68.0	21.5
14	30.400	68.5	21.0
15	. .	. .	20.5
17	. .	. .	21.0
19	. .	. .	31.0
21	30.051	65.0	31.0
22	. .	. .	30.0
24	29.864	67.0	31.0
28	29.811	68.5	42.0
30	29.784	68.0	46.0
32	29.775	68.5	50.0
34	. .	. .	50.5
35	. .	. .	51.0
37	29.800	67.0	50.5
39	30.072	68.0	18.5

For summary of the elements of reduction see page 3.

No.	Parallax.	Semi-diam.	Defective Illumination.	Sum.
	′ ″	′ ″	′ ″	′ ″
9	— 7.9	— 16 15.9	. .	— 16 23.8
30	— 7.9	+ 16 15.2	. .	+ 16 7.3
31	— 8.0	— 16 15.2	. .	— 16 23.2

DATE.	Number.	OBJECT.	Observer.	SECONDS OF TRANSIT OVER WIRES.										CORRECTIONS.			Apparent Right Ascension.	Miscellan'us ections.
				I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	Mean wire.	Inst.	Clock appar'nt.	Clock adopted.		
1871.													m. s.	s.	s.	s.	h. m. s.	s.
Dec. 15	1	5 Ursæ Minoris, S.P.	E.	. .	. .	15.0	6.6	57.9	. .	. .	. .	. .	27 57.88	− 5.02	. .	− 6.85	14 27 46.01	+ 0.22
	2	γ Ceti.	E.	35.3	37.9	39.4	45.5	47.5	49.6	55.7	57.2	59.8	36 47.54	− 0.74	− 6.86	− 6.85	2 36 39.95	+ 0.01
	3	β Ursæ Minoris, S.P.	E.	. .	. .	29.6	21.7	14.3	6.7	58.8	. .	. .	51 14.22	− 4.63	. .	− 6.85	14 51 2.74	+ 0.21
	4	α Ceti.	E.	30.5	33.0	34.7	40.8	42.9	44.9	51.0	52.5	55.0	55 42.81	− 0.72	− 6.85	− 6.85	2 55 35.24	+ 0.02
	5	48 Cephei	E.	. .	. .	56.2	5.7	15.0	24.2	33.2	. .	. .	4 14.86	+ 3.81	. .	− 6.85	3 4 11.82	+ 0.08
	6	Egeria	E.	. .	. .	. .	. .	. .	. .	. .	. .	. .	. . .	. .	. .	. .	. . . .	. .
16	7	θ Aquarii. . . .	F.	58.5	1.1	2.7	8.9	10.8	12.9	19.0	20.7	23.3	10 10.88	− 1.06	− 6.86	− 6.79	22 10 3.03	+ 0.09
	8	Moon I, S.. . .	F.	2.5	5.2	6.9	13.4	15.5	17.7	24.4	25.8	28.5	14 15.54	− 1.24	. .	− 6.79	22 14 7.51	+69.61
	9	η Aquarii . . .	F.	40.7	43.0	44.7	50.7	52.9	54.9	0.9	2.5	5.0	28 52.81	− 0.92	− 6.78	− 6.79	22 28 45.10	+ 0.02
	10	ζ Pegasi	F.	58.2	0.8	2.4	8.6	10.6	12.7	18.9	20.4	23.0	35 10.62	− 0.70	− 6.76	− 6.79	22 35 3.13	+ 0.03
	11	Polaris	F.	. .	. .	. .	. .	. .	. .	. .	15.0	. .	11 30.20	. .	. .	. .	. . . .	. .
	12	Neptune . . .	F.	24.3	26.7	28.4	34.5	36.6	38.6	44.8	46.2	49.0	21 36.57	− 0.77	. .	− 6.79	1 21 29.01	. .
	13	ο Piscium . . .	F.	32.8	35.3	37.0	43.0	45.0	47.2	53.3	55.0	57.6	38 45.13	− 0.73	− 6.74	− 6.79	1 38 37.61	− 0.08
	14	η Tauri	F.	46.5	49.3	51.0	57.6	59.8	2.0	8.9	10.3	13.0	39 59.82	− 0.42	− 6.80	− 6.79	3 39 52.61	+ 0.01
18	15	Moon I. . . .	Ha.	56.6	59.3	0.8	7.1	9.2	11.3	17.6	19.3	21.7	0 9.21	− 1.10	. .	− 6.76	0 0 1.35	+64.76
	16	β Ceti.	Ha.	4.2	6.9	8.6	15.0	17.1	19.4	25.8	27.4	30.0	37 17.16	− 1.37	− 6.78	− 6.76	0 37 9.03	+ 0.07
	17	32^1 Camelopard., S. P.	Ha.	. .	. .	0.3	40.3	20.3	0.4	41.5	. .	. .	48 20.56	−11.79	. .	− 6.76	12 48 2.01	− 7.69
	18	32^2 Camelopard., S. P.	Ha.	. .	. .	7.6	47.6	28.3	8.4	47.8	. .	. .	48 27.94	−11.79	. .	− 6.76	12 48 9.39	− 0.31
	19	ε Piscium . . .	Ha.	12.6	15.2	16.7	22.9	24.9	27.0	33.2	34.7	37.3	56 24.94	− 0.85	− 6.76	− 6.76	0 56 17.33	+ 0.02
	20	Polaris	Ha.	. .	. .	36.5	5.0	29.0	54.0	21.0	. .	. .	11 29.10	. .	. .	. .	. . . .	. .
	21	θ^1 Ceti.	Ha.	32.5	35.0	36.6	42.8	44.8	46.9	53.2	54.7	57.2	17 44.86	− 1.17	− 6.73	− 6.76	1 17 36.93	− 0.01
	22	38 Cassiopeæ. . .	Ha.	. .	. .	37.2	43.0	48.9	54.9	0.7	. .	. .	21 48.94	+ 1.96	. .	− 6.76	1 21 44.14	+ 0.03
	23	η Piscium . . .	Ha.	32.5	35.0	36.6	42.9	45.0	47.2	53.4	55.0	57.6	24 45.02	− 0.70	− 6.77	− 6.76	1 24 37.56	+ 0.08
	24	ο Piscium . . .	Ha.	32.8	35.4	37.0	43.1	45.3	47.3	53.5	55.0	57.7	38 45.23	− 0.83	− 6.75	− 6.76	1 38 37.64	− 0.04
	25	β Arietis	Ha.	28.0	30.9	32.4	38.9	41.0	43.3	49.9	51.5	54.2	47 41.12	− 0.58	− 6.72	− 6.76	1 47 33.78	− 0.02
	26	50 Cassiopeæ. . .	Ha.	. .	. .	24.3	31.0	37.8	44.2	50.8	. .	. .	52 37.62	+ 2.33	. .	− 6.76	1 52 33.19	− 0.19
	27	α Arietis	Ha.	. .	. .	. .	2.5	4.5	6.7	13.4	15.0	17.8	0 4.53	− 0.52	− 6.79	− 6.76	1 59 57.25	+ 0.04
	28	ξ^1 Ceti.	Ha.	7.9	10.4	11.9	18.2	20.2	22.3	28.6	30.0	32.6	6 20.23	− 0.83	− 6.78	− 6.76	2 6 12.64	+ 0.06
	29	ι Cassiopeæ. . .	Ha.	7.2	13.9	17.7	33.0	38.5	43.6	59.3	3.0	9.7	18 38.43	+ 1.56	. .	− 6.76	2 18 33.23	+ 0.23
	30	5 Ursæ Minoris, S.P.	Ha.	. .	. .	15.9	6.8	58.4	50.2	41.2	. .	. .	27 58.50	− 5.39	. .	− 6.76	14 27 46.35	+ 0.36
20	31	Polaris	F.	. .	. .	22.5	54.0	19.0	43.5	6.0	. .	. .	11 16.98	. .	. .	. .	. . . .	. .
	32	Moon I. . . .	F.	42.3	44.8	46.3	52.6	54.8	56.9	3.0	4.6	7.2	35 54.72	− 0.59	. .	− 6.86	1 35 47.27	+62.93
	33	β Arietis	F.	27.8	29.5	32.2	38.6	40.9	43.0	49.9	51.1	53.9	47 40.88	− 0.22	− 6.86	− 6.86	1 47 33.80	+ 0.02
	34	α Arietis	F.	53.7	55.4	59.7	2.0	4.2	6.5	8.6	13.0	14.7	0 4.20	− 0.15	− 6.85	− 6.86	1 59 57.19	0.00
	35	α Draconis . . .	S.	. .	. .	. .	. .	. .	. .	17.3	21.0	27.3	0 58.10	+ 2.02	. .	− 6.83	14 0 53.29	− 0.08
	36	α Bootis	S.	41.7	44.3	46.0	52.6	54.8	56.8	3.4	5.0	7.6	9 54.69	− 0.25	− 6.83	− 6.83	14 9 47.61	0.00
	37	ε Bootis	S.	. .	. .	. .	. .	. .	. .	38.0	39.6	42.5	39 28.70	− 0.05	− 6.77	− 6.83	14 39 21.82	− 0.08
	38	α^2 Libræ	S.	. .	49.3	51.5	53.6	55.7	58.0	2.0	3.6	6.4	43 53.60	− 1.04	− 6.73	− 6.83	14 43 45.73	− 0.11
	39	β Ursæ Minoris. .	S.	19.6	29.5	35.0	. .	. .	. .	. .	. .	. .	51 5.75	+ 3.96	. .	− 6.83	14 51 2.88	+ 0.03
	40	β Bootis	S.	55.7	19.0	1.0	. .	. .	. .	. .	. .	. .	57 11.84	+ 0.38	. .	− 6.83	14 57 5.39	− 0.01
	41	u Bootis	S.	28.2	31.3	33.3	41.0	43.6	46.3	54.1	56.0	59.3	19 43.68	+ 0.27	− 6.74	− 6.83	15 19 37.12	− 0.10
	42	α Coronæ Borealis .	S.	7.2	10.0	11.6	18.6	20.9	23.0	30.0	31.9	34.8	29 20.89	− 0.06	− 6.83	− 6.83	15 29 14.00	0.00
	43	ε Serpentis . . .	S.	19.0	21.7	23.0	29.3	31.4	33.5	39.5	41.2	43.7	44 31.37	− 0.60	− 6.79	− 6.83	15 44 23.94	− 0.04
21	44	Sun I	S.	19.8	23.2	24.6	31.3	33.4	35.6	42.6	44.3	47.0	55 33.53	− 1.23	. .	− 6.84	17 55 25.46	. .
	45	Sun II	S.	42.7	45.6	47.2	54.0	56.2	58.4	5.0	6.6	9.5	57 56.13	− 1.23	. .	− 6.84	17 57 48.06	. .
	46	ζ Aquilæ	S.	24.0	26.6	28.2	34.6	36.6	38.7	44.9	46.6	49.2	59 36.60	− 0.40	− 6.95	− 6.84	18 59 29.36	+ 0.19
	47	Mercury, (center).	S.	18.6	21.0	22.6	29.4	31.6	33.9	40.5	42.2	44.8	19 31.62	− 1.22	. .	− 6.84	19 19 23.56	. .
	48	γ Aquilæ	S.	. .	. .	11.2	13.4	15.5	17.6	19.8	. .	. .	40 15.50	− 0.48	− 6.85	− 6.84	19 40 8.18	+ 0.04
	49	α Aquilæ	S.	25.0	27.4	29.0	35.2	37.3	39.4	45.8	47.0	49.7	44 37.31	− 0.52	− 6.81	− 6.84	19 44 29.95	+ 0.01
	50	β Aquilæ	S.	. .	. .	. .	. .	4.6	10.9	14.8	16.4	19.0	49 6.67	− 0.57	− 6.86	− 6.84	19 48 59.26	+ 0.05
	51	Polaris	S.	. .	. .	5.2	1.7	44.5	10.0	. .	. .	. .	11 18.00	. .	. .	. .	. . . .	. .
	52	38 Cassiopeæ. . .	S.	. .	. .	. .	47.6	54.0	59.9	11.3	16.2	23.4	21 48.15	+ 2.71	. .	− 6.85	1 21 44.01	+ 0.03
	53	η Piscium . . .	S.	32.1	34.9	36.5	42.7	44.8	46.8	53.3	54.9	57.5	24 44.83	− 0.39	− 6.92	− 6.85	1 24 37.59	+ 0.14
	54	ο Piscium . . .	S.	32.5	35.0	36.9	42.9	45.0	47.0	53.2	54.9	57.4	38 44.98	− 0.53	− 6.83	− 6.85	1 38 37.60	− 0.05
	55	β Arietis	S.	27.6	30.5	32.4	38.8	41.0	43.2	49.7	51.4	54.0	47 40.96	− 0.25	− 6.92	− 6.85	1 47 33.86	+ 0.09

1. Bisections at wires C_3 and C_1.
3, 8. Bisections at sets B and D.
December 18, 19, 20, 21. Microscopes out of focus.
December 21 and during the day-time of December 27 zenith-point corrections were obtained from the mean of the miscellaneous corrections of those stars that were observed on other days during the year.

Number.	Circle Division.	MICROSCOPE MICROMS.				TELESCOPE MICROMETER.						Zenith Point Correction.	Apparent Zenith Distance, South.	Sympiesometer.	Refraction.	Apparent North Polar Distance.	Miscellan'us Corrections
		V.	VI.	VII.	VIII.	Rev.	1.	2.	3.	4.	5.						
-	° ′	r. ″	″	″	″							″	° ′ ″		′ ″	° ′ ″	″
1	64 44	10 3.2	0.7	23.8	26.0	34	225	230	. .	. .	. .	63.7	295 11 35.2	. .	− 2 12.1	346 15 44.3	+ 0.4
2	323 44	10 2.7	28.3	21.6	21.3	32	. .	995	. .	068	. .	63.7	36 11 14.4	. .	+ 45.6	87 18 21.2	− 0.1
3	66 20	9 29.0	26.2	20.5	19.7	38	. .	438	. .	450	. .	63.7	293 36 35.3	. .	− 2 22.2	344 40 34.3	+ 0.4
4	324 38	10 3.0	28.7	23.5	22.5	35	. .	095	. .	055	. .	63.7	35 17 46.8	. .	+ 44.1	86 24 52.1	− 1.3
5	38 18	10 6.5	4.0	26.5	25.8	38	. .	485	. .	460	. .	63.7	321 38 44.2	. .	− 49.3	12 44.16.1	+ 0.5
6	356 50	10 2.6	27.2	21.0	19.8	34	. .	488	. .	532	. .	63.7	3 7 36.5	. .	+ 3.4	54 12 1.1	0.0
7	312 38	9 27.9	22.5	16.7	16.2	35	. .	922	. .	932	. .	64.5	47 17 54.5	. .	+ 1 6.0	98 25 21.7	+ 2.0
8	303 52	10 5.8	29.8	23.3	25.2	33	. .	750	575	400	. .	64.5	56 3 26.1	. .	+ 1 30.3	107 11 17.6	
9	320 16	9 29.2	23.7	17.5	17.1	34	. .	440	. .	410	. .	64.5	39 39 32.5	. .	+ 50.5	90 46 44.2	+ 2.4
10	331 12	10 11.0	6.4	0.7	29.4	32	808	780	. .	806	804	64.5	28 43 20.2	. .	+ 33.4	79 50 14.8	+ 2.4
11																	
12	327 46	29.8	23.8	16.7	18.0	33	. .	782	. .	758	. .	64.5	32 9 22.7	. .	+ 38.6	83 16 22.5	
13	329 34	6.6	0.1	25.0	24.3	37	. .	162	. .	150	. .	64.5	30 22 21.6	. .	+ 35.9	81 29 18.7	+ 1.1
14	344 44	10 2.9	28.2	21.0	20.8	31	. .	674	. .	664	. .	64.5	15 10 54.2	. .	+ 16.6	66 17 32.0	− 0.3
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52																	
53	335 44	10 7.8	27.3	18.8	17.5	36	. .	255	. .	255	. .	64.9	24 12 4.6	. .	+ 29.2	75 18 55.0	+ 1.1
54	329 34	10 8.1	27.4	17.3	18.8	37	. .	182	. .	252	. .	64.9	30 22 19.4	. .	+ 38.1	81 29 18.7	+ 0.8
55	341 14	9.2	28.7	17.7	20.0	37	. .	445	. .	490	. .	64.9	18 42 24.4	. .	+ 22.0	69 49 7.6	+ 0.5

No.	Barom.	At. Ther.	Ex. Ther.
·	in.	°	°
1	. .	. .	17.5
8	30.140	67.0	29.5
10	. .	. .	29.0
12	30.187	67.0	26.5
14	30.180	67.0	28.0
15	30.196	68.0	42.5
33	30.016	64.0	7.0
54	. .	. .	5.5

For summary of the elements of reduction see page 3.

No.	Parallax.	Semi-diam.	Defective Illumination.	Sum.
	′ ″	′ ″	′ ″	° ′ ″
8	−48 43.0	− 16 4.9	. .	− 1 4 47.9
12	− 0.2	. .	. .	− 0.2

DATE.	Number.	OBJECT.	Observer.	SECONDS OF TRANSIT OVER WIRES.										CORRECTIONS.			Apparent Right Ascension.	Miscellan'us Corrections.
				I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	Mean wire.	Inst.	Clock appar'nt.	Clock adopted.		
1871.													m. s.	s.	s.	s.	h. m. s.	s.
Dec. 21	1	α Arietis	S.	50.9	53.7	55.4	2.0	4.3	6.4	13.2	14.9	17.4	0 4.24	− 0.19	− 6.86	− 6.85	1 59 57.20	+ 0.02
	2	ξ^1 Ceti.	S.	7.7	10.2	11.7	18.0	20.0	22.1	28.4	30.0	32.4	6 20.06	− 0.53	− 6.93	− 6.85	2 6 12.68	+ 0.12
	3	Moon I, S. . . .	S.	44.3	47.0	48.6	55.0	57.1	59.2	5.5	7.1	9.7	22 57.08	− 0.50	. .	− 6.85	2 22 49.73	+63.08
	4	α Ceti.	S.	30.4	33.0	34.6	40.6	42.6	44.7	50.8	52.4	55.0	55 42.68	− 0.63	− 6.83	− 6.85	2 55 35.20	0.00
25	5	δ Orionis. . . .	S.	23.9	26.4	27.9	34.1	36.1	38.2	44.4	45.9	48.4	25 36.14	− 0.79	− 7.02	− 7.02	5 25 28.33	− 0.03
	6	ε Orionis. . . .	S.	38.9	41.5	43.0	49.3	51.2	53.3	59.4	1.0	3.6	29 51.24	− 0.80	− 7.04	− 7.02	5 29 43.42	+ 0.01
	7	Moon I . . .	S.	58.3	1.3	2.9	9.8	12.2	14.4	21.2	23.0	25.9	43 12.11	− 0.40	. .	− 7.02	5 43 4.69	−66.83
	8	δ Ursæ Minoris, S.P.	S.	58.0	26.5	2.0	51.0	. .	. .	. .	. .	. .	13 42.55	−14.40	. .	− 7.02	18 13 21.13	− 0.16
	9	γ Geminorum . .	S.	13.9	16.7	18.3	24.5	26.9	29.0	35.3	36.8	39.6	30 26.78	− 0.54	− 7.01	− 7.01	6 30 19.23	− 0.03
	10	51 Cephei	S.	37.0	31.5	3.5	. .	. .	. .	. .	. .	. .	39 52.45	+16.04	. .	− 7.01	6 40 1.48	+ 0.15
26	11	ζ Ophiuchi . . .	E.	. .	. .	7.3	9.5	11.5	13.6	15.7	. .	. .	30 11.52	− 0.26	− 6.91	− 6.80	16 30 4.46	+ 0.11
	12	η Herculis . . .	E.	19.2	22.5	24.6	32.4	35.0	37.7	45.5	47.5	50.9	38 35.03	− 0.05	− 6.75	− 6.80	16 38 28.18	− 0.04
	13	κ Ophiuchi . . .	E.	28.8	31.6	33.0	39.2	41.3	43.5	49.6	51.0	53.7	51 41.30	− 0.16	− 6.79	− 6.80	16 51 34.34	+ 0.03
	14	α Herculis . . .	E.	40.7	43.4	45.0	51.2	53.4	55.5	1.9	3.4	6.2	8 53.41	− 0.15	− 6.84	− 6.80	17 8 46.46	+ 0.06
	15	α Ophiuchi . . .	E.	51.6	54.3	55.8	2.2	4.2	6.4	12.6	14.3	16.9	29 4.26	− 0.15	− 6.80	− 6.79	17 28 57.30	+ 0.04
	16	δ Ursæ Minoris. .	E.	. .	. .	17.0	50.0	24.5	0.0	32.0	. .	. .	13 24.70	+ 2.86	. .	. .	. . . .	. .
27	17	Sun I, N. . . .	E.	. .	. .	. .	. .	. .	. .	. .	. .	. .	. . .	. .	. .	. .	. . . .	. .
	18	Sun II, S. . . .	E.	20.6	23.5	25.3	32.0	34.0	36.5	43.0	45.0	47.5	25 34.16	− 0.32	. .	− 6.78	18 25 27.05	. .
	19	Mercury, (center).	E.	. .	. .	27.7	29.9	32.0	34.2	36.4	. .	. .	14 32.04	− 0.33	. .	− 6.78	19 14 24.94	+71.17
	20	γ Aquilæ. . . .	E.	. .	. .	. .	. .	. .	. .	23.3	24.9	27.4	40 15.00	− 0.16	− 6.67	− 6.77	19 40 8.07	− 0.07
	21	α Aquilæ. . . .	E.	24.4	27.0	28.6	34.8	36.9	38.9	45.0	46.6	49.2	44 36.92	− 0.17	− 6.76	− 6.77	19 44 29.98	+ 0.03
	22	β Aquilæ. . . .	E.	53.8	56.4	2.2	4.0	6.2	8.3	10.4	16.0	18.6	49 6.21	− 0.18	− 6.78	− 6.77	19 48 59.26	+ 0.04
	23	α Cygni	E.	51.0	54.8	56.9	5.6	8.5	11.4	20.0	22.0	25.7	37 8.43	+ 0.02	. .	− 6.76	20 37 1.69	− 0.07
	24	β Ursæ Minoris, S.P.	E.	. .	. .	. .	. .	. .	. .	. .	. .	. .	. . .	. .	. .	. .	. . . .	. .
	25	α Ceti.	E.	29.5	32.0	33.6	39.8	41.9	44.0	50.0	51.5	54.0	55 41.81	+ 0.12	− 6.74	− 6.71	2 55 35.22	+ 0.05
	26	48 Cephei	E.	. .	. .	8.8	17.8	27.0	36.4	54.8	1.7	13.0	4 17.76	+ 0.51	. .	− 6.71	3 4 11.56	+ 0.34
	27	ζ Arietis	E.	26.0	28.7	30.5	37.0	39.2	41.4	48.0	49.6	52.3	7 39.19	+ 0.14	− 6.77	− 6.71	3 7 32.62	+ 0.02
	28	α Persei	E.	59.0	3.2	5.5	15.0	18.0	21.2	30.7	33.1	36.9	15 18.07	+ 0.21	. .	− 6.70	3 15 11.68	+ 0.13
	29	γ^2 Ursæ Minoris, S.P.	E.	. .	. .	14.5	7.6	1.0	54.8	48.0	. .	. .	21 1.18	− 0.19	. .	− 6.70	15 20 53.29	− 0.66
	30	δ Persei	E.	37.6	41.5	43.7	52.8	55.8	58.8	7.7	10.0	13.9	33 55.76	+ 0.21	. .	− 6.70	3 33 49.27	+ 0.32
	31	η Tauri	E.	45.7	48.5	50.3	57.0	59.3	1.5	8.2	9.8	12.6	39 59.21	+ 0.15	− 6.76	− 6.70	3 39 52.66	+ 0.06
	32	ζ Persei	E.	57.6	0.5	2.2	9.5	11.9	14.4	21.5	23.3	26.4	46 11.92	+ 0.16	− 6.77	− 6.70	3 46 5.38	+ 0.06
	33	γ^1 Eridani. . . .	E.	57.6	0.3	1.9	8.3	10.3	12.4	18.8	20.4	23.0	52 10.33	+ 0.09	− 6.75	− 6.70	3 52 3.72	+ 0.09
	34	Groom. 2320, S. P.	E.	. .	. .	14.0	8.6	3.0	57.4	51.9	. .	. .	6 2.98	− 0.13	. .	− 6.70	16 5 56.15	+ 0.43
	35	γ Tauri	E.	24.5	27.1	28.8	35.0	37.1	39.2	45.7	47.3	50.0	12 37.19	+ 0.13	− 6.65	− 6.70	4 12 30.62	− 0.04
	36	ε Tauri	E.	2.2	5.0	6.6	13.1	15.3	17.4	24.0	25.6	28.3	21 15.28	+ 0.14	− 6.75	− 6.69	4 21 8.73	+ 0.05
	37	α Tauri	E.	28.5	31.3	32.8	39.0	41.2	43.3	49.7	51.4	54.0	28 41.24	+ 0.14	− 6.68	− 6.69	4 28 34.69	− 0.03
	38	α Aurigæ. . . .	E.	3.3	7.0	9.3	17.9	21.0	23.8	32.8	35.0	38.3	7 20.93	+ 0.20	. .	− 6.69	5 7 14.44	− 0.05
	39	β Orionis. . . .	E.	. .	. .	25.7	28.0	30.0	32.0	34.5	. .	. .	8 30.04	+ 0.10	− 6.60	− 6.69	5 8 23.45	− 0.09
	40	β Tauri	E.	5.0	7.8	9.6	16.4	18.8	21.1	28.0	29.8	32.7	18 18.80	+ 0.16	− 6.71	− 6.69	5 18 12.27	0.00
	41	α Leporis. . . .	E.	59.0	1.9	3.5	9.9	12.1	14.2	20.6	22.3	25.0	27 12.06	+ 0.08	− 6.52	− 6.68	5 27 5.46	− 0.20
	42	ε Orionis. . . .	E.	37.9	40.4	41.8	47.9	50.0	52.0	58.0	59.6	2.2	29 49.98	+ 0.11	− 6.68	− 6.68	5 29 43.41	− 0.01
	43	α Columbæ . . .	E.	53.5	56.6	58.5	5.8	8.5	10.9	18.4	20.1	23.3	35 8.40	+ 0.06	− 6.71	− 6.68	5 35 1.78	− 0.01
	44	δ Ursæ Minoris, S.P.	E.	. .	. .	37.5	3.5	29.5	. .	. .	. .	. .	13 28.97	− 1.44	. .	− 6.68	18 13 20.85	− 0.25
	45	γ Geminorum . .	E.	12.9	15.7	17.5	23.6	25.7	27.8	34.3	36.0	38.6	30 25.79	+ 0.14	− 6.67	− 6.67	6 30 19.26	− 0.03
	46	51 Cephei	E.	. .	. .	41.0	25.0	6.0	49.5	31.0	. .	. .	40 6.50	+ 2.02	. .	− 6.67	6 40 1.85	+ 0.11
	47	α^2 Geminorum . .	E.	18.0	21.0	22.8	30.0	32.5	35.0	42.3	44.0	47.0	26 32.51	+ 0.16	− 6.67	− 6.67	7 26 26.00	+ 0.24
	48	Moon II, N. . .	E.	45.8	48.7	50.5	57.3	59.6	1.9	8.8	10.4	13.4	32 59.60	+ 0.15	. .	− 6.67	7 32 53.08	−67.22
	49	β Geminorum . .	E.	21.5	24.5	26.2	33.2	35.5	37.8	34.8	36.6	39.4	37 35.50	+ 0.16	− 6.63	− 6.66	7 37 29.00	− 0.06
	50	φ Geminorum . .	E.	32.5	35.4	37.0	43.8	46.2	48.4	55.4	57.0	0.2	45 46.21	+ 0.15	− 6.54	− 6.66	7 45 39.70	− 0.20
	51	Venus II . . .	F.	55.4	58.1	59.6	6.0	8.2	10.3	16.6	18.2	21.0	17 8.16	+ 0.15	. .	− 6.45	15 17 1.86	− 0.71
	52	α Coronæ Borealis .	F.	6.6	9.5	11.2	18.1	20.5	22.7	29.6	31.2	34.0	29 20.38	+ 0.25	− 6.45	− 6.45	15 29 14.18	0.00
	53	η Herculis . . .	F.	18.6	21.9	23.8	31.8	34.5	37.0	44.9	46.9	50.2	38 34.40	+ 0.30	− 6.45	− 6.45	16 38 28.25	+ 0.01

17, 18. North polar distance seems wrong; cannot account for it.
26. Bisections at wires C_3 and D_1.
29. Bisections at wires C_5 and C_1.
39. Bisections at wires D_1 and VI.

Number.	Circle Division.	MICROSCOPE MICROMS.				TELESCOPE MICROMETER.						Zenith Point Correction.	Apparent Zenith Distance, South.	Sympiesometer.	Refraction.	Apparent North Polar Distance.	Miscellan'us Corrections.
		V.	VI.	VII.	VIII.	Rev.	1.	2.	3.	4.	5.						
	° ′	r. ″	″	″	″							″	° ′ ″		′ ″	° ′ ″	″
1	343 54	7.3	27.5	16.8	17.5	35	. .	840	. .	850	. .	64.9	16 1 57.8	. .	+ 18.7	67 8 37.7	+ 1.0
2	329 18	9.0	29.3	20.2	20.0	37	. .	160	. .	210	. .	64.9	30 38 20.6	. .	+ 38.5	81 45 20.3	— 0.4
3	330 44	10.8	1.2	21.8	21.2	40	. .	280	085	910	. .	64.9	29 13 23.2	. .	+ 36.4	80 20 20.8	
4	324 38	6.7	26.0	16.1	17.2	35	. .	095	. .	125	. .	64.9	35 17 45.6	. .	+ 46.0	86 24 52.8	— 1.2
5																	
6																	
7																	
8																	
9																	
10																	
11	310 46	8.8	2.6	19.7	18.9	39	. .	. .	. .	232	272	60.5	49 10 48.2	. .	+ 1 7.5	100 18 16.9	+ 0.5
12	0 12	12.2	4.4	22.5	20.0	34	. .	672	. .	722	. .	60.5	359 43 40.8	. .	— 0.3	50 50 1.7	— 0.5
13	330 38	10 12.8	5.0	23.0	23.2	37	. .	972	. .	985	. .	60.5	29 18 32.2	. .	+ 32.8	80 25 26.2	— 0.3
14	335 36	10 16.0	8.5	25.7	22.5	39	. .	325	. .	335	. .	60.5	24 20 55.2	. .	+ 26.4	75 27 42.8	— 1.0
15	333 42	10 11.3	2.8	20.5	18.5	35	. .	470	. .	520	. .	60.5	26 13 51.4	. .	+ 28.8	77 20 41.4	— 1.1
16	47 38	13.8	5.5	23.2	22.5	37	. .	175	. .	190	. .	60.5	312 18 20.3	. .	— 1 4.1	3 23 37.4	— 0.8
17	298 0	9 23.6	14.5	0.6	5.0	35	730	585	. .	. .	. .	60.5	61 55 36.2	. .	+ 1 49.1	113 3 46.5	
18	297 28	9 22.0	. .	29.5	. .	38	. .	. .	. .	285	110	60.5	62 28 13.0	. .	+ 1 51.6	113 36 25.8	
19	299 44	8.8	1.8	19.0	21.0	33	. .	. .	. .	630	690	60.5	60 11 22.9	. .	+ 1 41.4	111 19 25.5	
20	331 22	9 28.8	20.0	8.8	7.6	40	. .	. .	. .	750	800	60.5	28 35 0.6	. .	+ 31.8	79 41 53.6	+ 1.7
21	329 34	10 8.5	29.3	17.8	17.3	33	. .	265	. .	300	. .	60.5	30 21 14.8	. .	+ 34.2	81 28 10.2	+ 2.3
22	327 8	10 21.3	13.0	1.7	1.8	34	. .	400	. .	450	. .	60.5	32 47 45.1	. .	+ 37.6	83 54 43.9	+ 0.2
23	5 52	10 8.6	2.8	20.5	18.2	37	. .	190	. .	210	. .	60.5	354 4 17.1	. .	— 6.1	45 10 32.2	+ 0.6
24	66 20	10 3.3	28.0	12.7	13.2	38	. .	200	. .	300	. .	62.8	293 36 28.3	. .	— 2 19.8	344 40 29.7	— 0.4
25	324 38	10 15.1	6.6	24.0	21.5	35	. .	055	. .	080	. .	62.8	35 17 50.6	. .	+ 43.5	86 24 55.3	+ 1.1
26	38 16	10 14.5	7.2	21.5	19.5	30	. .	490	. .	465	. .	62.8	321 38 39.1	. .	— 48.6	12 44 11.7	— 0.7
27	341 36	10 17.5	9.1	26.2	23.0	32	. .	500	. .	500	. .	62.8	18 19 13.5	. .	+ 20.4	69 25 55.1	+ 3.0
28	10 26	10 13.7	7.5	23.7	22.3	33	. .	770	. .	760	. .	62.8	349 29 31.0	. .	— 11.4	40 35 40.8	— 0.8
29	68 42	10 10.7	3.0	23.3	20.9	33	. .	783	. .	840	. .	62.8	291 13 29.0	. .	— 2 37.4	342 17 12.8	+ 0.7
30	8 24	10 7.7	0.2	17.8	15.5	32	. .	832	. .	865	. .	62.8	351 31 10.4	. .	— 9.2	42 37 22.4	+ 1.0
31	344 44	10 6.2	29.0	14.6	10.7	31	. .	980	. .	999	. .	62.8	15 20 54.3	. .	+ 16.9	66 27 32.4	+ 0.4
32	352 32	10 18.0	10.1	28.5	24.6	33	. .	220	. .	195	. .	62.8	7 23 25.8	. .	+ 8.0	58 29 55.0	+ 2.8
33	307 10	10 2.8	25.4	14.2	10.6	32	. .	112	. .	160	. .	62.8	52 44 54.5	. .	+ 1 21.0	103 52 36.7	+ 3.9
34	72 50	10 0.6	23.4	6.8	9.4	35	. .	040	. .	051	. .	62.8	287 5 35.2	. .	— 3 18.7	338 8 37.7	— 4.8
35	336 22	10 4.3	26.8	13.7	12.8	37	. .	272	. .	265	. .	62.8	23 34 14.6	. .	+ 27.0	74 41 2.8	+ 2.6
36	339 56	10 15.5	5.2	25.7	22.3	34	. .	145	. .	135	. .	62.8	19 59 36.9	. .	+ 22.5	71 6 20.6	+ 1.7
37	337 18	10 23.3	14.3	1.7	2.2	36	. .	095	. .	180	. .	62.8	22 38 15.7	. .	+ 25.8	73 45 2.7	+ 3.0
38	6 54	10 12.2	3.5	22.0	16.5	35	. .	005	. .	070	. .	62.8	353 1 47.3	. .	— 7.6	44 8 0.9	— 2.3
39	312 42	10 11.1	4.5	22.5	26.8	34	. .	. .	560	585	. .	62.8	47 13 42.4	. .	+ 1 7.1	98 21 10.7	+ 3.2
40	349 32	12.3	5.1	23.0	21.0	34	. .	150	. .	210	. .	62.8	10 23 35.7	. .	+ 11.4	61 30 8.3	— 1.7
41	303 10	10 4.5	27.6	15.5	12.0	40	. .	322	. .	350	. .	62.8	56 47 2.1	. .	+ 1 34.8	107 54 58.1	0.0
42	319 46	10 18.5	11.3	28.5	25.2	35	. .	145	. .	202	. .	62.8	40 9 56.3	. .	+ 52.5	91 17 10.0	+ 0.7
43	286 56	10 14.9	8.9	27.5	24.0	31	. .	530	. .	540	. .	62.8	72 58 58.2	. .	+ 3 21.1	124 8 40.5	+ 1.0
44	54 24	4.5	28.0	13.6	12.2	34	195	. .	178	. .	. .	62.8	305 31 27.3	. .	— 1 27.2	356 36 21.3	— 0.3
45	337 32	7.6	1.7	15.3	10.2	31	. .	480	. .	508	. .	62.8	22 22 47.8	. .	+ 25.7	73 29 34.7	— 1.4
46	48 16	10 18.3	. .	0.7	. .	37	378	. .	470	. .	465	62.8	311 40 32.5	. .	— 1 10.2	2 45 43.5	— 0.9
47	353 12	10 8.8	0.0	18.2	16.5	34	. .	190	. .	215	. .	62.8	6 43 31.0	. .	+ 7.4	57 50 0.2	+ 0.2
48	345 28	10 4.3	25.8	12.8	8.4	41	. .	372	. .	465	. .	62.8	14 29 16.9	. .	+ 16.2	65 35 54.3	
49	349 22	10 10.5	2.8	22.3	20.6	33	. .	788	. .	718	. .	62.8	10 33 27.8	. .	+ 11.7	61 40 0.7	+ 0.5
50																	
51																	
52																	
53																	

No.	Barom.	At. Ther.	Ex. Ther.
	in.	°	°
2	. .	. .	4.5
3	. .	. .	5.0
4	30.545	62.0	5.0
6	30.034	72.0	38.0
10	. .	. .	40.0
11	. .	. .	46.5
15	29.930	68.0	47.0
17	. .	. .	47.0
23	. .	. .	41.5
25	30.315	66.0	28.0
35	. .	. .	25.5
43	. .	. .	23.0
47	. .	. .	20.0
50	30.460	68.0	19.5
52	30.634	65.0	17.5

For summary of the elements of reduction see page 3.

No.	Parallax.	Semi-diam.	Defective Illumination.	Sum.
	′ ″	′ ″	′ ″	° ′ ″
3	—26 40.8	— 15 1.3	. .	— 41 42.1
17	— 7.9	+ 16 19.6	. .	+ 16 11.7
18	— 8.0	— 16 19.6	. .	— 16 27.6
19	— 9.2	0.0	. .	— 9.2
48	—13 20.7	+ 14 46.1	. .	+ 1 25.4

OBSERVATIONS

WITH THE

MERIDIAN TRANSIT INSTRUMENT.

1871.

OBSERVATIONS

WITH THE

MERIDIAN TRANSIT INSTRUMENT.

Date and observer.	OBJECT.	Number.	SECONDS OF TRANSIT OVER WIRES.												CORRECTIONS.		Observed Right Ascension.	Reduction to 1870.0.
			I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	X.	XI.	Mean wire.	Inst.	Clock.		
1871.			s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	m. s.	m. s.	s.	h. m. s.	s.
Jan. 12 Sk.	α Aquarii. . . .	1	51.4	53.0	55.7	7.5	9.1	10.7	12.4	14.0	25.9	28.3	29.7	59 10.70	+ 0.12	−3.34	21 59	− 1.15
Y.	ζ Pegasi	2	. .	. .	. .	18.4	21.0	22.4	33.5	36.3	37.8	39.5	41.4	35 31.29	− 28.05	3.30	22 34 59.94	1.23
	α Piscis Australis .	3	10.1	11.9	14.7	28.6	30.5	32.3	34.2	36.1	49.8	52.7	54.5	50 32.31	0.00	3.29	22 50 29.02	1.35
	α Pegasi	4	1.7	3.5	6.1	18.3	19.9	21.6	23.4	25.0	37.3	39.8	41.4	58 21.64	+ 0.18	3.28	22 58 18.54	1.34
	Polaris	5	2.0	9.5	53.0	10.0	12.5	20.0	28.0	35.5	55.0	38.0	38.5	11 22.00	+ 15.13	3.16	. . . .	16.23
	β Arietis	6	12.7	14.6	17.3	29.9	31.4	33.2	35.0	36.7	49.4	51.9	53.6	47 33.25	0.21	3.13	1 47 30.33	2.54
Sk.	ζ Arietis	7	11.4	13.1	15.9	28.5	30.1	31.9	33.7	35.4	48.0	50.6	52.5	7 31.92	0.21	3.06	3 7 29.07	3.11
	*+23° 38′ . . .	†8	11.5	13.2	15.9	. .	. .	. .	. .	. .	. .	. .	. .	41 13.53	+ 19.10	3.03	3 41 29.60	3.40
	*+23° 38′ . . .	†9	. .	. .	. .	30.2	31.9	33.6	35.4	37.1	50.1	52.9	54.5	41 40.71	− 6.86	3.03	3 41 30.82	3.40
	γ^1 Eridani. . . .	10	44.0	45.4	48.0	0.3	1.7	3.5	5.4	7.0	19.2	21.6	23.5	51 3.60	+ 0.06	3.02	3 51 0.64	2.81
	*−26° 56′ . . .	11	55.6	57.5	0.2	14.0	15.6	17.5	19.0	21.1	34.4	37.2	38.9	5 17.36	0.01	3.01	4 5 14.36	2.72
	B. A. C. 1313 . .	12	2.5	7.7	. .	31.9	34.9	38.1	41.4	44.6	. .	8.8	14.2	10 38.23	0.67	3.00	4 10 35.90	5.56
	ε Tauri	13	47.8	49.6	52.0	4.6	6.2	7.8	9.8	11.3	24.0	26.5	28.2	21 7.98	+ 0.20	2.99	4 21 5.19	3.50
	Lacaille 1537 . .	14	33.5	35.5	38.7	53.8	55.8	57.5	0.1	1.9	17.5	20.2	22.2	31 57.88	− 0.03	2.98	4 31 54.87	2.72
	Lalande 9012 . .	15	49.8	52.4	55.9	13.0	15.0	17.5	19.5	21.9	. .	. .	. .	42 8.12	+ 9.69	2.97	4 42 14.84	4.62
	ι Aurigæ. . . .	16	15.6	17.7	20.7	34.7	36.8	38.6	40.7	42.5	56.9	59.6	1.3	48 38.65	0.30	2.97	4 48 35.98	4.05
	Lalande 9884 . .	17	. .	. .	. .	25.3	33.0	39.9	48.2	57.2	. .	. .	. .	17 40.72	1.76	2.94	5 17 39.54	12.39
	*+38° 58′ . . .	†18	38.4	40.4	43.8	59.0	0.8	2.9	5.1	7.0	22.2	25.5	27.6	21 2.97	0.35	2.94	5 21 0.38	4.44
	θ Orionis. . . .	19	. .	22.9	24.4	26.0	28.6	. .	. .	. .	. .	. .	. .	28 25.48	33.55	2.93	5 28 56.10	3.29
	θ Orionis. . . .	20	40.0	41.6	44.1	. .	. .	. .	. .	. .	. .	. .	. .	28 41.90	17.47	2.93	5 28 56.44	3.29
	θ Orionis. . . .	21	. .	. .	. .	57.1	58.6	0.3	1.4	2.3	. .	. .	. .	29 59.99	+ 0.10	2.93	5 29 57.16	3.29
	θ Orionis. . . .	22	. .	. .	. .	. .	. .	. .	. .	. .	14.8	17.0	18.9	29 16.90	− 17.27	2.93	5 28 56.70	3.29
	Lalande 10797. .	23	48.2	50.7	53.8	8.6	10.5	12.7	14.8	16.6	31.7	34.7	36.5	37 12.62	+ 0.34	2.93	5 37 10.03	4.44
	Lalande 12173. .	24	30.7	32.8	36.0	51.2	52.9	55.1	57.4	59.3	14.6	17.9	19.6	26 55.23	+ 0.35	2.88	6 26 52.70	4.58
	O. Arg. N. 6864 .	25	. .	. .	. .	25.9	34.7	41.0	29.1	39.9	45.5	53.0	0.9	32 8.75	− 1 57.11	2.88	6 30 8.76	11.66
	*+23° 49′ . . .	†26	. .	. .	. .	51.2	52.9	54.5	. .	58.1	. .	. .	. .	37 54.18	+ 0.68	2.87	6 37 51.99	4.04
	*−27° 15′ . . .	27	8.0	9.5	12.4	26.0	27.5	29.3	31.3	33.0	46.5	49.0	50.8	43 29.39	0.01	2.87	6 43 26.53	3.21
	B. A. C. 2266 . .	28	7.8	9.4	12.3	26.0	27.7	29.6	31.6	33.4	46.7	49.6	51.2	48 29.57	0.01	2.86	6 48 26.72	3.22
	*−24° 59′ . . .	†29	46.0	48.1	50.0	51.7	54.4	. .	0.6	3.9	5.5	7.1	9.2	4 27.65	0.10	2.85	7 4 24.90	3.26
	*−24° 59′ . . .	†30	8.6	10.2	12.9	26.1	27.7	29.6	31.6	33.2	46.2	48.9	50.8	4 29.62	0.02	2.85	7 4 26.79	3.26
	B. A. C. 2393 . .	31	20.5	22.4	25.3	38.5	40.2	42.1	43.8	45.6	. .	. .	. .	9 34.80	7.27	2.84	7 9 39.23	3.26
	α^1 Geminorum . .	32	1.6	3.9	6.9	. .	. .	. .	. .	. .	42.5	45.4	47.0	26 24.55	0.30	2.82	7 26 22.03	4.31
	α^2 Geminorum . .	33	. .	. .	. .	21.4	22.8	25.2	26.8	28.7	. .	. .	. .	26 24.98	0.30	2.82	7 26 22.46	4.31
	α Canis Minoris .	34	16.6	18.5	20.9	32.7	34.6	36.0	37.7	39.4	50.8	54.0	55.1	32 36.03	0.10	− 2.82	. . . .	3.57
16	ε Tauri	35	44.6	46.1	48.8	1.6	3.0	4.8	6.4	8.2	20.9	23.4	24.9	21 4.79	+ 0.10	+ 0.30	4 21 5.19	− 3.47
S.	ε Ursæ Minoris, S.P.	36	. .	. .	. .	. .	. .	10.5	22.0	. .	. .	. .	. .	59 16.25	− 6.46	0.31	. . . .	+ 12.86
	ι Aurigæ. . . .	37	12.5	14.5	17.3	31.6	33.5	35.5	37.4	39.3	53.6	56.3	58.3	48 35.44	+ 0.09	0.31	4 48 35.84	− 4.03
	β Tauri	38	46.3	48.1	51.0	4.3	6.1	8.1	10.0	11.8	25.4	28.1	29.9	18 8.10	+ 0.09	0.32	5 18 8.51	4.01
	δ Orionis. . . .	39	39.8	42.3	44.0	54.8	57.5	59.1	0.7	2.5	. .	. .	. .	25 52.59	− 27.65	0.32	5 25 25.26	3.35
	θ Orionis. . . .	40	. .	. .	. .	. .	. .	. .	25.7	28.1	29.8	31.5	33.6	29 29.75	− 33.93	0.32	5 28 56.14	3.28
	θ Orionis. . . .	41	36.7	38.2	40.5	. .	. .	. .	. .	. .	11.1	13.5	15.1	28 55.85	+ 0.13	0.32	5 28 56.30	3.28
	θ Orionis. . . .	42	. .	. .	. .	53.0	54.6	56.1	57.9	59.5	. .	. .	. .	28 56.22	0.13	0.32	5 28 56.67	3.28
	δ Ophiuchi . . .	43	. .	. .	. .	29.6	31.4	32.9	34.6	36.1	. .	. .	. .	7 32.92	0.13	0.49	. . . .	− 1.48
	Moon II . . .	†44	30.6	32.3	35.0	48.2	50.0	51.8	53.6	55.1	8.2	11.1	12.3	39 51.65	+ 0.16	+ 0.50	16 39 52.31	

8. South preceding.
9. North following.
18. Apparently too far south, preceded by a fainter star to northward.
26. Last of four stars.
29. Southward.
30. Northward.
44. Limb very indistinct.

January 12. Mr. Gardner inserted a new set of threads on a plate scored by Mr. Wm. Wurdeman.
After adjustment, Image west 0^{r}.37 ; clamp west.
Image east 0^{r}.03 ; clamp east.

CORRECTIONS, &c.

Date.	Error of clock.	Hourly rate.	n	c
1871. h.	s.	s.	s.	s.
Jan. 12, 2.0	− 3.12	+ 0.054	+ 0.24	+ 0.12
16, 7.2	+ 0.35	+ 0.016	− 0.08	+ 0.12

Date and observer.	OBJECT.	Number.	SECONDS OF TRANSIT OVER WIRES.												CORRECTIONS.		Observed Right Ascension.	Reduction to 1870.0.
			I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	X.	XI.	Mean wire.	Inst.	Clock.		
1871.			s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	m. s.	m. s.	s.	h. m. s.	s.
Jan. 17	ζ Persei	1	37.8	39.9	42.9	56.6	58.3	0.2	2.2	4.0	17.9	21.0	22.7	46 0.32	+ 0.18	+ 0.88	3 46 1.38	− 3.59
Sk.	γ¹ Eridani. . . .	2	40.0	41.5	44.1	56.6	57.9	59.7	. .	. .	15.2	17.7	19.4	51 59.12	0.67	0.87	3 52 0.66	2.76
	Weisse (2) 676. .	3	1.7	4.3	7.0	23.4	25.4	27.2	29.7	31.4	48.0	51.3	53.4	32 27.53	0.22	0.86	4 32 28.61	4.31
	B. A. C. 1565 . .	4	. .	. .	. .	4.8	13.2	21.6	30.7	39.9	. .	. .	. .	1 22.04	0.92	0.85	5 1 23.81	12.66
	δ Orionis. . . .	5	5.3	7.8	9.4	21.0	22.6	24.3	26.1	27.5	9.4	11.9	13.2	25 24.41	0.12	0.84	5 25 25.37	3.34
	ε Orionis. . . .	6	20.3	21.9	24.3	36.2	37.7	39.3	41.2	42.7	54.7	57.0	58.6	29 39.45	0.12	0.84	5 29 40.41	3.34
	α Orionis. . . .	7	51.4	53.0	55.4	7.4	9.1	10.6	12.2	13.8	25.8	28.3	29.9	48 10.63	0.13	0.83	5 48 11.59	− 3.55
	δ Ursæ Minoris, S. P.	8	21.5	46.0	27.5	. .	. .	. .	. .	. .	. .	. .	. .	8 51.67	4 48.91	0.82	. . . .	+ 34.93
21	Lalande 9884 . .	9	. .	. .	. .	19.1	26.7	35.0	42.8	50.7	. .	. .	. .	17 34.86	+ 1.21	2.66	5 17 38.73	− 12.09
	Σ Cat. Gen. 577, (1st *)	10	. .	. .	. .	17.1	21.1	23.8	42.5	47.5	49.6	52.5	56.0	21 38.76	− 47.50	2.66	5 20 53.92	5.46
	Σ Cat. Gen. 577, (2d *)	11	. .	. .	. .	46.5	48.9	51.7	54.6	57.3	. .	. .	. .	20 51.80	+ 0.39	2.66	5 20 54.85	5.46
	Groombridge 990.	12	35.2	37.9	41.8	. .	3.3	6.0	8.7	. .	30.3	34.0	36.5	28 5.97	0.35	2.67	5 28 8.99	5.24
	ε Orionis. . . .	13	. .	. .	. .	34.4	35.9	37.6	39.2	40.8	. .	. .	. .	29 37.58	0.12	2.67	. . . .	3.32
	O. Arg. S. 4457 .	14	14.9	16.9	19.7	33.2	35.0	36.9	38.9	40.7	54.3	57.0	58.7	50 36.93	+ 0.06	2.69	5 50 39.68	− 3.02
	δ Ursæ Minoris, S.P.	15	. .	. .	. .	50.0	16.0	43.5	11.5	36.5	. .	. .	. .	13 43.50	− 4.40	2.71	. . . .	+ 34.56
	*−25° 48′ . . .	16	29.5	31.4	34.1	. .	. .	. .	. .	. .	7.9	10.7	12.5	23 51.02	+ 0.07	2.73	6 23 53.82	− 3.17
	*−25° 48′ . . .	17	. .	. .	. .	48.4	49.9	51.9	52.7	55.5	. .	. .	. .	23 51.68	+ 0.07	2.73	6 23 54.48	3.17
	*+13° 4′ . . .	18	. .	. .	. .	7.3	8.8	10.5	12.3	13.9	26.2	28.6	30.1	39 17.21	− 6.51	2.74	6 39 13.44	3.79
	Lacaille 2480 . .	19	2.9	4.6	7.7	22.0	23.7	25.8	27.5	29.5	34.0	36.9	38.8	45 25.76	+ 0.06	2.75	6 45 28.57	3.18
	Lalande 13427 .	20	15.0	17.3	21.3	39.2	41.4	43.9	46.4	48.9	7.0	10.6	12.8	51 43.98	0.33	2.75	6 51 47.06	5.28
	δ Geminorum . .	†21	2.1	3.7	6.4	. .	. .	. .	. .	. .	39.3	41.7	43.8	12 22.63	0.18	2.78	7 12 25.49	4.06
	α Canis Minoris. .	22	11.2	12.8	15.4	27.2	28.8	30.3	32.2	33.8	45.8	48.1	49.6	32 30.47	0.13	2.80	7 32 33.40	3.65
	β Geminorum . .	23	0.9	2.7	5.6	19.0	20.9	22.5	24.6	26.3	39.8	42.9	44.4	37 22.69	0.20	2.80	7 37 25.69	4.21
	φ Geminorum . .	24	12.0	13.8	16.7	30.1	31.8	33.3	35.5	37.4	50.5	53.4	55.1	45 33.60	0.20	2.81	7 45 36.61	4.20
24	Polaris	25	. .	. .	. .	52.0	55.0	4.0	13.0	20.0	. .	. .	. .	11 4.80	+ 15.59	2.54	. . . .	5.28
Y.	θ¹ Ceti.	26	. .	. .	. .	. .	. .	. .	1.2	3.9	5.3	7.0	9.0	18 5.28	− 34.38	2.54	. . . .	1.94
	η Piscium . . .	27	. .	. .	. .	27.9	29.4	31.2	32.9	34.5	46.9	49.5	51.0	24 37.91	− 6.52	2.54	. . . .	2.16
	η Tauri	28	. .	. .	. .	42.6	44.2	46.0	47.8	49.6	. .	. .	. .	39 46.04	0.21	2.63	3 39 48.88	3.25
Sk.	ζ Persei	29	36.2	38.0	40.9	54.6	56.3	58.5	0.3	2.4	16.2	19.3	20.8	45 58.50	0.25	2.63	3 46 1.38	3.50
	γ¹ Eridani. . . .	†30	37.9	39.8	42.2	54.6	56.1	58.0	59.6	1.0	13.4	15.9	17.3	51 57.79	0.08	2.63	3 51 0.50	2.68
	B. A. C. 1313 . .	31	53.5	56.6	1.8	26.0	28.9	32.4	36.0	38.9	3.4	8.0	11.3	10 33.44	0.55	2.63	4 10 36.62	5.32
	ε Tauri	32	42.2	43.7	46.4	58.9	0.6	2.3	3.9	5.4	18.3	20.7	22.4	21 2.25	0.18	2.64	4 21 5.07	3.40
	Weisse (2) 676. .	33	59.7	2.5	5.3	21.5	23.4	25.6	27.9	30.4	46.2	49.3	51.8	32 25.78	0.33	2.64	4 32 28.75	4.22
	ι Aurigæ. . . .	34	9.8	11.8	14.9	29.4	31.1	33.0	34.8	36.8	50.7	53.7	55.7	48 32.88	0.26	2.64	4 48 35.78	3.95
	Lalande 9884 . .	35	. .	. .	. .	18.6	26.2	34.9	43.9	50.5	. .	. .	. .	17 34.82	1.45	2.65	5 17 38.92	11.93
	Σ Cat. Gen. 577, (2d *)	36	18.9	21.5	26.1	46.8	49.2	51.9	55.0	58.0	18.2	22.5	24.9	20 52.09	0.47	2.65	5 20 55.21	5.42
	Lacaille 1924 . .	37	45.1	47.0	50.1	4.6	6.5	8.4	10.3	12.3	27.0	29.8	31.8	33 8.45	0.02	2.66	5 33 11.13	2.86
	Lalande 12237 .	38	. .	. .	. .	2.6	4.4	6.2	8.0	9.6	. .	. .	. .	18 6.16	0.22	2.67	6 18 9.05	4.09
	B. A. C. 2095 . .	39	. .	. .	. .	52.3	0.4	9.6	18.7	27.7	. .	. .	. .	24 9.74	1.64	2.66	6 24 14.04	14.40
	51 Cephei	40	. .	. .	. .	15.5	47.0	21.5	57.0	29.0	. .	. .	. .	39 22.00	6.16	2.68	. . . .	47.90
	Lalande 13427 .	41	15.5	18.3	21.5	39.7	42.0	44.4	46.9	49.2	6.9	11.0	13.0	51 44.40	0.39	2.66	6 51 47.45	5.29
	Weisse (2) 135. .	42	. .	42.0	44.7	58.0	59.7	1.2	3.0	4.7	18.0	20.8	. .	6 1.37	0.23	2.66	7 6 4.26	4.16
	B. A. C. 2383 . .	43	39.8	41.6	44.3	57.8	59.6	1.5	3.3	5.1	18.4	20.8	22.6	9 1.35	0.22	2.66	7 9 4.23	4.22
	δ Geminorum . .	44	1.8	3.6	6.3	19.4	21.8	22.6	24.5	26.1	39.1	41.5	43.2	12 22.72	0.20	2.67	7 12 25.59	4.07
	B. A. C. 2521 . .	45	. .	. .	. .	32.0	40.1	50.8	1.2	10.9	. .	. .	. .	34 51.00	1.80	2.67	7 34 55.47	15.63
	φ Geminorum . .	46	11.8	14.1	16.4	30.2	32.0	33.5	35.6	37.3	0.7	3.4	5.0	45 33.64	+ 0.20	2.70	7 45 36.54	4.22
27	Polaris	47	. .	. .	. .	. .	. .	. .	. .	. .	48.0	50.0	0.0	34 52.67	−23 35.11	2.67	. . . .	2.54
Y.	η Piscium . . .	48	. .	. .	. .	27.8	29.4	31.0	32.8	34.5	46.7	49.4	50.9	24 37.81	− 6.52	+ 2.67	1 24 33.96	− 2.12

CORRECTIONS, &c.

Date.	Error of clock.	Hourly rate.	n	c
1871. h.	s.	s.	s.	s.
Jan. 17, 4.9	+ 0.85	+ 0.023	+ 0.06	+ 0.12
21, 7.1	2.77	0.063	0.13	0.12
24, 5.1	2.65	0.017	0.18	0.12
27, 2.0	2.68	0.020	0.20	0.12
27, 5.5	+ 2.77	+ 0.020	+ 0.20	+ 0.12

21. Cloudy.
30. Unsteady.

January 28. Image east $0^{r}.12$; clamp east.
Image west $0^{r}.26$; clamp west.

Date and observer.	OBJECT.	Number.	SECONDS OF TRANSIT OVER WIRES. I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	X.	XI.	Mean wire.	CORRECTIONS. Inst.	Clock.	Observed Right Ascension.	Reduction to 1870.0.
			s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	m. s.	m. s.	s.	h. m. s.	s.
1871. Jan. 27	β Arietis	1	6.6	8.5	11.2	23.8	25.4	27.3	29.0	30.6	43.4	45.8	47.5	47 27.19	+ 0.20	+ 2.68	1 47 30.07	− 2.33
Y.	Moon I. . . .	2	52.9	54.7	57.2	9.5	11.0	12.7	14.5	16.1	28.3	30.7	32.4	1 12.73	0.14	2.68	2 1 15.55	
	ξ1 Ceti.	3	46.9	48.5	50.8	2.8	4.6	6.2	7.8	9.5	21.5	24.0	25.5	6 6.19	0.15	2.68	2 6 9.02	− 2.33
	ξ2 Ceti.	4	55.0	56.8	59.3	11.3	12.8	14.4	16.2	17.8	29.8	32.2	33.7	21 14.48	0.15	2.68	2 21 17.31	2.43
	γ Ceti.	5	14.3	16.1	18.5	30.4	32.0	33.6	35.3	36.7	48.6	51.0	52.6	36 33.55	0.13	2.69	2 36 36.37	2.45
	μ Ceti.	6	35.2	36.7	39.4	51.4	53.1	54.8	56.5	58.0	10.0	12.5	14.1	37 54.70	0.16	2.69	2 37 57.55	2.56
Sk.	β Tauri	7	43.5	45.5	48.4	1.8	3.5	5.4	7.4	9.1	22.4	25.5	27.2	18 5.43	0.24	2.77	5 18 8.44	3.94
	Σ Cat. Gen. 577, (2d *)	8	18.8	21.4	25.8	46.4	49.0	51.5	54.2	57.3	18.0	22.1	24.8	20 51.76	0.50	2.77	5 20 55.03	5.30
	δ Orionis. . . .	9	3.4	4.8	7.4	19.2	20.7	22.3	24.0	25.4	37.5	39.9	41.5	25 22.37	0.12	2.77	5 25 25.26	3.28
	α Orionis. . . .	10	49.5	50.9	53.4	5.6	7.0	8.6	10.2	11.9	23.9	26.4	27.9	48 8.66	+ 0.15	2.78	5 48 11.59	− 3.51
Feb. 2	Moon I. . . .	11	37.9	39.5	42.4	55.7	57.5	59.4	0.9	2.7	15.7	18.7	20.5	4 59.17	− 0.14	7.16	7 5 6.19	
	δ Geminorum . .	12	. .	. .	. .	15.1	16.8	18.6	20.5	22.0	. .	. .	. .	12 18.60	0.14	7.16	7 12 25.62	− 4.07
	α Canis Minoris. .	13	7.3	8.9	11.2	23.2	24.7	26.5	28.1	29.7	41.6	44.1	45.6	32 26.45	0.14	7.16	7 32 33.47	3.67
	β Geminorum . .	14	56.9	58.6	1.5	15.1	17.0	18.6	20.6	22.3	35.8	38.5	40.4	37 18.66	0.14	7.17	7 37 25.69	4.25
	φ Geminorum . .	15	8.2	9.8	11.5	26.0	27.9	29.6	31.5	33.2	56.6	59.2	1.4	45 29.54	− 0.14	7.17	7 45 36.57	− 4.26
	λ Ursæ Minoris, S.P.	16	. .	. .	. .	27.0	45.5	13.0	40.0	3.0	. .	. .	. .	52 13.70	+ 4.73	7.17	. . . .	+ 111.65
	Weisse (2) 181. .	17	43.0	44.7	47.6	1.5	3.3	5.2	7.2	9.0	22.9	25.8	27.6	10 5.25	− 0.14	7.18	8 10 12.29	− 4.40
	Weisse 294 . .	18	50.7	52.5	55.0	7.1	8.7	10.4	12.1	13.6	25.8	28.3	30.1	12 10.39	0.16	7.18	8 12 17.41	3.54
	B. A. C. 2883 . .	19	21.3	23.0	25.9	39.8	41.8	43.7	45.5	47.3	1.3	4.3	6.1	27 43.64	0.22	7.18	8 27 50.60	3.44
	δ Hydræ	20	24.0	25.4	28.2	40.0	41.6	43.3	45.0	46.6	58.5	1.0	2.6	30 43.29	0.14	7.18	8 30 50.33	3.79
	ε Hydræ	21	31.0	32.5	35.0	47.0	48.5	50.4	52.0	53.5	5.5	7.8	9.6	39 50.25	0.14	7.19	8 39 57.30	3.79
	O.Arg.N.9342, (1st*)	22	8.3	12.8	20.3	. .	. .	. .	. .	. .	54.6	2.4	7.8	43 7.70	0.17	7.19	8 43 14.72	8.65
	O.Arg.N.9342, (2d *)	23	. .	. .	. .	58.3	3.5	9.0	14.0	18.7	. .	. .	. .	43 8.70	0.18	7.19	8 43 15.71	8.65
3	Polaris	24	. .	. .	. .	54.0	0.0	9.0	18.0	20.0	. .	. .	. .	11 8.20	2.13	7.49	. . . .	4.13
Y.	β Arietis	25	2.2	3.8	6.5	19.2	20.9	22.6	24.4	26.0	38.6	41.3	43.2	47 22.61	0.12	7.50	. . . .	2.23
	α Arietis	26	25.1	26.8	29.5	42.4	44.1	46.0	47.7	49.3	2.3	5.0	6.8	59 45.91	0.12	7.50	. . . .	2.36
S.	φ Geminorum . .	27	7.7	9.2	11.9	25.3	27.2	29.1	30.9	32.6	46.0	48.7	50.7	45 29.03	0.12	7.68	7 45 36.59	− 4.26
	Moon I. . . .	28	6.7	8.3	10.9	24.2	25.9	27.8	29.7	31.3	44.4	47.0	49.0	1 27.75	0.12	7.69	8 1 35.32	
	ε Hydræ	29	30.4	32.0	34.4	46.3	48.1	49.8	51.5	52.9	4.9	7.4	9.0	39 49.70	0.14	7.70	8 39 57.26	− 3.80
	ι Ursæ Majoris . .	30	46.2	48.7	52.3	10.3	12.5	15.3	17.7	20.1	37.9	41.6	44.4	50 15.18	0.11	7.70	8 50 22.77	5.14
	κ Cancri	31	19.3	20.7	23.1	35.4	37.0	38.6	40.4	41.9	53.9	56.4	58.2	0 38.63	0.14	7.71	9 0 46.20	3.87
6	*−27° 41′ . . .	†32	. .	. .	. .	8.7	10.2	12.2	14.0	15.5	29.1	31.9	33.9	10 19.44	7.59	7.25	9 10 19.10	3.55
	*−28° 26′ . . .	33	56.4	58.2	1.0	14.4	16.1	18.0	20.0	21.8	35.1	38.1	39.9	17 18.09	0.28	7.26	9 17 25.07	3.56
	*−28° 26′ . . .	34	. .	. .	. .	. .	. .	. .	. .	. .	55.3	58.1	59.9	17 57.77	19.94	7.26	9 17 45.09	3.56
	*−28° 26′ . . .	35	. .	. .	. .	. .	. .	. .	23.2	25.9	27.7	29.7	31.8	18 27.66	39.19	7.26	9 17 55.73	3.56
	α Hydræ	36	. .	. .	. .	23.8	26.3	28.1	38.9	41.6	43.2	44.8	46.8	21 36.69	28.33	7.26	9 21 15.62	3.64
	ζ Antliæ	37	46.1	47.9	50.8	4.8	6.5	8.6	10.5	12.4	26.2	29.2	30.9	25 8.54	0.30	7.26	9 25 15.50	3.58
	*−36° 21′ . . .	38	6.5	8.4	11.3	26.3	28.2	30.3	32.4	34.3	49.0	52.0	54.0	32 30.25	0.33	7.27	9 32 37.19	3.61
	ε Leonis	39	4.0	5.6	8.3	21.4	23.0	24.9	26.8	28.4	41.6	44.4	46.2	38 24.96	0.08	7.27	9 38 32.15	4.08
	Lacaille 4031 . .	†40	46.1	47.9	51.0	5.5	7.1	9.3	11.3	13.2	27.6	30.7	32.6	43 9.30	0.32	7.27	9 43 16.25	3.62
	μ Leonis	41	. .	. .	. .	. .	. .	. .	52.7	55.4	57.2	59.0	1.2	45 57.10	38.34	7.27	9 45 26.03	4.09
	*−38° 45′ . . .	42	19.2	21.2	24.5	39.5	41.8	43.6	45.8	47.9	3.0	6.2	8.4	55 43.74	0.36	7.28	9 55 50.66	3.67
	*−38° 45′ . . .	43	9.0	11.0	14.1	29.3	31.4	33.6	35.6	36.7	52.9	56.3	58.4	57 33.48	0.36	7.28	9 57 40.40	3.67
	Groombridge 1618	44	. .	. .	. .	45.0	48.9	51.4	8.6	12.3	15.0	17.6	20.5	4 4.91	43.46	7.28	10 3 28.73	4.92
	O. Arg. S. 10488 .	45	25.8	27.5	30.5	44.7	45.9	48.0	49.9	51.7	5.7	8.3	10.5	9 48.05	0.29	7.29	10 9 55.05	3.62
	O. Arg. S. 10533 .	46	. .	. .	. .	2.2	4.0	5.8	7.8	9.5	24.0	25.7	28.6	12 13.45	7.64	7.29	10 12 13.10	3.62
	O. Arg. S. 10540 .	47	. .	. .	. .	42.0	43.8	45.9	47.7	49.4	2.9	5.7	7.8	13 53.15	7.64	7.29	10 13 52.80	3.62
	Weisse 303. . .	48	21.5	23.2	25.6	37.5	39.3	40.9	42.6	44.2	56.2	58.7	0.4	18 40.92	0.12	7.29	10 18 48.09	3.74
	34 Sextantis . . .	49	32.0	33.5	36.1	47.9	49.6	51.2	52.8	54.4	6.4	8.8	10.5	35 51.20	− 0.14	+ 7.30	10 35 58.36	− 3.65

32. Saw only one star.
40. Second of close double.

CORRECTIONS, &c.

Date.	Error of clock.	Hourly rate.	n	c
1871. h.	s.	s.	s.	s.
Feb. 2, 8.8	+ 7.17	+ 0.020	+ 0.06	− 0.15
3, 1.9	7.50	0.020	0.10	0.15
3, 8.6	7.70	0.020	0.10	0.15
6, 10.5	+ 7.30	+ 0.035	+ 0.20	− 0.15

Date and observer.	OBJECT.	Number.	SECONDS OF TRANSIT OVER WIRES. I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	X.	XI.	Mean wire.	CORRECTIONS. Inst.	Clock.	Observed Right Ascension.	Reduction to 18~~70.~~
1871.			s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	m. s.	m. s.	s.	h. m. s.	s.
Feb. 6	*l* Leonis	1	2.2	3.9	6.4	18.6	20.2	22.0	23.6	25.1	37.3	39.8	41.5	42 21.87	− 0.12	+ 7.31	10 42 29.06	− 3.68
S.	Moon II . . .	2	6.2	7.9	10.4	22.7	24.6	26.2	28.0	29.6	42.0	44.4	46.4	50 26.22	0.11	7.31	10 50 33.42	
	χ Leonis	3	55.7	57.3	59.7	11.8	13.3	15.1	16.7	18.4	30.3	32.8	34.5	58 15.05	0.13	7.32	10 58 22.24	− 3.61
	δ Leonis	4	47.5	49.0	51.7	4.4	6.1	7.9	9.8	11.3	24.2	26.9	28.5	7 7.94	0.08	7.32	11 7 15.18	3.70
	δ Crateris . . .	5	27.3	28.8	31.4	43.8	45.4	47.1	48.7	50.4	2.5	5.1	6.9	12 47.04	0.21	7.32	11 12 54.15	3.50
	τ Leonis	6	. .	. .	. .	8.1	9.8	11.4	13.1	14.6	. .	. .	. .	21 11.40	0.14	7.33	11 21 18.59	5.52
9	Polaris	7	49.0	51.0	33.0	50.0	56.0	4.0	13.0	16.0	33.0	15.0	25.0	11 4.09	5.83	8.00	. . . .	8.62
Y.	β Arietis	8	1.6	3.4	5.9	18.6	20.4	22.0	23.8	25.5	38.1	40.8	42.5	47 22.05	0.16	8.00	. . . .	2.15
	α Arietis	9	24.6	26.2	28.9	41.8	43.6	45.4	47.2	48.9	1.7	4.4	6.3	59 45.36	0.16	8.00	. . . .	2.27
Sk.	ι Aurigæ. . . .	10	4.6	6.5	9.3	23.4	25.4	27.5	29.4	31.2	45.4	48.4	50.4	48 27.41	0.18	8.27	4 48 35.50	3.73
	11 Orionis. . . .	11	44.0	45.6	48.0	0.5	2.1	3.7	5.5	7.1	19.3	22.0	23.7	57 3.77	0.15	8.27	4 57 11.89	3.32
	θ Orionis. . . .	12	10.0	11.8	13.6	. .	. .	. .	. .	. .	22.5	24.0	25.9	28 47.97	0.23	8.27	5 28 56.01	3.07
	θ Orionis. . . .	13	. .	15.4	18.0	. .	. .	. .	. .	. .	18.6	21.1	. .	28 48.28	0.23	8.27	5 28 56.32	3.07
	θ Orionis. . . .	14	. .	. .	. .	45.2	46.9	48.6	50.2	51.6	. .	. .	. .	28 48.50	0.15	8.27	5 28 56.62	3.07
	θ Orionis. . . .	15	30.0	31.5	33.9	. .	. .	. .	. .	. .	4.2	6.8	8.6	28 49.17	0.15	8.27	5 28 57.29	3.07
	Rumker 1680 . .	16	21.4	23.1	25.7	39.1	40.8	42.7	44.5	46.1	59.6	2.3	4.3	55 42.69	0.16	8.28	5 55 50.81	3.92
	*+25° 35′ . . .	17	21.2	22.9	25.8	38.9	40.6	42.5	44.3	45.9	. .	. .	. .	17 35.28	0.16	8.28	6 17 43.40	3.99
	Lalande 12237. .	18	. .	. .	. .	57.2	58.8	0.8	2.6	4.2	. .	. .	. .	18 0.72	0.16	8.28	6 18 8.84	3.99
	B. A. C. 2095 . .	19	. .	. .	. .	47.6	56.6	5.8	15.2	23.8	. .	. .	. .	24 5.80	0.76	8.29	6 24 13.33	13.58
	*+23° 49′ . . .	20	3.8	5.2	7.8	20.8	22.6	24.4	26.3	28.0	41.0	43.8	45.5	37 24.47	0.16	8.29	6 37 32.60	4.01
	Weisse (2) 1163 .	21	. .	. .	. .	37.7	39.5	41.2	43.0	44.8	. .	. .	. .	38 41.24	0.16	8.29	6 38 49.37	4.02
	51 Cephei	22	. .	. .	. .	. .	. .	. .	. .	. .	36.5	26.5	2.5	45 21.83	6 2.22	8.29	. . . .	44.80
	δ Canis Majoris .	23	40.3	41.9	44.7	8.0	9.7	1.6	3.4	5.1	18.3	21.0	22.9	3 1.54	0.17	8.29	7 3 9.66	3.17
	Weisse (2) 135. .	24	34.8	36.4	39.3	52.4	54.1	55.8	57.7	59.3	12.6	15.3	17.1	5 55.89	0.16	8.29	7 6 4.02	4.14
	*−28° 1′ . . .	25	58.0	59.8	2.6	15.8	17.8	19.7	21.5	23.4	36.6	39.4	41.5	11 19.65	0.18	8.29	7 11 27.76	3.18
	Lacaille 2741 . .	26	49.2	51.0	53.6	6.8	8.7	10.6	12.4	14.1	27.3	30.2	31.9	15 10.53	0.17	8.30	7 15 18.66	3.24
	Lacaille 2824 . .	27	19.4	21.5	24.4	39.3	41.6	43.7	45.7	47.5	2.6	5.7	7.8	23 43.56	0.20	8.30	7 23 51.66	3.15
	Weisse (2) 1022 .	28	. .	. .	. .	23.7	25.5	27.4	28.9	30.8	. .	. .	. .	35 27.26	0.16	8.30	7 35 35.40	4.08
	*+21° 18′ . . .	29	11.9	. .	16.0	. .	. .	. .	. .	. .	48.9	51.3	53.2	35 36.26	3.94	8.30	7 35 40.62	4.08
	O. Arg. S. 7473 .	30	8.9	10.5	13.5	27.2	29.0	30.9	32.9	34.5	48.3	51.2	53.1	43 30.91	0.18	8.30	7 43 39.03	3.29
	φ Geminorum . .	31	6.9	8.7	11.3	24.8	26.8	28.4	30.4	32.1	45.5	48.1	50.1	45 28.46	0.16	8.30	7 45 36.60	4.26
	Weisse (2) 880. .	32	. .	. .	. .	14.1	15.6	17.4	19.1	20.5	. .	. .	. .	52 17.34	0.15	8.36	12 52 25.55	3.26
	Groombridge 1947	33	. .	. .	. .	. .	. .	. .	30.0	37.2	41.8	46.4	52.3	55 41.54	1 37.94	8.36	12 54 11.96	3.73
	θ Virginis . . .	34	. .	. .	. .	4.9	6.6	8.2	10.0	11.4	. .	. .	. .	3 8.22	− 0.15	8.37	13 3 16.44	− 3.18
	Polaris, S. P. . .	35	. .	. .	. .	40.0	42.5	54.0	59.0	5.5	. .	. .	. .	10 52.20	+ 5.71	8.37	. . . .	+ 8.99
	α Virginis . . .	36	56.4	57.7	0.1	12.6	14.1	15.8	17.4	18.8	30.9	33.6	35.4	18 15.71	− 0.15	8.37	13 18 23.93	− 3.16
	l^2 Virginis . . .	37	48.2	49.7	52.3	4.2	5.8	7.4	9.0	10.7	22.3	25.1	26.6	25 7.39	0.15	8.37	13 25 15.61	− 3.08
	Moon II . . .	38	20.2	21.8	24.2	36.5	38.1	39.9	41.7	43.1	55.5	57.7	59.7	29 39.85	0.15	8.37	13 29 48.07	
	Weisse 781. . .	39	59.0	0.6	3.2	15.4	17.2	18.9	20.6	22.2	34.2	36.6	38.4	43 18.75	0.15	8.37	13 43 26.97	− 3.08
	η Bootis	40	. .	. .	. .	21.0	22.5	24.4	26.2	27.6	. .	. .	. .	48 24.34	− 0.15	8.37	13 48 32.56	− 2.76
Y. 10	Polaris	41	48.0	51.0	33.0	47.0	54.0	3.0	13.0	16.0	32.0	15.0	25.0	11 3.41	. .	. .	. . . .	+ 9.36
S.	Polaris, S. P. . .	42	. .	. .	. .	. .	43.0	48.0	55.0	. .	. .	. .	. .	10 48.67	+ 10.91	8.41	. . . .	+ 9.71
	ζ Virginis . . .	43	39.9	41.2	44.0	55.8	57.4	59.1	0.6	2.2	14.1	16.8	18.3	27 59.04	− 0.15	8.41	13 28 7.30	− 3.04
	*−12° 9′ . . .	44	40.0	41.4	43.8	56.0	57.6	59.2	1.1	2.5	14.8	17.2	19.2	33 59.35	0.14	8.41	13 34 7.62	3.15
	*+18° 40′ . . .	45	. .	. .	. .	2.8	4.6	6.2	8.2	9.6	. .	. .	. .	43 6.28	0.19	8.41	13 43 14.50	2.84
	η Bootis	46	4.0	5.7	8.3	21.0	22.5	24.3	26.0	27.8	40.2	42.8	44.4	48 24.27	0.19	8.41	13 48 32.49	2.79
	Weisse (2) 1167 .	47	12.3	13.7	16.7	29.5	31.2	33.0	34.9	36.6	49.5	52.2	54.0	53 33.05	0.21	8.41	13 53 41.25	2.72
	*−26° 4′ . . .	†48	. .	. .	. .	37.4	40.3	42.0	43.8	45.9	. .	. .	. .	1 41.88	0.12	8.41	14 1 50.17	3.23
	ι Virginis . . .	49	47.6	49.1	51.5	3.4	5.1	7.0	8.3	10.0	21.9	24.5	26.0	9 6.76	0.15	8.41	14 9 15.02	2.91
	λ Virginis . . .	50	. .	. .	. .	56.1	57.7	59.3	1.4	2.7	. .	. .	. .	11 59.44	− 0.14	+ 8.41	14 12 7.71	− 2.99

CORRECTIONS, &c.

Date.	Error of clock.	Hourly rate.	*n*	*c*
1871. h.	s.	s.	s.	s.
Feb. 9, 9.3	+ 8.32	+ 0.012	+ 0.01	− 0.15
10, 14.2	+ 8.41	+ 0.003	− 0.10	− 0.15

48. Could see but one star.

Date and observer.	OBJECT.	Number.	SECONDS OF TRANSIT OVER WIRES.												CORRECTIONS.		Observed Right Ascension.	Reduction to 1870.0.
			I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	X.	XI.	Mean wire.	Inst.	Clock.		
1871.			s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	m. s.	m. s.	s.	h. m. s.	s.
Feb. 9	2 Libræ	1	1.5	3.0	5.5	17.4	19.0	20.7	22.7	24.0	36.2	38.6	40.4	16 20.82	− 0.14	+ 8.41	14 16 29.09	− 2.94
S.	Moon II	2	. .	. .	. .	45.5	47.1	49.1	50.5	52.2	. .	. .	. .	23 48.88	0.14	8.41	14 23 57.15	
	ε Bootis	3	. .	. .	. .	9.2	10.8	12.9	14.6	16.0	. .	. .	. .	39 12.70	0.22	8.41	14 39 20.89	− 2.32
	α^2 Libræ	4	16.3	17.8	20.2	32.6	34.4	36.0	37.6	39.2	51.6	54.2	56.1	43 36.00	0.13	8.41	14 43 44.28	2.86
14	γ Geminorum	5	47.1	48.9	51.5	3.9	5.5	7.4	8.8	10.5	22.7	25.4	27.2	30 7.17	0.17	8.76	. . . .	3.73
Sk.	51 Cephei	6	. .	. .	. .	15.0	47.0	24.0	55.0	26.0	. .	. .	. .	39 21.40	3.69	8.76	. . . .	43.51
	*−30° 21′	†7	. .	. .	. .	32.7	34.7	36.8	38.8	40.4	. .	. .	. .	45 36.68	0.16	8.76	6 45 45.28	2.98
	B. A. C. 2226	8	56.3	57.9	0.6	14.1	16.1	17.8	19.7	21.5	35.0	37.7	39.6	48 17.85	0.16	8.76	6 48 26.45	3.02
	ε Canis Majoris	9	4.0	5.3	8.1	21.8	23.7	25.5	27.7	29.3	42.8	45.7	47.6	53 25.59	0.16	8.76	. . . .	3.04
	*−20° 24′	10	. .	. .	. .	13.6	16.4	18.2	29.8	32.3	34.0	35.8	38.3	23 27.30	29.88	8.76	7 23 6.18	3.27
	*−30° 59′	11	. .	. .	. .	43.0	45.8	47.7	0.4	3.2	5.1	7.2	9.6	31 57.75	− 32.66	8.76	7 31 33.85	3.19
	Lacaille 2908	†12	50.7	52.3	55.3	. .	. .	. .	. .	. .	. .	. .	. .	34 52.77	+ 19.75	8.76	7 35 21.28	3.22
	O. Arg. S. 7237	†13	. .	. .	. .	11.6	13.3	15.4	17.2	19.0	32.7	35.5	37.6	35 22.79	− 7.62	8.76	7 35 23.93	3.22
	*−23° 54′	†14	. .	56.2	58.8	11.7	13.5	15.3	17.3	19.3	31.4	34.7	. .	43 15.36	0.15	8.76	7 43 23.97	3.31
	B. A. C. 2703	15	28.6	30.2	32.9	45.8	47.4	49.4	51.2	58.0	5.8	8.5	10.0	58 49.35	0.18	8.76	7 58 57.93	4.15
	O. Arg. S. 8072	16	41.8	43.4	46.0	59.3	1.1	2.7	4.6	6.3	19.3	21.9	23.9	3 2.75	0.15	8.76	8 3 11.36	3.39
	Weisse (2) 381.	†17	. .	. .	. .	0.4	2.5	4.6	7.2	9.0	. .	. .	. .	18 4.74	0.22	8.76	8 18 13.28	4.81
	Lacaille 3422	18	40.4	42.1	45.2	59.1	1.1	3.1	5.0	6.8	20.7	23.7	25.6	31 2.98	0.16	8.76	8 31 11.58	3.44
	Weisse (2) 841.	†19	42.6	44.1	46.1	59.4	1.0	3.0	4.6	6.0	18.7	21.0	23.0	34 2.68	0.17	8.76	8 34 11.27	4.11
	*+20° 9′	†20	50.2	51.8	53.9	. .	. .	. .	. .	. .	26.4	29.0	30.8	34 10.35	0.17	8.76	8 34 18.94	4.11
	ε Hydræ	21	. .	30.9	33.3	45.5	47.2	48.7	50.5	51.9	4.0	6.2	. .	39 48.69	0.15	8.76	. . . .	3.82
	52 Cancri	22	29.7	31.0	33.1	46.0	47.7	49.5	50.9	52.5	6.1	7.7	9.6	43 49.44	0.17	8.76	8 43 58.03	4.03
	Lacaille 3595	†23	40.9	42.7	45.3	59.7	1.6	3.8	5.5	7.2	21.6	24.8	26.4	50 3.59	0.16	8.76	8 50 12.19	− 3.50
16	Polaris	24	40.0	46.0	26.0	44.0	48.5	58.0	7.0	10.0	26.0	10.0	20.0	10 57.86	3.09	9.28	. . . .	+ 13.60
Y.	β Arietis	25	0.3	2.0	4.5	17.1	18.8	20.7	22.5	24.0	36.6	39.3	41.2	47 20.64	0.12	9.28	. . . .	− 2.05
Sk.	B. A. C. 1565	26	. .	. .	. .	55.5	4.0	12.4	21.0	29.9	. .	. .	. .	1 12.56	1.08	9.54	5 1 21.02	10.30
	Groombridge 990.	27	28.7	31.1	35.2	54.1	56.6	59.3	2.2	4.5	23.6	27.5	30.2	27 59.36	0.31	9.56	5 28 8.61	4.77
	O. Arg. N. 6082	28	. .	. .	. .	39.5	44.3	49.5	54.3	58.5	. .	. .	. .	32 49.22	0.60	9.57	5 32 58.19	7.27
	Weisse (2) 328.	29	55.1	57.0	59.8	13.9	15.6	17.8	19.6	21.4	35.3	38.3	40.3	13 17.65	0.22	9.60	6 13 27.03	4.10
	μ Geminorum	30	. .	. .	. .	16.5	19.2	21.1	32.8	35.6	37.4	39.1	41.3	15 30.38	30.37	9.60	6 15 9.61	3.80
	51 Cephei	31	. .	. .	. .	13.5	46.5	21.0	56.5	26.0	. .	. .	. .	39 20.70	4.23	9.62	. . . .	43.03
	ε Canis Majoris.	32	2.8	4.4	7.4	20.7	22.7	24.5	26.5	28.3	41.9	44.7	46.5	53 24.58	0.14	9.64	6 53 34.08	3.01
	O. Arg. S. 6442	33	10.9	12.6	15.8	49.3	52.3	54.0	6.3	9.3	10.9	13.1	15.2	8 49.97	17.60	9.65	7 8 42.02	3.10
	δ Geminorum	34	55.3	57.2	59.6	12.6	14.3	16.1	17.8	19.5	32.4	35.1	36.9	12 16.07	0.19	9.65	7 12 25.53	4.00
	*−14° 26′	35	14.9	16.4	19.0	31.4	33.0	34.7	36.2	38.0	50.2	52.8	54.6	14 34.65	0.14	9.65	7 14 44.16	3.30
	*+15° 37′	36	44.2	45.8	48.0	0.0	2.2	3.9	5.6	7.4	19.6	22.1	24.0	21 3.89	0.17	9.66	7 21 13.38	3.86
	*−30° 59′	37	. .	. .	. .	20.8	23.6	24.7	26.4	28.2	. .	. .	. .	31 24.74	0.14	9.67	7 31 34.27	3.17
	*−30° 59′	38	. .	. .	. .	40.0	41.9	43.8	45.9	47.7	. .	. .	. .	31 43.86	0.14	9.67	7 31 53.39	3.17
	β Geminorum	39	54.4	56.0	58.9	12.7	14.4	16.3	18.0	19.8	33.3	36.0	38.0	37 16.16	0.20	9.67	7 37 25.63	4.21
	O. Arg. S. 7458	40	34.9	36.9	39.4	52.5	54.1	56.1	58.0	59.4	12.7	15.5	17.2	42 56.06	0.14	9.68	7 43 5.60	3.29
18	μ Geminorum	41	39.2	40.8	43.4	56.2	58.0	59.8	1.7	3.2	16.1	18.7	20.6	14 59.79	− 0.20	9.94	6 15 9.53	3.78
	51 Cephei	42	16.0	56.0	30.0	1.0	57.0	. .	. .	. .	. .	. .	. .	27 32.00	+11 53.62	9.94	. . . .	42.48
	ε Canis Majoris.	43	2.3	4.0	6.8	20.6	22.3	24.2	26.2	27.9	41.5	44.5	46.2	53 24.23	− 0.13	9.96	6 53 34.01	2.98
	δ Canis Majoris.	44	38.4	40.0	42.6	55.9	57.5	59.5	1.3	3.0	16.3	19.0	21.0	2 59.50	0.13	9.96	7 3 9.33	3.06
	Weisse 320	†45	. .	. .	. .	34.3	36.0	37.5	39.5	41.2	53.3	55.5	57.5	11 44.35	6.80	9.97	7 11 47.52	3.74
	ρ Geminorum	†46	. .	35.6	37.6	39.5	41.5	43.2	14.9	18.0	20.0	21.9	24.2	20 59.64	20.41	9.97	7 20 49.20	4.34
	B. A. C. 2521	47	. .	. .	. .	18.4	33.1	43.6	50.8	57.0	15.8	26.0	38.0	37 36.42	2 51.72	9.98	7 34 54.68	14.90
	O. Arg. S. 7443	48	2.0	3.7	6.6	19.5	21.3	23.0	24.9	26.3	39.2	42.1	43.9	42 22.95	0.13	9.99	7 42 32.81	3.27
	*−26° 6′	†49	9.3	11.0	13.5	27.0	28.6	30.4	32.4	34.3	47.3	50.2	52.0	49 30.55	− 0.13	+ 9.99	7 49 40.41	− 3.28

7. Very faint.
12. South preceding of two.
13. North following.
14. Very faint.
17. Faint.
19, 20. Same declination.
23. Fainter, and south preceding.
45, 46. Cloudy.
49. Avoided star north following.

Feb. 16. For Yarnall's observations, $n = +0^s.08$.

CORRECTIONS, &c.

Date.	Error of clock.	Hourly rate.	n	c
1871. h.	s.	s.	s.	s.
Feb. 14, 7.4	+ 8.76	+ 0.003	− 0.03	− 0.15
16, 7.0	9.64	0.051	0.06	0.15
18, 7.2	+ 9.97	+ 0.036	− 0.08	− 0.15

Date and observer.	OBJECT.	Number.	SECONDS OF TRANSIT OVER WIRES.												CORRECTIONS.		Observed Right Ascension.	Reduction to 1870.0.
			I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	X.	XI.	Mean wire.	Inst.	Clock.		
1871.			s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	m. s.	m. s.	s.	h. m. s.	s.
Feb. 18	8 Cancri	1	24.6	26.0	28.5	40.7	42.5	44.2	45.7	47.3	59.5	2.2	3.8	57 44.09	− 0.18	+10.00	7 57 53.91	− 3.89
Sk.	O. Arg. S. 7938 .	†2	. .	. .	. .	. .	. .	. .	53.2	56.3	58.1	0.0	2.2	59 57.96	39.45	10.00	7 59 28.51	3.29
	Weisse 415. . .	3	40.4	41.8	44.3	56.7	58.3	0.0	1.7	3.3	15.5	18.1	19.9	17 0.00	0.18	10.01	8 17 9.83	3.94
	Lacaille 3312 . .	4	. .	. .	. .	48.6	50.5	52.6	54.3	56.1	. .	. .	. .	19 52.42	0.13	10.01	8 20 2.30	3.37
	*+20° 29′ . . .	5	42.9	44.4	. .	59.8	1.5	3.3	5.0	6.7	. .	21.9	23.8	31 3.26	0.18	10.02	8 31 13.10	4.11
	*+20° 29′ . . .	6	. .	. .	. .	25.4	27.2	29.0	30.8	32.3	. .	. .	. .	31 28.94	0.19	10.02	8 31 38.77	4.11
	44 Cancri	7	19.0	20.4	22.7	35.5	37.0	39.1	40.8	42.4	55.0	57.5	59.3	35 38.97	0.19	10.02	8 35 48.80	4.07
	ε Hydræ	8	28.4	29.9	32.2	44.3	45.8	47.6	49.3	50.8	2.8	5.2	6.8	39 47.55	0.16	10.02	8 39 57.41	− 3.82
20	Polaris	9	38.0	41.0	22.5	40.0	46.0	55.0	3.0	7.0	21.0	5.0	13.0	10 53.77	2.65	. .	. . . .	+ 16.85
Y.	β Arietis	10	59.8	1.4	4.0	16.7	18.4	20.2	21.9	23.6	36.4	38.9	40.7	47 20.18	0.13	9.69	. . . .	− 2.00
	α Arietis	11	22.6	24.4	27.0	40.0	41.7	43.6	45.3	47.0	59.8	2.6	4.5	59 43.50	0.13	9.69	. . . .	2.11
S.	*+20° 32′ . . .	12	. .	. .	. .	30.4	31.9	33.7	35.5	37.2	. .	. .	. .	50 33.74	0.20	9.61	7 50 43.15	− 4.04
	λ Ursæ Majoris, S.P.	13	. .	. .	. .	. .	. .	. .	. .	. .	. .	42.0	1.0	8 21.50	15 59.05	9.60	. . . .	+ 105.23
	*+19° 37′ . . .	14	54.7	56.2	58.9	11.4	13.2	14.8	16.6	18.3	30.9	33.6	35.3	17 14.91	0.19	9.60	8 17 24.32	− 4.06
	B. A. C. 2885 . .	15	24.2	26.2	29.1	43.8	45.6	47.6	49.5	51.3	5.8	8.7	10.8	27 47.51	0.11	9.60	8 27 57.00	3.37
	Weisse (2) 841. .	16	41.7	43.2	45.9	58.4	0.2	2.0	3.6	5.3	18.0	20.6	22.4	34 1.94	0.20	9.60	8 34 11.34	4.10
	*+20° 9′ . . .	17	49.0	50.7	53.2	6.0	7.5	9.4	11.1	12.7	25.4	28.2	29.9	34 9.37	0.20	9.60	8 34 18.77	4.10
	ε Hydræ	18	28.5	30.0	32.4	44.6	46.1	47.8	49.4	50.9	2.9	5.5	7.1	39 47.75	0.16	9.59	. . . .	3.82
	Weisse (2) 1255 .	19	4.0	5.6	8.3	41.2	44.0	45.6	57.8	0.4	2.1	4.0	6.1	51 41.74	17.14	9.59	8 51 34.19	4.19
	Weisse (2) 1258 .	20	. .	. .	. .	27.0	28.8	30.5	32.2	33.9	. .	. .	. .	51 30.48	0.21	9.59	8 51 39.86	4.19
	κ Cancri	21	17.3	18.8	21.4	33.5	35.2	36.8	38.4	40.0	52.1	54.8	56.4	0 36.79	0.17	9.59	. . . .	3.93
	α Hydræ	22	47.1	48.6	51.0	3.0	4.5	6.3	7.9	9.4	21.5	24.0	25.6	21 6.26	0.14	9.58	. . . .	3.70
21	δ Geminorum . .	23	55.2	56.8	59.4	12.2	13.8	15.8	17.5	19.3	32.1	34.7	36.7	12 15.77	0.23	9.84	7 12 25.38	3.96
Sk.	*−18° 37′ . . .	24	54.9	56.3	59.0	11.4	13.1	14.9	16.7	18.4	30.5	33.4	35.1	23 14.88	0.11	9.84	7 23 24.61	3.22
	Weisse (2) 915. .	†25	34.7	36.2	39.1	51.7	53.7	55.3	57.3	. .	11.4	13.8	16.0	31 54.92	0.22	9.83	7 32 4.53	3.99
	Weisse (2) 1022 .	26	5.5	7.3	9.5	. .	. .	. .	. .	. .	42.1	44.7	46.5	35 25.93	0.23	9.83	7 35 35.53	4.01
	*+21° 18′ . . .	27	. .	. .	. .	27.1	29.1	30.9	32.7	34.5	. .	. .	. .	35 30.86	0.23	9.83	7 35 40.46	4.01
	O. Arg. S. 7473 .	28	7.3	9.0	11.6	25.5	27.2	29.2	31.0	32.9	46.5	49.4	51.3	43 29.17	0.08	9.83	7 43 38.92	3.18
	φ Geminorum . .	29	. .	23.4	25.0	26.8	28.8	30.6	1.0	3.7	5.4	7.4	9.3	45 46.14	− 19.46	9.83	7 45 36.51	− 4.19
	λ Ursæ Minoris, S.P.	30	. .	. .	. .	18.5	40.5	6.0	32.0	55.0	. .	. .	. .	52 6.40	+ 16.51	9.82	. . . .	+ 104.58
	O. Arg. S. 7938 .	†31	56.6	58.2	1.2	14.8	16.6	18.5	20.5	22.3	36.0	38.7	40.8	59 18.56	− 0.08	9.82	7 59 28.30	− 3.26
	*−33° 10′ . . .	32	23.6	25.4	28.1	41.9	44.0	45.3	47.6	49.4	2.9	5.6	7.8	3 45.60	0.07	9.82	8 3 55.35	3.25
	Rumker 2508 . .	33	2.2	4.9	9.2	31.2	34.1	37.0	40.3	43.2	5.0	9.5	12.5	18 37.19	0.54	9.81	8 18 46.46	6.00
	*− 9° 14′ . . .	34	57.5	59.0	1.4	13.5	15.2	16.9	18.6	20.0	32.3	34.7	36.4	30 16.86	0.12	9.81	8 30 26.55	3.58
	*+19° 45′ . . .	35	26.0	27.6	30.1	42.8	44.5	46.3	48.2	49.5	2.2	5.1	6.8	33 46.28	0.22	9.81	8 33 55.97	4.09
	*+14° 10′ . . .	36	42.4	43.9	46.4	58.6	0.4	2.2	3.8	5.5	17.6	20.3	22.0	37 2.10	0.20	9.81	8 37 11.71	3.96
	ε Hydræ	37	28.4	30.0	32.4	44.4	46.0	47.6	49.4	50.7	3.0	5.3	7.0	39 47.65	0.17	9.81	8 39 57.29	3.82
	Lacaille 3552 . .	38	22.4	24.5	27.3	41.1	42.8	44.5	46.5	48.5	2.1	5.0	7.0	44 44.70	0.08	9.81	8 44 54.43	3.46
	*−30° 42′ . . .	39	19.2	21.1	24.0	37.6	39.5	41.4	43.4	45.0	58.9	1.8	3.7	47 41.42	0.08	9.80	8 47 51.14	3.47
	Weisse (2) 1258 .	†40	9.5	11.1	14.0	26.8	28.7	30.5	32.3	34.0	46.8	49.7	51.4	51 30.44	0.23	9.80	8 51 40.01	4.19
	κ Cancri	41	17.0	18.6	21.1	33.4	34.9	36.7	38.4	40.0	52.0	54.4	56.3	0 36.62	0.18	9.80	9 0 46 24	− 3.93
27	Polaris	42	. .	. .	. .	. .	. .	. .	. .	. .	18.0	2.0	11.0	22 50.33	12 6.55	12.82	. . . .	+ 21.14
Y.	β Arietis	43	56.6	58.2	0.8	13.5	15.2	17.0	18.8	20.4	33.0	35.7	37.6	47 16.98	0.16	12.82	. . . .	+ 1.91
	α Arietis	44	19.4	21.2	24.0	. .	. .	. .	13.0	15.8	17.6	19.4	21.4	59 56.48	16.33	12.82	. . . .	− 2.01
S.	β Geminorum . .	45	51.1	52.9	55.7	9.2	10.9	12.7	14.8	16.2	30.0	32.9	34.6	37 12.82	0.21	12.99	. . . .	4.12
	φ Geminorum . .	46	2.3	3.9	6.7	20.1	21.9	23.8	25.6	27.3	40.5	43.5	45.4	45 23.73	0.21	13.00	. . . .	4.15
	*−30° 28′ . . .	47	26.1	27.9	30.8	. .	. .	. .	. .	. .	5.9	8.9	10.8	50 48.40	0.13	13.00	7 51 1.27	3.13
	*−30° 28′ . . .	48	. .	. .	. .	45.2	47.0	48.9	50.9	52.7	. .	. .	. .	50 48.94	− 0.13	13.00	7 51 1.81	3.13
	*+14° 46′ . . .	49	29.5	31.4	33.1	34.9	37.6	. .	. .	. .	. .	. .	. .	59 33.30	+ 34.97	13.00	8 0 21.27	3.87
	*+14° 45′ . . .	50	57.7	59.4	2.1	14.3	16.0	17.6	19.4	20.9	33.2	35.6	37.5	0 17.61	− 0.18	+13.00	8 0 30.43	− 3.87

CORRECTIONS, &c.

Date.	Error of clock.	Hourly rate.	n	c
1871. h.	s.	s.	s.	s.
Feb. 20, 9.0	+ 9.59	− 0.014	− 0.10	− 0.15
21, 8.2	9.82	− 0.020	0.16	0.15
27, 8.0	+ 13.00	+ 0.020	− 0.08	− 0.15

2. Avoided star fainter and following.
25. Excessively faint.
31. Avoided fainter and following.
40. Second and preceding of two.

February 20. For Yarnall's observations, $n = +0^s.09$.
27. For Yarnall's observations, $n = 0^s.00$.

27. Image west $0^r.26$; clamp west.
Image east $0^r.13$; clamp east.

Date and observer.	OBJECT.	Number.	SECONDS OF TRANSIT OVER WIRES.												CORRECTIONS.		Observed Right Ascension.	Reduction to 1870.0.
			I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	X.	XI.	Mean wire.	Inst.	Clock.		
			s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	m. s.	m. s.	s.	h. m. s.	s.
1871. Feb. 27	Weisse 294 . .	1	44.9	46.4	48.8	1.5	2.9	4.5	6.3	7.8	20.0	22.5	24.2	12 4.53	− 0.14	+13.00	8 12 17.39	− 3.45
S.	δ Hydræ	2	18.1	19.7	22.3	34.1	35.7	37.4	39.1	40.5	52.6	55.2	56.7	30 37.40	0.16	13.01	8 30 50.25	3.77
	ε Hydræ	3	. .	. .	. .	29.5	2.1	3.9	14.8	17.3	18.9	20.7	22.6	40 12.48	− 28.23	13.01	. . . .	3.80
28	ε Orionis. . . .	4	. .	. .	. .	23.3	24.9	26.4	28.1	29.7	. .	. .	. .	29 26.48	+ 0.12	13.40	5 29 40.00	− 2.86
Sk.	Moon I. . . .	5	45.1	46.7	49.6	2.7	4.3	6.3	8.0	9.8	23.1	25.7	27.3	46 6.24	0.13	13.41	5 46 19.78	
	α Orionis. . . .	6	. .	. .	. .	54.3	55.9	57.7	59.4	0.9	. .	. .	. .	47 57.64	0.12	13.41	5 48 11.17	− 3.14
	ν Orionis. . . .	7	. .	. .	. .	51.6	53.2	54.8	56.5	58.3	. .	. .	. .	59 54.88	0.12	13.41	6 0 8.41	3.36
	η Geminorum . .	8	31.1	32.8	35.6	48.4	50.0	51.7	53.6	55.3	8.3	11.0	12.6	6 51.85	0.13	13.42	6 7 5.40	3.59
	μ Geminorum . .	9	35.0	36.9	39.6	52.4	54.0	55.9	57.7	59.3	12.2	14.9	16.5	14 55.85	0.13	13.42	6 15 9.40	3.64
	γ Geminorum . .	10	42.0	43.8	46.5	58.7	0.4	2.0	3.8	5.6	18.0	20.5	21.9	30 2.11	0.13	13.43	6 30 15.67	3.54
	51 Cephei . . .	11	. .	. .	. .	59.0	31.5	4.5	39.5	13.0	. .	. .	. .	39 5.50	2.82	13.43	. . . .	38.64
	δ Canis Majoris. .	12	24.2	26.1	28.8	52.1	53.8	55.6	57.5	59.3	12.6	15.2	17.0	2 55.65	0.13	13.44	7 3 9.22	2.91
	Weisse 320 . .	13	14.0	15.7	18.2	30.4	31.9	33.5	35.2	36.9	49.0	51.5	53.1	11 33.58	+ 0.12	13.45	7 11 47.15	3.63
	*−30° 33′ . . .	†14	. .	. .	. .	. .	. .	. .	. .	28.6	30.1	32.2	34.4	13 31.32	− 40.60	13.45	7 13 4.17	2.93
	B. A. C. 2420 . .	15	58.1	0.3	3.3	17.2	18.9	20.8	22.8	24.6	38.2	41.2	43.0	13 20.76	+ 0.13	13.45	7 13 34.34	2.93
	Weisse (2) 594. .	16	32.3	34.5	37.7	53.3	55.2	57.5	59.7	1.8	17.6	20.7	22.8	21 57.55	+ 0.17	13.46	7 22 11.18	4.58
	O. Arg. S. 7445 .	17	. .	. .	. .	15.2	. .	18.6	20.5	22.3	35.9	38.5	40.4	42 27.34	− 8.47	13.47	7 42 32.34	3.11
	*−30° 32′ . . .	†18	43.0	44.8	48.1	1.9	3.4	. .	7.4	9.1	23.1	25.8	27.4	51 5.40	+ 0.13	13.47	7 51 19.00	3.12
	Lacaille 3127 . .	19	33.1	35.0	37.7	50.9	52.5	54.4	56.1	58.0	11.3	13.9	15.5	58 54.40	0.12	13.48	7 59 8.00	3.22
	O. Arg. N. 8698 .	20	. .	. .	. .	15.1	18.4	22.5	26.1	29.6	. .	. .	. .	4 22.34	0.27	13.48	8 4 36.09	6.66
	Weisse (2) 381. .	21	34.1	36.3	39.5	55.2	57.2	59.3	1.6	3.6	19.2	22.5	24.3	17 59.35	+ 0.17	13.49	8 18 13.01	4.73
	*+40° 20′ . . .	†22	. .	. .	. .	. .	. .	. .	. .	54.2	56.3	58.4	1.2	19 57.52	− 45.86	13.49	8 19 25.15	4.72
	O. Arg. S. 8776 .	23	9.9	11.5	14.4	27.4	29.1	31.0	32.7	34.4	47.3	49.9	51.5	31 30.83	+ 0.12	13.49	8 31 44.44	3.39
	Lacaille 3459 . .	24	7.2	9.3	12.2	26.4	28.2	30.3	32.2	34.2	. .	51.2	53.2	34 28.44	1.96	13.49	8 34 43.89	3.33
	*−33° 33′ . . .	25	. .	. .	. .	39.3	41.2	43.1	45.1	47.1	. .	. .	. .	34 43.16	0.14	13.49	8 34 56.79	3.33
	ε Hydræ	26	24.2	25.9	28.5	40.4	42.0	43.6	45.4	47.0	. .	. .	. .	39 37.12	6.65	13.50	8 39 57.27	3.79
	O. Arg. N. 9350 .	27	. .	. .	. .	57.0	0.3	4.0	7.9	11.3	. .	. .	. .	43 4.10	0.28	13.50	8 43 17.88	6.84
	Weisse (2) 1258 .	28	5.5	7.4	10.0	23.0	24.5	26.5	28.2	30.0	43.0	45.5	47.2	51 26.44	0.13	13.50	8 51 40.07	4.19
	*−27° 41′ . . .	29	43.6	45.6	48.4	2.0	3.6	5.3	7.3	9.0	22.5	25.3	26.9	10 5.41	0.13	13.51	9 10 19.05	3.47
	*−38° 53′ . . .	30	11.3	13.5	16.8	31.9	33.8	35.9	38.2	40.4	55.5	58.8	0.7	13 36.08	0.15	13.51	9 13 49.74	3.41
	*−28° 26′ . . .	31	49.4	51.4	54.2	7.8	9.3	11.5	13.3	15.0	28.6	31.2	33.0	17 11.34	0.13	13.52	9 17 24.99	3.46
	α Hydræ	32	42.6	44.2	46.8	58.8	0.3	1.9	3.7	5.3	17.2	19.8	21.3	21 1.99	0.12	13.52	9 21 15.63	3.69
	ζ Antliæ, (1st *). .	33	39.2	41.3	44.2	. .	. .	. .	. .	. .	19.8	22.3	24.2	25 1.83	0.13	13.52	9 25 15.48	3.45
	ζ Antliæ, (2d *) . .	34	. .	. .	. .	58.5	0.1	2.1	4.0	5.8	. .	. .	. .	25 2.10	0.13	13.52	9 25 15.75	3.45
	*−36° 21′ . . .	35	59.7	1.8	4.9	19.6	21.3	23.4	25.5	27.6	42.4	45.3	47.5	32 23.55	0.14	13.52	9 32 37.22	3.42
	ε Leonis	36	. .	59.3	2.2	15.1	16.9	18.6	20.6	22.3	35.3	38.1	. .	38 18.71	0.12	13.53	9 38 32.36	− 4.20
Mar. 1	Polaris	37	16.0	25.0	10.0	22.0	28.0	36.0	44.0	50.0	6.0	48.0	53.0	10 36.18	5.63	13.62	. . . .	+ 22.24
Y.	α Arietis	38	18.2	20.1	22.8	35.8	37.4	39.2	40.9	42.7	55.6	58.3	0.0	59 39.18	0.13	13.62	. . . .	− 1.98
S.	γ Geminorum . .	39	41.9	43.7	46.2	58.6	0.3	1.9	3.6	5.4	17.9	20.4	21.9	30 1.98	0.11	13.57	. . . .	− 3 .53
	Moon I. . . .	40	5.2	6.9	9.7	22.9	24.4	26.4	28.3	30.1	43.3	46.0	47.7	40 26.45	+ 0.11	13.56	6 40 40.12	
	51 Cephei	41	. .	. .	. .	. .	. .	. .	. .	. .	21.0	13.0	. .	44 47.00	− 5 38.90	13.56	. . . .	− 21.64
	ζ Geminorum . .	42	53.3	55.1	57.9	10.6	12.2	14.0	15.8	17.4	30.2	32.8	34.5	56 13.98	+ 0.11	13.56	6 56 27.65	3.76
	B. A. C. 2420 . .	43	. .	. .	. .	. .	. .	. .	55.6	58.7	0.5	2.3	4.6	14 0.34	− 39.39	13.56	7 13 34.51	2.88
	α² Geminorum . .	44	46.0	47.8	50.7	4.9	6.6	8.8	10.8	12.5	26.7	29.5	31.3	26 8.69	+ 0.12	13.56	7 26 22.37	4.22
	O. Arg. S. 7167 .	45	34.8	36.8	39.6	53.6	55.4	57.2	59.2	1.0	14.7	17.7	19.5	32 57.23	0.16	13.56	7 33 10.95	2.99
	O. Arg. S. 7476 .	46	15.6	17.4	20.2	33.1	34.7	36.6	38.3	40.1	53.0	55.8	57.4	43 36.56	+ 0.11	13.56	7 43 50.23	3.15
	φ Geminorum . .	47	. .	. .	. .	39.9	42.6	44.2	56.5	59.5	1.2	3.0	5.1	45 54.00	− 31.09	13.56	. . . .	4.12
	Weisse (2) 1601 .	48	. .	. .	. .	1.7	3.8	5.8	7.9	10.0	. .	. .	. .	59 5.84	+ 0.12	+13.56	7 59 19.52	− 4.56

CORRECTIONS, &c.

Date.	Error of clock.	Hourly rate.	n	c
1871. h.	s.	s.	s.	s.
Feb. 28, 7.5	+ 13.46	+ 0.032	+ 0.01	+ 0.12
Mar. 1, 7.7	+ 13.56	− 0.005	− 0.04	+ 0.12

14. Probably not the star; same field with next.
18. Close double, south, preceding.
22. Brighter and following star.

Date and observer.	OBJECT.	Number.	SECONDS OF TRANSIT OVER WIRES.												CORRECTIONS.		Observed Right Ascension.	Reduction to 1870.0.
			I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	X.	XI.	Mean wire.	Inst.	Clock.		
1871.			s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	m. s.	m. s.	s.	h. m. s.	s.
Mar. 1	*+31° 4′	1	19.0	20.8	22.8	24.7	26.6	. .	57.8	0.9	2.6	4.6	6.7	9 42.65	− 19.76	+13.56	8 9 36.45	− 4.32
S.	B. A. C. 2885	2	19.9	21.7	24.9	39.2	41.1	43.1	45.1	47.0	1.5	4.4	6.4	27 43.12	+ 0.17	13.56	8 27 56.85	3.28
	*+19° 46′	3	28.0	30.0	31.7	33.5	36.2	. .	. .	. .	. .	. .	. .	31 31.88	36.46	13.56	8 32 21.90	4.04
	ε Hydræ	4	24.2	25.8	28.3	40.2	41.9	43.6	45.3	46.9	58.8	1.3	2.9	39 43.56	+ 0.12	13.56	. . . .	3.78
2	*+38° 58′	†5	. .	. .	. .	. .	. .	. .	. .	. .	38.2	43.1	46.2	18 42.50	− 22.03	13.47	5 18 33.94	3.75
Sk.	*+38° 58′	†6	. .	. .	. .	. .	. .	. .	. .	. .	. .	58.4	1.0	18 59.70	− 23.40	13.47	5 18 49.77	3.75
	*+38° 55′	7	20.8	22.9	26.0	41.5	43.3	45.6	48.0	50.0	4.4	8.1	10.4	20 45.55	+ 0.20	13.47	5 20 59.22	3.77
	δ Orionis	8	. .	53.7	56.2	8.1	9.6	11.2	12.9	14.5	26.3	28.8	. .	25 11.26	0.11	13.47	5 25 24.84	2.82
	ε Orionis	9	7.2	8.8	11.3	23.2	24.8	26.3	28.0	29.5	41.3	43.9	45.3	29 26.33	0.12	13.47	5 29 39.92	2.82
	γ Geminorum	10	42.0	43.6	46.3	58.8	0.3	2.0	3.8	5.4	17.8	20.4	21.9	30 2.03	0.14	13.46	6 30 15.63	3.51
	51 Cephei	11	. .	. .	. .	59.0	29.5	4.0	38.0	10.5	. .	. .	. .	39 4.20	3.62	13.47	. . . .	38.32
	δ Canis Majoris	12	34.2	36.0	38.8	52.1	54.0	55.8	57.7	59.2	12.5	15.0	17.0	2 55.66	0.10	13.46	7 3 9.22	2.87
	*−29° 28′	†13	20.4	22.5	25.3	39.0	41.0	42.9	44.7	46.6	59.9	2.9	4.7	11 42.72	0.10	13.46	7 11 56.28	− 2.87
	Moon I.	14	49.3	51.2	54.0	7.3	8.8	10.6	12.3	14.3	27.5	29.8	31.8	36 10.63	0.16	13.46	7 36 24.25	
	Lalande 15329	15	57.8	59.7	3.3	15.1	16.7	18.4	20.2	21.8	34.6	37.2	38.9	45 18.52	0.15	13.46	7 45 32.13	− 3.93
	*−30° 32′	†16	43.2	45.1	48.1	1.6	3.6	5.4	7.6	9.2	22.8	26.0	27.9	51 5.50	0.10	13.46	7 51 19.06	3.09
	Weisse (2) 1601	17	41.4	43.3	46.5	1.7	3.7	6.0	7.8	9.6	25.0	27.9	29.8	59 5.70	0.20	13.46	7 59 19.36	4.55
	Lacaille 3312	18	25.8	27.8	30.7	44.8	46.5	48.4	50.3	52.2	6.1	9.1	10.9	19 48.42	0.10	13.46	8 20 1.98	3.24
	Lacaille 3459	19	7.3	9.4	12.3	26.6	28.4	30.2	32.4	34.3	48.6	51.6	53.4	34 30.41	0.10	13.46	8 34 43.97	3.31
	*−33° 33′	20	. .	. .	. .	39.5	41.2	43.3	45.3	46.9	. .	. .	. .	34 43.24	0.10	13.46	8 34 56.80	3.31
	Weisse (2) 1013	21	57.0	58.3	2.6	18.1	20.2	22.2	24.4	26.3	42.0	45.1	47.2	41 22.13	0.21	13.46	8 41 35.80	4.72
	*−31° 39′	†22	49.1	51.1	54.2	8.4	10.1	12.1	14.0	15.8	29.7	32.8	34.5	50 11.98	0.10	13.45	8 50 25.53	3.40
	κ Cancri	23	13.1	14.8	. .	29.4	30.9	32.7	34.3	35.8	. .	50.5	52.1	0 32.62	+ 0.14	13.45	9 0 46.21	3.91
	Carrington 1325	24	. .	. .	. .	. .	. .	. .	. .	. .	19.0	36.8	47.5	3 34.43	− 2 1.69	13.45	9 1 46.19	16.18
	*−27° 41′	25	44.0	45.6	48.3	1.8	3.7	5.4	7.4	9.2	22.5	25.4	27.1	10 5.49	+ 0.10	13.45	9 10 19.04	3.52
	α Hydræ	26	. .	. .	. .	17.5	19.9	21.5	32.4	35.2	36.5	38.3	40.1	21 30.18	− 27.94	13.45	9 21 15.69	3.69
4	*+20° 39′	27	. .	. .	. .	. .	. .	. .	25.8	. .	31.0	32.2	34.2	32 30.80	36.68	13.97	8 32 8.09	4.04
	*+20° 39′	28	. .	. .	. .	. .	. .	. .	51.1	53.9	55.7	57.5	59.3	32 55.50	− 36.30	13.97	8 32 33.17	4.04
	*+20° 39′	29	53.9	55.5	58.1	10.7	12.2	14.1	15.9	17.5	30.3	32.7	34.4	34 14.12	+ 0.10	13.97	8 34 28.19	4.04
	Weisse (2) 866	30	. .	. .	. .	38.9	41.0	42.6	44.5	46.2	. .	. .	. .	34 42.64	0.10	13.97	8 34 56.71	4.05
	ε Hydræ	31	23.7	25.3	27.7	39.9	41.4	43.1	44.8	46.5	58.2	0.5	2.3	39 43.04	0.11	13.97	8 39 57.12	3.76
	*−29° 52′	†32	24.8	26.8	29.5	43.7	45.2	47.0	49.0	50.8	4.5	7.4	9.2	45 47.08	0.18	13.97	8 46 1.23	3.37
	Weisse (2) 1255	33	59.2	1.4	4.0	. .	. .	. .	. .	. .	37.0	39.3	41.2	51 20.33	0.10	13.97	8 51 34.40	4.14
	Weisse (2) 1258	34	. .	. .	. .	22.5	24.0	26.2	27.9	29.5	. .	. .	. .	51 26.02	0.10	13.97	8 51 40.09	4.14
	κ Cancri	35	12.6	14.4	16.9	28.9	30.4	32.1	33.8	35.4	47.4	50.0	51.4	0 32.12	0.11	13.97	9 0 46.20	3.90
	Lacaille 3704	36	15.0	16.9	19.6	33.1	34.7	36.5	38.3	40.1	53.1	55.9	57.8	4 36.45	+ 0.17	13.97	9 4 50.59	3.49
	Lacaille 3815	37	. .	. .	. .	. .	. .	. .	34.7	38.0	39.8	41.9	44.4	19 39.76	− 43.52	13.97	9 19 10.21	3.53
	h Leonis	38	29.9	31.3	33.9	45.9	47.6	49.3	51.1	52.7	4.5	7.0	8.6	24 49.25	+ 0.11	13.98	9 25 3.34	− 3.92
	Moon I.	39	26.8	28.4	31.3	43.7	45.6	47.4	49.2	50.9	3.9	6.3	8.0	28 47.41	0.10	13.98	9 29 1.49	
	ο Leonis	40	42.8	44.5	47.2	59.3	0.6	2.3	4.2	5.8	18.1	20.4	21.9	34 2.46	0.11	13.98	9 34 16.55	− 3.93
	ε Leonis	41	57.2	59.0	1.6	15.0	16.5	18.5	20.2	21.8	34.8	37.5	39.2	38 18.30	0.10	13.98	9 38 32.38	4.20
	μ Leonis	42	50.7	52.7	55.2	8.7	10.3	12.1	13.8	15.6	28.7	31.6	33.6	45 12.09	0.10	13.98	9 45 26.17	4.24
	*−38° 45′	43	5.5	7.8	10.7	. .	. .	. .	. .	. .	49.7	52.9	54.7	55 30.22	0.21	13.98	9 55 44.41	3.73
	Lacaille 4107	44	. .	. .	. .	32.4	34.3	36.5	38.6	40.5	. .	. .	. .	55 36.46	0.21	13.98	9 55 50.65	3.73
	*−38° 45′	45	1.4	3.9	7.1	22.3	24.3	26.3	28.5	30.5	46.0	49.0	51.0	57 26.39	+ 0.21	13.98	9 57 40.58	3.74
	O. Arg. S. 10488	46	. .	. .	. .	58.6	1.5	3.2	15.6	18.9	20.4	22.4	24.6	10 13.15	− 32.07	13.98	10 9 55.06	3.75
	O. Arg. S. 10533	47	. .	. .	. .	. .	. .	. .	33.0	35.9	37.7	39.3	41.6	13 37.50	38.52	13.98	10 13 12.96	3.76
	O. Arg. S. 10540	48	. .	. .	. .	56.1	58.9	0.6	12.9	15.9	17.8	19.5	21.7	14 10.42	− 31.38	13.98	10 13 53.02	3.76
	B. A. C. 3562	49	14.6	16.2	18.8	31.0	32.4	33.9	35.9	37.5	49.3	52.1	53.6	18 34.12	+ 0.11	+13.99	10 18 48.22	− 3.95

CORRECTIONS, &c.

Date.	Error of clock.	Hourly rate.	n	c
1871. h.	s.	s.	s.	s.
Mar. 2, 7.1	+ 13.46	− 0.005	+ 0.06	+ 0.12
4, 9.9	+ 13.98	+ 0.010	− 0.07	+ 0.12

5. Excessively faint.
6. Southward of latter.
13. Followed 20 seconds by another star.
16. Close double, south preceding.
22. Followed by a star 9.8 magnitude to northward.
32. Very faint.

Date and observer.	OBJECT.	Number.	SECONDS OF TRANSIT OVER WIRES.												CORRECTIONS.		Observed Right Ascension.	Reduction to 1870.0.
			I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	X.	XI.	Mean wire.	Inst.	Clock.		
1871.			s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	m. s.	m. s.	s.	h. m. s.	s.
Mar. 4 Sk.	*−3° 53′ . . .	1	41.4	43.0	45.7	58.0	59.4	1.0	2.5	4.1	15.9	18.2	20.2	29 0.85	+ 0.12	+13.99	10 29 14.96	— 3.84
	B. A. C. 3649 . .	2	23.8	25.8	28.2	40.3	41.3	43.4	45.3	46.8	58.8	1.5	2.8	32 43.45	0.11	13.99	10 32 57.55	3.94
	Weisse 781 . .	3	48.5	50.4	52.5	4.9	6.5	8.2	10.0	11.3	23.7	26.1	28.1	44 8.20	+ 0.11	13.99	10 44 22.30	3.97
	Weisse 803 . .	4	. .	. .	. .	14.2	16.8	18.2	29.5	32.1	33.7	35.5	37.2	45 27.15	— 28.29	13.99	10 45 12.85	3.96
	δ Leonis	5	. .	. .	. .	58.1	59.8	1.3	3.1	4.8	. .	. .	. .	7 1.42	+ 0.10	13.99	11 7 15.51	4.06
	δ Crateris . . .	6	20.4	22.2	24.7	36.8	38.5	40.3	41.8	43.7	55.9	58.3	0.0	12 40.24	0.14	13.99	11 12 54.37	3.84
	32 Camelopardi, (H.)	7	. .	. .	. .	37.0	53.0	9.0	23.5	39.0	. .	. .	. .	48 8.30	0.46	14.00	11 48 22.76	14.26
6 S.	Weisse (2) 373 .	8	21.3	23.0	25.6	37.8	39.7	41.3	43.2	44.9	57.2	59.9	1.5	19 41.40	0.08	13.96	10 19 55.44	4.07
	ρ Leonis	9	28.4	30.0	32.5	44.5	46.2	47.8	49.6	51.0	3.1	5.6	7.3	25 47.82	0.10	13.96	10 26 1.88	3.96
	l Leonis	10	55.7	57.4	59.9	12.1	13.5	15.0	16.9	18.6	30.6	33.0	34.7	42 15.22	0.10	13.96	10 42 29.28	3.97
	*−33° 49′ . . .	11	18.8	20.5	23.8	38.1	39.9	41.9	43.7	45.8	0.1	2.8	5.0	47 41.85	+ 0.24	13.96	10 47 56.05	3.91
	F. Lal. 1831, (1st *)	12	. .	. .	. .	20.1	25.7	31.6	37.9	43.8	. .	. .	. .	6 31.82	— 0.06	13.97	11 6 45.73	8.04
	F. Lal. 1831, (2d *)	13	. .	. .	. .	21.7	27.5	33.2	39.9	45.3	. .	. .	. .	6 33.52	— 0.06	13.97	11 6 47.43	— 8.04
	Moon II . . .	14	2.5	4.2	6.7	19.3	20.7	22.6	24.2	25.8	38.2	40.5	42.4	21 22.46	+ 0.10	13.97	11 21 36.53	
	B. A. C. 3929 . .	15	42.2	. .	47.8	2.9	5.1	7.3	9.5	11.8	27.3	. .	32.3	27 7.36	+ 0.27	13.97	11 27.21.60	— 4.14
	υ Leonis	16	4.2	5.6	7.3	9.1	10.5	. .	37.3	40.1	41.6	43.1	45.0	30 24.38	— 16.91	13.97	11 30 21.44	3.86
	β Leonis	17	55.6	57.3	59.9	12.3	14.0	15.5	17.2	18.8	31.2	33.8	35.4	42 15.55	+ 0.09	13.97	11 42 29.61	3.88
	Lalande 22585 .	18	34.5	36.3	38.8	50.8	52.3	54.0	55.7	57.4	9.4	11.9	13.4	53 54.05	0.15	13.97	11 54 8.17	3.86
	Weisse 963 . .	†19	49.1	50.8	53.2	5.2	6.8	8.4	10.1	11.8	23.7	25.8	27.4	57 8.39	+ 0.11	13.97	11 57 22.47	3.84
	Weisse 966 . .	†20	. .	. .	. .	30.7	33.2	34.7	45.6	48.3	49.9	51.5	53.3	57 43.40	— 27.73	13.97	11 57 29.64	3.84
	Weisse (2) 107. .	21	59.5	1.0	3.6	15.8	17.3	18.8	20.4	22.1	34.2	36.8	38.4	8 18.90	+ 0.15	13.98	12 8 33.03	3.85
	Weisse 360 . .	22	58.4	0.0	2.8	14.9	16.3	18.0	19.8	21.3	33.2	35.8	37.3	22 17.98	+ 0.11	13.98	12 22 32.07	3.79
	Lacaille 5193 . .	23	. .	. .	. .	. .	. .	. .	6.8	10.3	11.9	13.0	16.3	26 11.66	— 39.80	13.98	12 25 45.84	4.09
	Groombridge 947.	24	4.6	9.4	16.7	50.9	55.0	59.8	4.6	9.6	43.0	49.8	54.0	53 59.76	— 0.03	13.98	12 54 13.71	4.97
	θ Virginis . . .	25	43.6	45.5	47.6	59.7	1.1	2.7	4.4	6.1	18.0	20.4	22.1	3 2.84	+ 0.13	13.99	13 3 16.96	— 3.73
	Polaris, S. P. . .	26	. .	. .	. .	21.0	25.0	35.0	44.0	46.0	. .	. .	. .	10 34.20	0.95	13.99	. . . .	+ 25.68
7 Y.	Polaris	27	. .	. .	. .	20.0	23.0	32.0	42.0	49.0	. .	. .	. .	10 33.20	4.88	13.84	. . . .	+ 25.96
	β Arietis	28	55.0	56.9	59.7	12.2	13.7	15.5	17.4	19.0	31.7	34.4	36.1	47 15.60	0.13	13.84	. . . .	— 1.83
	α Arietis	29	18.0	19.8	22.5	35.4	37.0	38.8	40.7	42.4	55.3	58.0	59.7	59 38.87	0.13	13.84	. . . .	1.91
14 Sk.	μ Geminorum . .	30	31.8	33.7	36.4	49.2	50.9	52.7	54.5	56.2	8.9	11.7	13.4	14 52.67	0.14	16.35	. . . .	3.40
	γ Geminorum . .	31	39.1	40.7	43.4	55.7	57.3	58.9	0.6	2.3	14.8	17.3	18.8	29 58.99	0.14	16.29	6 30 15.42	3.32
	51 Cephei	†32	. .	. .	. .	50.5	22.0	54.0	. .	. .	. .	. .	. .	38 22.17	+ 36.66	16.29	. . . .	33.49
	O. Arg. S. 5718 .	33	. .	26.4	29.1	30.9	. .	. .	43.1	46.2	47.7	49.8	51.6	43 40.60	— 31.12	16.29	6 43 25.77	2.50
	B. A. C. 2244 . .	34	18.6	20.4	23.1	36.7	38.4	40.4	42.1	43.9	57.4	0.0	1.8	44 40.25	+ 0.12	16.29	6 44 56.66	2.51
	ε Canis Majoris. .	35	55.2	57.2	59.9	13.7	15.2	17.1	19.1	20.7	34.5	37.3	38.8	53 17.15	0.12	16.29	6 53 33.56	2.54
	δ Canis Majoris. .	36	31.0	33.0	35.9	49.0	50.7	52.4	54.4	56.2	9.4	12.2	14.0	2 52.56	0.12	16.28	7 3 8.96	2.65
	*−30° 36′ . . .	†37	. .	. .	. .	1.6	3.3	5.1	7.3	9.0	. .	. .	. .	13 5.26	0.12	16.28	7 13 21.66	2.63
	B. A. C. 2420 . .	38	33.8	36.0	37.9	39.5	42.8	. .	14.0	15.8	17.7	19.7	21.5	12 57.87	19.98	16.28	7 13 34.13	2.63
	*−24° 0′ . . .	39	21.5	23.4	26.1	39.6	41.1	42.4	44.5	46.5	59.2	2.0	3.7	24 42.73	+ 0.12	16.28	7 24 59.13	2.82
	*−24° 0′ . . .	40	. .	. .	. .	. .	10.9	13.3	15.4	. .	. .	. .	. .	25 13.20	— 18.80	16.28	7 25 10.68	2.82
	*+10° 25′ . . .	†41	. .	. .	. .	. .	. .	. .	14.9	17.3	18.9	20.7	22.5	34 18.86	.34.50	16.28	7 34 0.64	— 3.50
	λ Ursæ Minoris. .	†42	. .	. .	. .	47.0	9.5	38.5	4.0	26.0	. .	. .	. .	52 37.00	— 7.76	16.28	. . . .	+ 88.49
	*+20° 40′ . . .	43	. .	. .	. .	41.7	43.4	45.0	46.8	48.7	. .	. .	. .	32 45.12	+ 0.14	16.27	8 33 1.53	— 3.94
	ε Hydræ	†44	. .	. .	. .	37.4	39.1	40.8	42.6	44.1	. .	. .	. .	39 40.80	0.13	16.27	8 39 57.20	3.67
	ζ Aquilæ	45	52.0	53.7	56.1	8.5	10.0	11.7	13.4	15.0	27.3	29.7	31.4	59 11.71	0.13	16.19	18 59 28.03	— 1.93
	Moon II . . .	46	44.6	46.3	49.1	2.7	4.3	6.1	8.2	9.7	23.3	25.9	27.6	7 6.16	0.12	16.19	19 7 22.47	
	α Aquilæ	47	52.6	54.2	56.7	8.6	10.2	12.0	13.6	15.1	27.3	29.6	31.3	44 11.93	0.13	16.18	19 44 28.24	— 1.86
15 S.	*+41° 56′ . . .	48	54.5	56.9	0.3	16.2	18.2	20 4	22.6	24.9	40.9	43.9	46.2	12 20.45	0.17	16.17	7 12 36.79	4.33
	β Geminorum . .	49	47.2	49.1	52.0	5.4	7.1	9.0	10.9	12.8	26.2	29.1	30.9	37 9.06	+ 0.14	+16.17	7 37 25.37	— 3.89

19, 20. Very faint.
32. Cloudy.
37. Cloudy.
41, 42. Cloudy.
44. Cloudy.

CORRECTIONS, &c.

Date.	Error of clock.	Hourly rate.	n	c
1871. h.	s.	s.	s.	s.
Mar. 6, 11.5	+ 13.97	+ 0.010	— 0.14	+ 0.12
7,	. .	. .	0.00	0.12
14, 11.3	+ 16.25	— 0.008	+ 0.03	0.12
15, 8.7	+ 16.16	— 0.008	0.00	+ 0.12

Date and observer.	OBJECT.	Number.	SECONDS OF TRANSIT OVER WIRES.												CORRECTIONS.		Observed Right Ascension.	Reduction to 1870.0.
			I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	X.	XI.	Mean wire.	Inst.	Clock.		
			s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	m. s.	m. s.	s.	h. m. s.	s.
1871. Mar. 15 S.	λ Ursæ Minoris. .	1	. .	. .	. .	50.0	13.0	39.5	8.0	27.0	. .	. .	. .	52 39.50	− 6.18	+16.16	. . . .	+ 87.71
	*+20° 40′ . . .	†2	. .	. .	. .	13.4	15.1	16.7	18.7	20.2	. .	. .	. .	32 16.82	+ 0.13	16.16	8 32 33.11	− 3.93
	*+20° 40′ . . .	†3	. .	. .	. .	41.7	43.4	45.2	46.9	48.8	. .	. .	. .	32 45.20	+ 0.13	16.16	8 33 1.49	3.93
	35 Lyncis	4	56.9	58.8	1.1	3.6	5.7	. .	42.9	46.8	48.8	51.1	53.7	43 24.94	− 23.58	16.16	8 43 17.52	4.77
	Weisse (2) 1255 .	5	56.7	58.7	1.6	14.4	16.1	17.9	19.5	21.4	34.4	37.0	38.7	51 17.85	+ 0.13	16.16	8 51 34.14	4.05
	α Hydræ	†6	40.0	41.5	44.1	56.0	57.7	59.3	1.0	2.6	14.6	17.0	18.5	20 59.30	0.12	16.15	9 21 15.57	3.60
	μ Leonis	†7	48.3	50.3	53.0	6.4	8.1	10.0	11.7	13.4	26.8	29.7	31.3	45 9.91	+ 0.14	16.15	9 45 26.20	− 4.19
16 Sk.	λ Ursæ Minoris, S.P.	†8	. .	. .	. .	. .	. .	. .	. .	35.0	1.0	. .	. .	0 48.00	− 8 14.33	16.65	. . . .	+ 86.91
	*+20° 39′ . . .	9	23.9	25.8	28.5	41.4	42.9	44.5	46.4	48.1	0.7	3.2	5.0	32 44.58	+ 0.17	16.66	8 33 1.41	− 3.92
	*+20° 39′ . . .	10	. .	. .	. .	. .	. .	. .	. .	51.7	52.7	54.5	56.0	32 53.72	− 37.30	16.66	8 32 33.08	3.92
	*+20° 39′ . . .	11	. .	. .	. .	. .	. .	. .	43.2	46.4	47.9	49.5	51.6	34 47.72	36.23	16.66	8 34 28.15	3.92
	Weisse (2) 866. .	12	. .	. .	. .	. .	. .	. .	11.7	14.6	16.4	18.1	20.0	35 16.16	− 36.23	16.66	8 34 56.59	3.93
	ε Hydræ	13	20.9	22.5	25.1	37.0	38.5	40.2	41.8	43.5	55.5	57.9	59.5	39 40.22	+ 0.13	16.66	. . . .	3.65
	52 Cancri	14	21.0	22.7	25.5	37.6	39.3	41.0	42.7	44.4	56.7	59.4	1.0	43 41.03	0.16	16.66	8 43 57.85	3.86
	*−29° 52′ . . .	15	54.8	57.0	59.8	13.2	15.2	17.0	19.2	21.2	34.7	37.3	39.4	46 17.16	0.08	16.66	8 46 33.90	3.22
	Weisse (2) 1255 .	16	56.5	58.3	0.8	13.9	15.6	17.3	19.1	20.6	33.7	36.3	38.2	51 17.30	0.18	16.66	8 51 34.14	4.04
	Weisse (2) 1258 .	17	2.2	3.9	6.6	. .	. .	. .	. .	. .	39.8	42.2	43.8	51 23.08	0.18	16.66	8 51 39.92	4.04
	*−27° 41′ . . .	†18	39.8	42.2	45.1	58.0	0.3	2.2	3.7	5.7	19.0	21.7	23.7	10 1.95	0.08	16.67	9 10 18.70	3.33
	α Hydræ	19	39.4	41.0	43.5	55.4	57.1	58.8	0.5	2.1	14.1	16.5	18.1	20 58.77	0.13	16.67	. . . .	3.59
	μ Leonis	20	47.9	49.6	52.4	5.8	7.5	9.2	11.2	12.8	26.3	29.0	30.7	45 9.31	0.19	16.68	. . . .	4.19
21	γ Geminorum . .	21	36.8	38.7	41.2	53.4	55.2	56.9	58.6	0.2	12.5	15.2	16.8	29 56.86	0.12	18.32	6 30 15.32	3.19
	51 Cephei	22	. .	. .	. .	44.0	16.5	52.0	35.0	57.5	. .	. .	. .	38 53.00	2.22	18.32	. . . .	30.56
	ε Canis Majoris. .	23	53.0	54.8	57.8	11.1	13.2	15.0	16.8	18.7	32.5	35.1	36.8	53 14.99	0.14	18.31	6 53 33.44	2.39
	δ Canis Majoris. .	24	29.1	30.9	33.8	47.0	48.6	50.5	52.2	54.1	7.4	10.1	11.8	2 50.50	0.14	18.31	7 3 8.95	2.51
	O. Arg. S. 6552 .	25	19.6	21.5	24.3	37.8	39.5	41.2	43.2	45.0	58.5	1.1	3.0	11 41.34	+ 0.14	18.30	7 11 59.78	2.52
	B. A. C. 2428 . .	26	3.7	5.5	7.4	9.5	12.3	. .	43.5	46.7	48.6	50.5	52.7	14 28.04	− 20.27	18.30	7 14 26.07	2.42
	O. Arg. S. 7167 .	27	29.7	31.8	34.7	48.4	50.3	52.1	54.2	56.0	9.9	12.7	14.5	32 52.21	+ 0.14	18.29	7 33 10.64	2.61
	β Geminorum . .	28	45.0	46.9	49.8	3.2	5.0	6.9	8.4	10.4	24.1	27.0	28.4	37 6.83	+ 0.13	18.29	7 37 25.25	3.78
	Lacaille 2998 . .	29	. .	. .	. .	9.3	10.9	12.7	14.5	16.1	29.1	31.9	33.4	44 19.74	− 6.94	18.29	7 44 31.09	2.83
	*+39° 39′ . . .	30	29.8	31.8	35.0	50.6	52.6	54.7	56.8	58.9	14.4	17.6	19.5	46 54.70	+ 0.15	18.29	7 47 13.14	4.27
	*−26° 6′ . . .	31	. .	. .	. .	. .	. .	. .	55.0	57.9	59.7	1.4	3.2	49 59.44	− 37.80	18.28	7 49 39.92	2.82
	ψ^2 Cancri	32	1.3	3.2	6.0	19.2	20.9	22.9	24.5	26.3	39.5	42.3	44.0	0 22.74	+ 0.13	18.28	8 0 41.15	3.87
	Weisse (2) 181. .	33	31.0	32.9	36.0	49.7	51.5	53.4	55.4	57.2	11.2	14.0	15.8	9 53.46	0.13	18.27	8 10 11.86	4.06
	B. A. C. 2883 . .	34	9.2	11.3	14.1	28.0	29.7	31.7	33.3	35.5	49.3	52.1	54.0	27 31.65	+ 0.13	18.26	8 27 50.04	3.00
	*+20° 40′ . . .	35	. .	. .	. .	30.5	33.3	35.0	. .	. .	. .	. .	. .	32 32.93	− 18.36	18.26	8 32 32.83	3.85
	*+20° 40′ . . .	36	. .	. .	. .	39.6	41.2	42.8	44.6	46.5	. .	. .	. .	32 42.94	+ 0.12	18.26	8 33 1.32	3.85
	*+20° 40′ . . .	37	49.0	51.0	53.5	6.3	8.1	9.7	11.6	13.2	25.7	28.4	30.0	34 9.68	0.12	18.26	8 34 28.06	3.86
	Weisse (2) 866. .	38	. .	. .	. .	34.8	36.4	38.2	39.7	41.9	. .	. .	. .	34 38.20	0.12	18.26	8 34 56.58	3.86
	Lacaille 3500 . .	39	2.2	4.2	7.0	20.9	22.6	24.5	26.4	28.3	42.3	45.0	46.8	39 24.56	+ 0.14	18.26	8 39 42.96	3.09
	Weisse (2) 1013 .	40	. .	. .	. .	. .	. .	. .	56.1	59.9	2.2	4.0	6.8	42 1.80	− 44.36	18.25	8 41 35.69	4.48
	α Hydræ	41	37.8	39.4	41.9	54.0	55.5	57.2	58.8	0.3	12.5	15.0	16.4	20 57.16	+ 0.12	18.23	9 21 15.51	3.55
	O. Arg. S. 9824 .	42	40.1	41.9	44.7	58.0	59.6	1.8	3.7	5.4	18.7	21.4	23.4	26 1.70	0.14	18.23	9 26 20.07	3.42
	Lalande 19022. .	43	32.4	34.6	38.2	54.3	56.5	58.6	1.1	3.3	19.8	23.0	25.0	34 58.80	0.16	18.23	9 35 17.19	4.71
	*+12° 4′ . . .	44	23.1	25.1	26.8	28.6	30.9	. .	32.7	35.2	36.8	38.7	40.4	40 1.83	0.20	18.22	9 40 20.25	3.88
	*+12° 4′ . . .	45	46.5	48.5	51.0	. .	. .	. .	. .	. .	21.9	24.4	26.0	40 6.38	+ 0.12	18.22	9 40 24.72	3.88
	B. A. C. 3345 . .	46	. .	. .	. .	. .	. .	. .	50.2	52.9	54.3	55.9	57.9	40 54.24	− 34.71	18.22	9 40 37.75	3.88
	*−38° 54′ . . .	47	. .	. .	. .	12.8	14.7	16.9	19.0	21.1	. .	. .	. .	52 16.90	+ 0.12	18.22	9 52 35.24	3.56
	α Leonis	48	52.8	54.4	57.0	9.0	10.6	12.3	14.3	15.7	28.0	30.3	32.0	1 12.40	+ 0.12	+18.21	10 1 30.73	− 3.91

CORRECTIONS, &c.

Date.	Error of clock.	Hourly rate.	*n*	*c*
1871. h.	s.	s.	s.	s.
Mar. 16, 9.3	+ 16.67	+ 0.016	+ 0.11	+ 0.12
21, 7.9	+ 18.28	− 0.032	− 0.01	+ 0.12

2. Very faint.
3. Excessively faint.
6. Blurred.
7. Much blurred.
8. Cloudy.
18. Only star in the field.

Date and observer.	OBJECT.	Number.	SECONDS OF TRANSIT OVER WIRES.												CORRECTIONS.		Observed Right Ascension.	Reduction to 1870.0.
			I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	X.	XI.	Mean wire.	Inst.	Clock.		
1871.			s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	m. s.	m. s.	s.	h. m. s.	s.
Mar. 22	Weisse (2) 1263	1	38.4	40.5	43.4	57.3	59.0	1.0	2.9	4.6	18.4	21.3	23.2	45 0.91	+ 0.17	+17.36	7 45 18.44	− 3.92
S.	α Ursæ Minoris	2	. .	. .	. .	. .	. .	. .	. .	. .	4.0	17.0	45.0	8 2.00	−15 23.06	17.35	. . . .	+ 80.95
	*+43° 12′	3	22.0	24.2	27.8	44.3	46.4	48.8	50.9	53.2	9.8	13.2	15.3	36 48.72	+ 0.22	17.33	8 37 6.27	− 4.57
	ε Hydræ	4	20.3	21.8	24.2	36.3	37.9	39.5	41.2	42.7	54.8	57.3	58.7	39 39.52	0.13	17.33	8 39 56.98	3.58
	κ Cancri	5	8.9	10.6	13.1	25.2	26.7	28.4	30.2	31.9	44.0	46.5	47.8	0 28.48	0.13	17.32	9 0 45.93	3.74
	α Hydræ	6	38.7	40.5	43.0	54.9	56.4	58.0	59.7	1.4	13.4	15.8	17.4	20 58.11	0.11	17.30	9 21 15.52	3.54
	μ Leonis	7	47.2	49.0	51.9	5.1	6.8	8.7	10.6	12.3	25.5	28.3	30.0	45 8.67	0.16	17.29	9 45 26.12	4.14
23	Σ Cat. Gen. 1044, Nd.	8	32.0	34.0	36.6	. .	. .	. .	. .	. .	7.4	10.0	11.5	39 51.92	0.13	16.76	8 40 8.81	3.66
Sk.	Σ Cat. Gen. 1044, Sd.	9	. .	. .	. .	48.8	50.3	51.9	53.8	55.3	. .	. .	. .	39 52.02	+ 0.13	16.76	8 40 8.91	3.66
	G.12-Y.C. 1879, S.P.	10	11.8	20.8	35.1	43.2	54.0	2.5	11.9	20.5	29.2	44.0	53.6	53 29.69	− 0.96	16.76	8 53 45.49	12.04
	κ Cancri	11	9.5	11.2	13.9	25.8	27.5	29.0	30.8	32.4	44.6	46.9	48.4	0 29.09	+ 0.13	16.75	. . . .	3.73
	Carrington 1325	12	. .	. .	. .	. .	. .	. .	. .	. .	12.3	29.9	41.5	3 27.90	− 2 1.75	16.75	9 1 42.90	14.43
	α Hydræ	13	39.0	41.0	43.3	55.5	56.7	58.4	0.8	1.9	13.9	16.3	17.8	20 58.60	+ 0.13	16.75	. . . .	− 3.53
24	Moon I.	14	33.7	35.5	38.2	50.6	52.0	54.0	55.7	57.4	9.8	12.3	14.0	54 53.93	0.12	16.30	2 55 10.35	
Y.	α Persei	15	19.5	22.2	25.9	44.0	46.3	48.9	51.7	54.0	12.3	16.2	18.3	14 49.03	+ 0.20	16.29	3 15 5.52	− 2.41
	η Tauri	16	. .	. .	. .	28.1	29.7	31.6	33.5	35.2	48.1	50.8	52.3	39 38.66	− 7.01	16.28	3 39 47.93	2.29
	ζ Persei	17	21.2	23.2	26.0	40.1	42.0	43.9	45.9	47.6	1.7	4.5	6.3	45 43.85	+ 0.14	16.27	3 46 0.26	2.44
	α Tauri	18	29.5	32.2	34.0	10.5	12.2	13.9	15.6	17.2	53.8	55.6	58.2	28 13.88	0.13	16.25	4 28 30.26	2.45
S.	δ Geminorum	19	27.8	30.0	31.8	33.6	36.3	. .	. .	. .	. .	. .	. .	11 31.90	37.06	16.02	7 12 24.98	3.50
	O. Arg. S. 6600	20	58.4	0.4	3.2	16.6	18.1	19.9	21.9	23.6	. .	. .	. .	13 12.76	+ 7.40	16.02	7 13 36.18	2.51
	*−26° 18′	21	. .	. .	. .	. .	. .	. .	25.2	28.4	30.0	31.9	33.9	14 29.88	− 37.84	16.02	7 14 8.06	2.51
	α¹ Geminorum	22	42.7	44.7	47.6	. .	. .	. .	. .	. .	23.4	26.2	28.1	26 5.45	+ 0.10	16.01	7 26 21.56	3.85
	α² Geminorum	23	. .	. .	. .	2.0	3.9	5.8	7.8	9.6	. .	. .	. .	26 5.82	0.10	16.01	7 26 21.93	3.85
	*−23° 56′	24	26.3	28.1	30.8	43.9	45.5	47.3	49.2	50.8	3.8	6.4	8.2	33 47.30	0.16	16.00	7 34 3.46	2.69
	Lacaille 3006	25	1.1	3.0	6.1	20.2	22.1	24.0	26.0	27.9	42.1	45.1	46.7	44 24.03	0.19	16.00	7 44 40.22	− 2.59
	λ Ursæ Minoris	26	. .	. .	. .	55.4	19.0	46.5	11.0	34.0	. .	. .	. .	52 45.20	− 2.64	16.00	. . . .	+ 78.74
	*+20° 40′	27	31.2	33.1	35.7	48.4	50.0	51.8	53.4	55.2	8.1	10.7	12.2	31 51.80	0.10	15.98	8 32 7.88	− 3.81
	*+20° 40′	28	24.9	26.5	29.2	. .	. .	. .	. .	. .	1.5	4.2	5.9	32 45.37	+ 0.10	15.98	8 33 1.45	3.81
	*+20° 40′	29	. .	. .	. .	. .	. .	. .	49.0	52.0	53.5	55.3	57.3	32 53.42	− 36.31	15.98	8 32 33.09	3.81
	*+20° 40′	30	51.6	53.4	56.2	8.7	10.3	12.1	14.0	15.7	28.4	31.0	32.6	34 12.18	+ 0.10	15.98	8 34 28.26	3.82
	*+20° 40′	31	. .	. .	. .	37.3	39.0	40.8	42.5	44.2	. .	. .	. .	34 40.76	0.10	15.98	8 34 56.84	3.82
	ε Hydræ	32	21.6	23.3	25.7	37.7	39.2	40.9	42.5	44.2	56.2	58.5	0.2	39 40.91	+ 0.11	15.97	8 39 56.99	3.55
	α Hydræ	33	. .	. .	. .	. .	. .	. .	29.6	32.4	34.0	35.6	37.5	21 33.82	− 34.28	15.95	9 21 15.49	3.52
	*−36° 8′	†34	33.5	35.6	38.7	53.3	55.2	57.2	59.2	1.2	16.0	19.2	21.0	25 57.28	+ 0.20	15.95	9 26 13.43	− 3.33
25	Polaris	35	. .	. .	. .	4.0	8.0	17.0	28.0	33.0	. .	. .	. .	10 18.00	9.16	15.50	. . . .	+ 32.05
Sk.	Moon I.	36	46.5	48.1	50.8	3.4	5.1	6.8	8.7	10.6	23.0	25.5	27.2	43 6.88	+ 0.16	15.46	3 43 22.50	
	ζ Persei	37	. .	. .	. .	2.6	5.5	7.0	19.7	22.9	24.4	26.5	28.9	46 17.19	− 32.35	15.46	3 46 0.30	− 2.42
	γ¹ Eridani	38	24.4	26.1	28.6	40.7	42.4	43.9	45.6	47.5	59.7	1.9	3.8	51 44.05	+ 0.09	15.46	3 51 59.60	+ 1.70
	ε Canis Majoris	39	55.9	57.7	0.6	14.3	15.9	17.8	19.7	21.4	34.9	37.8	39.6	53 17.78	0.12	15.52	6 53 33.42	− 2.30
	δ Canis Majoris	40	31.9	33.8	36.5	49.7	51.5	53.3	55.2	57.0	10.1	12.9	14.6	2 53.32	0.12	15.41	7 3 8.85	2.43
	O. Arg. S. 6600	41	. .	. .	. .	17.3	18.9	20.7	22.5	24.5	. .	. .	. .	13 20.78	+ 0.12	15.41	7 13 36.31	2.49
	O. Arg. S. 6623	42	5.7	7.4	9.4	11.3	12.9	. .	43.5	45.5	47.5	49.4	51.2	14 28.33	− 18.89	15.41	7 14 24.85	− 2.49
	λ Ursæ Minoris, S.P.	43	. .	. .	. .	59.0	26.5	52.0	18.0	40.0	. .	. .	. .	52 51.10	− 6.96	15.40	. . . .	+ 77.69
	*+20° 39′	†44	. .	. .	. .	17.0	18.6	20.5	22.1	23.9	. .	. .	. .	32 20.42	+ 0.14	15.39	8 32 35.95	− 3.80
	*+20° 39′	45	. .	. .	. .	42.5	44.2	45.9	47.5	49.4	2.1	4.6	6.2	32 52.80	− 6.79	15.39	8 33 1.40	3.80
	44 Cancri	46	12.6	14.4	17.0	29.5	31.1	33.0	34.6	36.3	49.0	51.5	53.2	35 32.93	+ 0.14	15.39	8 35 48.46	3.76
	Carrington 1325	†47	. .	. .	. .	5.7	16.0	28.1	. .	52.4	. .	. .	. .	1 25.55	3.90	15.39	9 1 44.84	14.22
	B. A. C. 5255	48	. .	. .	. .	26.2	28.0	30.0	31.9	33.5	. .	. .	. .	25 29.92	0.16	15.38	9 25 45.46	4.16
	ε Leonis	49	55.6	57.5	0.1	13.3	15.0	16.5	17.4	20.2	33.3	36.0	37.7	38 16.60	0.15	15.38	9 38 32.13	4.06
	Lacaille 4031	†50	37.1	39.3	42.1	56.7	58.5	0.4	2.5	4.4	18.7	21.7	23.7	43 0.46	+ 0.12	+15.38	9 43 15.96	− 3.45

34. Only star in the field.
44. Avoided star north preceding.
47. Very faint.
50. Observed as one star.

March 24. For Stone's observations $n = -0^{s}.07$.

CORRECTIONS, &c.

Date.	Error of clock.	Hourly rate.	n	c
1871. h.	s.	s.	s.	s.
Mar. 22, 9.2	+ 17.31	− 0.036	+ 0.05	+ 0.12
23, 9.2	16.75	0.024	0.05	0.12
24, 3.8	16.27	0.030	0.01	0.12
24, 8.4	+ 15.98	− 0.030	+ 0.01	+ 0.12

Date and observer.	OBJECT.	Number.	SECONDS OF TRANSIT OVER WIRES.												CORRECTIONS.		Observed Right Ascension.	Reduction to 1870.0.
			I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	X.	XI.	Mean wire.	Inst.	Clock.		
1871.			s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	m. s.	m. s.	s.	h. m. s.	s.
Mar. 25 Sk.	μ Leonis	1	. .	. .	. .	6.9	8.7	10.6	12.4	14.1	. .	. .	. .	45 10.54	+ 0.16	+15.37	9 45 26.07	− 4.12
	O. Arg. S. 10241 .	†2	30.9	32.4	35.0	48.6	50.7	52.4	54.5	56.4	9.7	11.9	14.1	50 52.42	0.12	15.37	9 51 7.91	3.52
	B. A. C. 3456 . .	3	11.0	13.0	15.9	30.0	31.9	33.6	35.5	37.6	51.7	54.5	56.3	0 33.73	0.18	15.37	10 0 49.28	4.40
	γ^1 Leonis	4	16.2	18.0	20.6	33.3	34.9	36.6	38.4	40.1	52.9	55.6	57.3	12 36.72	0.14	15.37	10 12 52.23	4.08
	Weisse (2) 373. .	5	19.9	21.5	24.2	36.7	38.3	40.1	41.8	43.5	56.0	58.6	0.0	19 40.05	0.14	15.37	10 19 55.56	4.02
	*+37° 45′ . . .	6	28.2	30.2	33.5	48.3	50.2	52.3	54.5	56.4	11.6	14.7	16.8	22 52.43	+ 0.20	15.37	10 23 8.00	4.47
	*+37° 45′ . . .	7	. .	. .	. .	50.8	54.0	56.1	9.5	13.1	15.0	17.3	19.6	24 6.92	− 34.92	15.37	10 23 47.37	4.47
	44 Ursæ Majoris . .	8	. .	. .	. .	57.4	1.7	4.0	23.3	28.3	30.9	33.7	36.9	46 19.52	48.47	15.36	10 45 46.41	− 5.26
28	Moon I . . .	†9	. .	. .	. .	. .	. .	. .	59.4	2.3	3.8	5.7	8.0	18 3.84	− 37.48	13.95	6 17 40.31	
	γ Geminorum . .	10	41.1	43.0	45.6	57.9	59.3	1.1	3.0	4.5	17.0	19.5	21.0	30 1.18	+ 0.11	13.95	6 30 15.24	− 3.07
	δ Canis Majoris .	11	. .	. .	. .	51.2	52.9	54.6	56.4	58.0	. .	. .	. .	2 54.62	0.16	13.93	7 3 8.71	2.36
	*−30° 58′ . . .	12	10.0	11.6	14.5	28.6	30.4	32.2	34.1	36.0	50.4	52.7	54.7	13 32.29	+ 0.17	13.92	7 13 46.38	2.32
	*−30° 12′ . . .	13	. .	. .	. .	. .	. .	. .	13.3	16.7	18.6	20.2	22.4	44 18.24	− 39.24	13.91	7 43 52.91	2.56
	O. Arg. S. 7505 .	14	. .	. .	. .	41.8	43.8	46.7	0.4	2.2	4.0	6.0	7.9	43 56.60	+ 7.67	13.91	7 44 18.18	− 2.56
	λ Ursæ Minoris, S.P.	15	. .	. .	. .	1.5	24.0	54.0	21.0	39.0	. .	. .	. .	52 51.90	− 3.32	13.90	. . . .	+ 74.83
	*+23° 2′ . . .	16	14.9	16.4	19.2	32.2	33.8	35.7	37.6	39.3	52.1	54.5	56.5	35 35.65	+ 0.11	13.88	8 35 49.64	− 3.82
	*−32° 39′ . . .	17	47.5	49.5	52.4	6.8	8.4	10.3	12.3	14.3	28.5	31.3	33.2	38 10.41	+ 0.18	13.88	8 38 24.47	2.92
	α Mali	18	. .	. .	. .	. .	. .	. .	46.5	50.0	51.6	53.8	55.9	38 51.56	− 40.28	13.88	8 38 25.16	2.92
	*−42° 40′ . . .	†19	26.2	29.0	33.0	48.0	49.9	52.2	54.5	56.6	13.0	15.8	18.3	45 52.41	+ 0.21	13.88	8 46 6.50	2.85
	*−33° 34′ . . .	20	. .	. .	. .	55.0	56.5	58.6	0.8	2.3	. .	. .	. .	49 58.64	0.18	13.87	8 50 12.69	3.00
	κ Cancri	21	12.4	13.9	16.7	28.7	30.2	32.0	33.5	35 3	47.6	49.9	51.3	0 31.95	+ 0.11	13.87	9 0 45.93	3.67
	Carrington 1325 .	†22	. .	. .	. .	15.7	25.9	46.2	4.6	22.2	33.0	45.2	58.7	4 46.44	− 3 17.05	13.86	9 1 43.25	13.89
	α Hydræ	23	42.0	43.6	46.1	58.1	59.6	1.3	3.0	4.7	16.7	19.2	20.7	21 1.36	+ 0.13	13.86	9 21 15.35	3.46
	O. Arg. S. 9824 .	24	44.2	46.2	48.9	2.5	4.6	6.0	7.9	9.5	23.0	26.8	27.3	26 6.08	0.16	13.85	9 26 20.09	3.32
	ε Leonis	25	57.2	58.7	1.9	14.7	16.3	18.2	19.9	21.6	34.9	37.5	39.2	38 18.19	0.11	13.85	9 38 32.15	4.04
	*−37° 42′ . . .	26	28.4	30.4	33.6	48.5	50.3	52.4	54.5	56.7	11.5	14.5	16.5	41 52.48	0.19	13.85	9 42 6.52	3.39
	μ Leonis	27	50.5	52.4	55.4	8.6	10.3	12.1	14.1	15.8	29.1	31.8	33.5	45 12.15	0.11	13.84	9 45 26.10	4.09
Apr. 3 S.	μ Leonis	28	51.5	53.3	56.2	9.5	11.3	13.0	15.1	16.8	30.1	32.7	34.3	45 13.07	+ 0.15	12.82	. . . .	4.01
	*+69° 5′ . . .	29	. .	. .	. .	. .	. .	. .	4.7	11.7	16.2	20.5	26.4	59 15.90	− 1 34.97	12.82	9 57 53.75	6.81
	Lalande 19627. .	30	. .	. .	. .	. .	. .	. .	39.4	46.7	50.9	55.6	0.8	59 50.68	1 34.97	12.82	9 58 28.53	6.81
	Groombridge 1633	31	. .	. .	. .	8.4	29.5	41.2	13.8	36.4	48.9	3.3	18.8	18 55.04	− 3 53.58	12.82	10 15 14.28	15.14
	ρ Leonis	32	29.3	31.0	33.5	45.5	47.1	48.9	50.4	52.0	4.0	6.6	8.2	25 48.77	+ 0.13	12.82	. . . .	3.86
	Lalande 20849. .	33	. .	. .	. .	18.2	23.1	27.8	32.9	37.8	. .	. .	. .	44 27.96	0.46	12.82	10 44 41.24	6.97
	υ Leonis	34	. .	. .	. .	5.3	6.8	8.6	10.2	11.9	. .	. .	. .	30 8.56	+ 0.12	12.82	11 30 21.50	− 3.93
	Mars I	35	. .	. .	. .	17.8	20.1	21.5	32.4	35.4	36.9	38.5	40.4	41 30.38	− 27.78	12.82	11 41 15.42	
	Mars II . . .	†36	. .	. .	. .	0.4	1.8	3.5	5.0	6.8	. .	. .	. .	41 3.50	+ 0.12	12.82	11 41 16.44	
	ο Virginis . . .	37	6.6	8.4	11.0	23.0	24.5	26.2	27.9	29.5	41.5	43.9	45.6	58 26.19	0.13	12.82	. . . .	− 3.98
	Weisse (2) 107. .	38	0.8	2.4	5.0	17.0	18.6	20.1	21.9	28.5	35.7	38.0	39.7	8 20.25	+ 0.12	12.83	12 8 33.20	− 4.03
4 Sk.	λ Ursæ Minoris, S.P.	39	. .	. .	. .	16.0	37.5	5.5	32.5	54.0	. .	. .	. .	53 5.10	− 8.34	13.01	. . . .	+ 67.56
	ψ^2 Cancri	40	6.6	8.2	11.0	24.3	25.9	27.8	29.7	31.4	44.5	47.3	49.0	2 27.79	+ 0.15	13.01	8 2 40.95	− 3.64
	O. Arg. S. 8887 .	41	21.9	23.7	26.4	39.5	41.2	42.9	44.8	46.5	59.5	2.2	3.8	36 42.95	0.11	12.98	8 36 56.04	2.92
	O. Arg. N. 9342 .	42	. .	. .	. .	49.5	54.1	59.2	4.5	9.2	. .	. .	. .	42 59.30	+ 0.48	12.98	8 43 12.76	7.11
	O. Arg. N. 9342 .	43	. .	. .	. .	47.4	55.2	0.2	34.1	42.4	46.2	54.4	58.1	44 27.25	− 1 26.28	12.97	8 43 13 94	7.11
	κ Cancri	44	13.1	14.8	17.3	29.5	31.1	32.7	34.4	36.1	48.2	50.6	52.2	0 32.73	+ 0.13	12.96	9 0 45.82	3.58
	Lalande 18122, (1st*)	†45	49.6	52.4	56.4	. .	. .	. .	. .	. .	47.0	51.1	53.5	5 21.67	0.26	12.96	9 5 34.89	4.95
	Lalande 18122, (2d *)	†46	. .	. .	. .	17.9	20.6	23.3	26.2	28.9	. .	. .	. .	5 23.38	0.25	12.96	9 5 36.59	4.95
	α Hydræ	47	42.9	44.5	47.0	59.2	0.6	2.2	3.9	5.6	17.5	20.1	21.6	21 2.28	0.12	12.95	9 21 15.35	3.38
	B. A. C. 3255 . .	48	10.1	12.0	15.0	28.5	30.2	32.1	34.1	35.9	49.6	52.2	54.0	25 32.15	0.16	12.94	9 25 45.25	4.03
	Lalande 19022. .	49	37.6	39.7	43.1	59.4	1.4	3.9	6.0	8.2	24.8	27.9	30.0	35 3.82	0.20	12.94	9 35 16.96	4.46
	ε Leonis	50	57.9	59.7	2.4	15.5	17.2	19.0	20.8	22.3	35.7	38.3	40.0	38 18.98	+ 0.15	+12.93	9 38 32.06	− 3.95

CORRECTIONS, &c.

Date.	Error of clock.	Hourly rate.	n	c
1871. h.	s.	s.	s.	s.
Mar. 25, 7.3	+ 15.41	− 0.014		
1^h–4^h	. .	. .	+ 0.13	+ 0.12
6^h–7^h	. .	. .	+ 0.02	0.12
28, 8.6	+ 13.88	− 0.032	− 0.05	0.12
Apr. 3, 10.7	12.82	+ 0.004	+ 0.04	0.12
4, 10.7	+ 12.89	− 0.043	+ 0.04	+ 0.12

2. Exceedingly faint.
9. Cloudy.
19. Following of three stars.
22. Very faint.
36. Unsteady.
45. Southward.
46. Northward.

April 4. Image $0^r.00$; clamp east.
Image $0^r.43$: clamp west.

Date and observer.	OBJECT.	Number.	SECONDS OF TRANSIT OVER WIRES.												CORRECTIONS.		Observed Right Ascension.	Reduction to 1870.0.
			I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	X.	XI.	Mean wire.	Inst.	Clock.		
1871.			s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	m. s.	m. s.	s.	h. m. s.	s.
April 4	*—37° 12′ . . .	1	29.1	31.4	34.4	49.3	51.3	53.3	55.3	57.5	12.2	15.2	17.4	41 53.31	+ 0.12	+12.93	9 42 6.36	— 3.28
Sk.	Lalande 19627. .	2	. .	. .	. .	5.8	10.6	14.6	19.4	24.1	. .	. .	. .	58 14.90	0.43	12.92	9 58 28.25	6.78
	*+69° 5′ . . .	3	. .	. .	. .	54.2	57.7	2.9	7.7	11.9	. .	. .	. .	59 2.88	+ 0.43	12.92	9 59 16.23	6.78
	B. A. C. 3456 . .	4	. .	. .	. .	53.8	56.8	58.6	11.6	14.6	16.4	18.5	20.5	1 8.85	— 32.68	12.92	10 0 49.09	4.19
	*—37° 24′ . . .	5	10.5	12.5	15.6	30.8	32.5	34.6	36.8	38.7	53.8	56.8	58.8	28 34.67	+ 0.12	12.90	10 28 47.69	3.68
	O. Arg. S. 10952 .	6	. .	. .	. .	52.9	54.7	56.7	58.4	0.4	. .	. .	. .	46 56.62	0.12	12.89	10 47 9.63	3.77
	*+9° 22′ . . .	7	5.9	7.5	10.2	22.2	23.7	25.4	27.0	28.5	40.7	43.2	44.6	55 25.35	0.13	12.88	10 55 38.36	3.92
	B. A. C. 3792 . .	8	13.3	15.3	18.4	33.1	34.8	36.9	39.0	41.0	55.5	58.4	0.4	58 36.92	+ 0.12	12.88	10 58 49.92	3.88
	δ Leonis	9	42.0	43.9	46.4	. .	0.8	2.5	4.3	6.0	18.8	21.4	23.1	7 2.92	— 0.20	12.87	11 7 15.59	4.08
	Lacaille 4805 . .	10	42.0	44.0	47.0	1.1	3.0	5.0	7.3	9.1	23.4	26.4	28.2	30 5.14	+ 0.12	12.86	11 30 18.12	— 4.08
	Mars I	11	29.2	30.9	33.3	. .	. .	. .	. .	. .	3.9	6.4	7.8	39 48.58	0.12	12.85	11 40 1.55	
	Mars II . . .	12	. .	. .	. .	46.5	47.9	49.6	51.3	52.8	. .	. .	. .	39 49.62	0.12	12.85	11 40 2.59	
	B. A. C. 4010 . .	13	55.9	57.9	1.2	16.4	18.4	20.6	22.8	24.7	40.0	43.1	45.0	45 20.55	+ 0.19	12.84	11 45 33.58	— 4.35
	Weisse (2) 1079 .	†14	. .	7.8	11.1	27.7	29.7	32.3	34.5	36.6	53.2	56.7	58.6	55 34.82	— 2.45	. .	11 55 45.21	4.46
	Lacaille 5071 . .	15	46.9	49.0	52.0	5.9	7.6	9.5	11.4	13.4	27.3	30.3	32.2	7 9.59	+ 0.12	12.83	12 7 22.54	4.25
	η Virginis . . .	16	47.3	48.9	51.4	3.2	4.8	6.3	8.0	9.6	. .	. .	. .	12 59.94	6.60	12.83	12 13 19.37	4.01
	12 Comæ	17	27.6	29.7	32.4	45.8	47.4	49.1	51.2	53.0	6.2	9.0	10.7	15 49.28	0.15	12.83	12 16 2.26	4.11
	Weisse 360 . .	18	59.7	1.4	3.9	16.0	17.5	19.2	20.9	22.4	34.5	36.9	38.5	22 19.17	0.13	12.82	12 22 32.12	4.02
	*+5° 27′ . . .	†19	9.6	11.2	13.8	. .	. .	. .	. .	. .	44.1	46.5	48.1	24 28.88	0.12	12.82	12 24 41.82	4.02
	*+5° 27′ . . .	†20	. .	. .	. .	31.2	32.8	34.5	36.1	37.7	. .	. .	. .	24 34.46	0.12	12.82	12 24 47.40	— 4.02
	Moon I. . . .	21	33.3	34.7	37.5	49.6	51.2	52.8	54.6	56.3	8.3	11.0	12.5	41 52.89	0.12	12.80	12 42 5.81	
	Moon II . . .	22	48.9	50.3	53.0	5.1	6.5	8.2	10.0	11.7	23.7	26.4	27.9	44 8.34	0.16	12.80	12 44 21.30	
	38 Virginis . . .	23	3.7	5.5	7.9	19.9	21.2	22.9	24.6	26.2	38.2	40.6	42.2	46 22.99	0.12	12.80	12 46 35.91	— 4.05
	κ Virginis . . .	24	. .	. .	. .	45.8	47.3	49.0	50.6	52.2	. .	. .	. .	52 48.98	0.12	12.80	12 53 1.90	4.06
	48 Virginis . . .	25	44.6	46.2	48.7	0.5	2.2	3.9	5.5	7.2	19.1	21.5	22.8	57 3.84	0.12	12.79	12 57 16.75	4.06
	θ Virginis . . .	26	45.2	46.8	49.3	1.2	2.8	4.4	6.1	7.8	19.7	22.2	23.5	3 4.45	+ 0.12	12.79	13 3 17.36	4.07
6	ρ Leonis	27	30.7	32.6	34.9	47.0	48.6	50.3	52.0	53.5	5.5	8.0	9.7	25 50.25	— 0.13	11.60	. . . .	— 3.83
	Moon II . . .	28	9.8	11.6	14.1	26.6	28.1	30.0	31.8	33.3	45.8	48.3	50.0	37 29.95	0.18	11.58	14 37 41.35	
	α Libræ	29	14.4	16.0	18.4	30.9	32.5	34.3	36.0	37.5	49.9	52.5	54.3	43 34.25	0.19	11.58	. . . .	— 4.21
7	β Libræ	30	34.1	35.7	38.3	50.3	51.9	53.6	55.2	56.7	8.8	11.3	13.0	9 53.54	0.17	11.51	15 10 4.88	4.05
S.	γ Libræ	31	48.5	50.0	52.5	4.8	6.4	8.1	9.9	11.4	23.7	26.5	28.1	28 8.17	0.18	11.51	15 28 19.50	— 3.76
	Moon II . . .	32	. .	4.2	6.7	19.6	21.3	23.2	24.9	26.5	39.2	42.0	. .	37 23.07	0.18	11.51	15 37 34.40	
	ε Serpentis . . .	33	53.4	55.1	57.4	9.2	10.9	12.7	14.3	15.7	27.7	30.3	31.9	44 12.60	0.14	11.51	15 44 23.97	— 3.75
	ζ Ursæ Minoris . .	34	3.5	10.4	22.7	20.7	28.5	36.5	44.8	52.3	50.5	2.5	10.6	48 36.63	0.20	11.51	15 48 47.94	2.76
	δ Scorpii	35	11.4	. .	15.6	. .	30.2	32.0	33.8	35.4	48.3	51.0	52.7	52 34.49	2.71	11.51	15 52 43.29	4.29
	β¹ Scorpii	36	. .	27.0	29.8	42.3	44.0	45.8	47.5	49.2	1.7	4.3	6.2	57 47.78	2.22	11.51	15 57 57.07	4.20
8	α Hydræ	37	44.1	45.6	48.2	0.1	2.0	3.5	5.0	6.7	18.7	21.2	22.8	21 3.45	0.16	12.04	9 21 15.33	3.33
Sk.	ε Leonis	38	59.2	0.7	3.4	16.4	18.0	20.0	21.8	23.5	36.6	39.3	41.1	38 20.00	0.12	12.04	9 38 31.92	3.89
	*+0° 42′ . . .	39	54.8	56.2	58.7	10.6	12.1	13.9	15.5	16.9	29.0	31.3	33.2	57 13.84	0.15	12.04	10 57 25.73	3.84
	δ Leonis	40	43.1	44.7	47.4	0.2	1.9	3.8	5.4	7.0	19.8	22.5	24.2	7 3.64	0.12	12.04	11 7 15.56	4.05
	*+38° 17′ . . .	†41	4.2	6.2	9.2	24.6	26.4	28.5	30.6	32.9	47.8	50.9	53.0	14 28.57	0.11	12.04	11 14 40.50	4.36
	τ Leonis	42	48.1	49.6	52.0	4.0	5.6	7.3	8.9	10.4	22.3	24.7	26.5	21 7.22	0.14	12.04	11 21 19.12	3.92
	Weisse 349. . .	43	30.3	32.1	34.0	35.4	38.0	. .	38.4	40.9	42.5	44.2	46.3	21 8.21	0.22	12.04	11 21 20.03	3.92
	B. A. C. 3929 . .	44	45.0	47.1	50.3	5.7	7.9	10.0	11.9	14.0	29.7	32.9	35.0	27 9.95	0.29	12.04	11 27 21.70	4.12
	Lacaille 5066 . .	45	21.9	23.7	26.7	40.9	42.7	44.7	46.6	48.5	2.6	5.7	7.7	6 44.70	0.25	12.03	12 6 56.48	4.20
	12 Comæ	46	. .	. .	. .	46.8	48.5	50.3	52.3	54.0	7.3	9.9	11.8	15 57.61	— 7.36	12.03	12 16 2.28	4.22
	Polaris, S. P. . .	47	. .	. .	. .	17.0	21.5	32.0	39.0	45.0	. .	. .	. .	10 30.90	+ 1.63	12.03	. . . .	33.14
11	*+37° 33′ . . .	48	58.6	0.4	3.5	18.5	20.6	22.6	24.7	26.6	41.7	44.9	46.9	36 22.64	— 0.01	11.00	8 36 33.63	3.99
	ε Hydræ	49	. .	. .	. .	42.6	44.2	45.8	47.5	49.0	. .	. .	. .	39 45.82	— 0.12	+11.00	8 39 56.70	— 3.29

14. Brighter of two and southward.
19. Southward.
20. Northward.
41. Excessively faint.
46. Northward of two stars.
47. Unsteady.

CORRECTIONS, &c.

Date.	Error of clock.	Hourly rate.	*n*	*c*
1871. h.	s.	s.	s.	s.
April 6, 12.6	+ 11.59	— 0.004	+ 0.11	— 0.15
7, 15.7	11.51	0.004	0.11	0.15
8, 10.4	12.04	0.004	0.11	0.15
11, 13.5	+ 10.86	— 0.028	+ 0.24	— 0.15

Date and observer.	OBJECT.	Number.	SECONDS OF TRANSIT OVER WIRES.												CORRECTIONS.		Observed Right Ascension.	Reduction to 1870.0.
			I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	X.	XI.	Mean wire.	Inst.	Clock.		
1871.			s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	m. s.	m. s.	s.	h. m. s.	s.
Apr. 11	α Hydræ	1	45.2	46.8	49.2	1.2	2.9	4.5	6.0	7.6	19.6	22.1	23.9	21 4.46	— 0.19	+10.97	9 21 15.24	— 3.29
Sk.	ε Leonis	2	0.1	1.7	4.4	17.5	19.2	21.1	22.8	24.4	37.6	40.3	42.2	38 21.03	0.05	10.97	9 38 31.95	3.86
	*—37° 12'	3	. .	. .	. .	14.6	17.7	19.7	33.5	36.9	38.5	40.6	43.3	42 30.60	35.35	10.97	9 42 6.22	3.16
	μ Leonis	4	53.6	55.3	58.0	11.4	13.2	15.0	16.8	18.6	31.8	34.7	36.5	45 14.99	— 0.05	10.96	9 45 25.90	3.91
	*+69° 5'	5	11.0	15.0	21.5	. .	0.1	5.2	9.4	. .	46.7	54.6	58.7	59 4.69	+ 0.19	10.96	9 59 15.84	6.51
	*—29° 21'	6	. .	. .	. .	38.4	41.3	43.1	56.0	58.7	0.5	2.3	4.8	43 53.14	— 32.28	10.94	10 43 31.80	3.68
	*+37° 0'	†7	54.5	56.4	59.5	14.5	16.3	18.4	20.6	22.4	37.5	40.6	42.5	55 18.47	0.01	10.93	10 55 29.39	4.30
	O. Arg. S. 11114	8	29.5	31.2	33.9	. .	. .	. .	. .	. .	8.7	11.7	13.7	58 51.45	0.31	10.93	10 59 2.07	3.79
	*—29° 47'	†9	. .	. .	. .	. .	. .	. .	. .	35.3	36.8	38.7	40.7	59 37.87	40.89	10.93	10 59 7.91	3.79
	δ Leonis	10	44.2	45.8	48.5	1.2	3.0	4.7	6.4	8.1	20.9	23.6	25.5	7 4.72	0.06	10.93	11 7 15.59	4.03
	γ Aquilæ	11	37.4	38.8	41.4	53.4	55.1	56.7	58.3	59.9	12.1	14.5	16.3	39 56.72	0.11	10.69	19 40 7.30	2.61
	α Aquilæ	12	59.2	0.6	3.0	15.3	16.9	18.5	20.1	21.8	33.7	36.3	37.9	44 18.48	0.12	10.69	19 44 29.05	— 2.66
	Moon II	13	38.0	39.5	42.4	55.8	57.5	59.4	1.3	3.0	16.4	19.1	21.0	50 59.40	0.27	10.68	19 51 9.81	
	α^2 Capricorni	14	23.4	24.6	27.2	39.6	40.9	42.7	44.5	46.1	58.2	1.0	2.6	10 42.80	— 0.21	10.67	20 10 53.26	— 2.87
	Polaris	†15	. .	. .	. .	20.0	20.0	30.0	40.0	. .	. .	. .	. .	9 57.50	+ 36.76	10.53	. . . .	+ 32.82
12	β Orionis	16	49.8	51.4	53.9	5.8	7.4	9.2	10.8	12.4	24.4	27.0	28.7	8 9.16	— 0.19	10.37	. . . .	— 1.87
Y.	β Tauri	17	35.1	36.7	39.6	53.1	54.9	56.9	58.7	0.4	14.0	16.9	18.8	17 56.83	0.04	10.37	. . . .	2.67
14	F. Lal. 1831, (1st *)	18	. .	. .	. .	24.5	30.1	36.3	42.5	48.0	. .	. .	. .	6 36.28	0.11	8.47	11 6 44.64	7.37
S.	F. Lal. 1831, (2d *)	19	. .	. .	. .	26.0	32.3	38.3	44.4	50.0	. .	. .	. .	6 38.20	0.11	8.47	11 6 46.56	7.37
	δ Crateris	20	26.5	28.0	30.6	43.0	44.4	46.2	47.8	49.5	1.6	4.3	6.0	12 46.17	0.18	8.47	11 12 54.46	3.80
	τ Leonis	21	. .	. .	. .	7.4	9.0	10.8	12.3	13.9	. .	. .	. .	21 10.68	0.14	8.48	11 21 19.02	3.89
	υ Leonis	22	54.1	55.4	57.9	10.2	11.5	13.2	14.8	16.2	28.3	30.7	32.4	30 13.16	0.15	8.48	11 30 21.49	3.89
	β Leonis	23	. .	. .	. .	18.0	19.6	21.1	22.8	24.4	. .	. .	. .	42 21.18	0.12	8.49	11 42 29.55	3.96
	Lalande 22585	24	40.8	42.1	44.7	56.9	58.5	0.1	1.7	3.2	15.4	17.9	19.5	54 0.07	0.17	8.49	11 54 8.39	3.96
	3 Canum Venat.	25	. .	. .	. .	43.3	47.0	49.9	6.7	10.5	12.9	15.6	18.6	14 3.06	43.17	8.50	12 13 28.39	4.54
	Weisse 360	26	4.4	6.1	9.8	20.7	22.3	24.0	25.6	27.1	39.2	41.6	43.4	22 24.02	0.14	8.51	12 22 32.39	4.02
	θ Virginis	27	50.0	51.5	53.9	5.8	7.4	8.9	10.5	12.0	24.2	26.5	28.3	3 9.00	— 0.16	8.53	. . . .	— 4.13
	Polaris, S. P.	28	. .	. .	. .	25.0	25.0	34.0	42.0	50.0	. .	. .	. .	10 35.20	+ 1.23	8.53	. . . .	+ 32.68
Y.	α Andromedæ	29	11.8	13.7	16.3	29.7	31.6	33.7	35.5	37.3	50.8	53.8	55.6	1 33.62	— 0.02	8.28	. . . .	— 1.59
	Polaris	†30	21.0	40.0	51.0	54.0	44.0	. .	. .	. .	. .	. .	. .	46 54.00	+23 42.72	8.28	. . . .	+ 32.67
15	l Leonis	31	1.7	3.3	5.8	18.0	19.6	21.3	23.0	24.5	36.4	39.1	40.8	42 21.23	— 0.14	8.03	10 42 29.12	— 3.82
Sk.	*—33° 49'	32	25.1	26.8	30.0	44.3	46.1	48.1	50.2	52.2	6.4	9.6	11.5	47 48.21	0.22	8.02	10 47 56.01	3.68
	*+ 0° 42'	33	58.7	0.1	2.5	14.6	16.1	17.7	19.4	21.0	32.8	35.3	36.9	57 17.74	0.15	8.02	10 57 25.61	3.79
	δ Crateris	34	26.9	28.5	30.7	43.2	44.8	46.6	48.3	49.8	3.2	4.6	6.4	12 46.64	0.17	8.01	11 12 54.48	3.80
	τ Leonis	35	52.0	53.5	55.9	7.7	9.3	11.0	12.8	14.3	26.1	28.6	30.5	21 11.06	0.15	8.01	11 21 18.92	— 3.88
	Mars. I	36	12.5	14.6	16.0	17.6	20.4	. .	21.0	23.5	25.0	26.8	28.6	28 50.60	0.22	8.00	11 28 58.38	
	Mars. II	37	32.2	33.8	36.2	48.2	49.9	51.6	53.4	54.8	6.7	9.2	10.7	28 51.52	0.14	8.00	11 28 59.38	
	Groombridge 1830	38	1.2	3 0	6.1	21.3	23.4	25.5	27.5	29.6	44.8	48.0	50.0	45 25.48	0.15	8.00	11 45 33.33	— 4.30
	Lalande 22585	39	41.0	42.5	45.0	57.2	58.8	0.4	2.3	3.7	15.9	18.4	20.0	54 0.47	0.16	7.99	11 54 8.30	3.98
	Groombridge 1860	40	. .	. .	. .	. .	. .	33.5	49.3	6.0	5.6	30.0	46.1	9 8.42	1 34.83	7.98	12 7 41.57	13.64
	3 Canum Venat.	41	51.0	53.2	57.1	15.5	17.9	20.7	23.3	25.4	43.7	47.8	50.3	13 20.54	0.16	7.98	12 13 28.36	4.54
	Weisse (2) 880	42	59.3	1.0	3.3	15.4	17.0	18.6	20.4	21.9	34.0	36.5	38.1	52 18.68	0.16	7.96	12 52 26.48	4.15
	θ Virginis	43	50.5	52.0	54.3	6.4	8.0	9.5	11.2	12.8	24.8	27.2	28.9	3 9.60	— 0.15	7.96	. . . .	— 4.13
	Polaris, S. P.	44	. .	. .	. .	23.5	25.0	32.0	39.0	47.0	. .	. .	. .	10 33.30	+ 3.77	7.95	. . . .	+ 32.64
18	ε Leonis	45	4.7	6.4	9.1	22.1	23.9	25.7	27.5	29.2	42.2	45.0	46.8	38 25.69	— 0.12	6.25	9 38 31.82	— 3.75
	μ Leonis	46	58.3	59.9	2.7	16.0	17.8	19.6	21.5	23.2	36.5	39.2	41.2	45 19.63	0.11	6.24	9 45 25.76	3.81
	Groombridge 1633	47	. .	. .	. .	38.8	51.8	6.2	20.3	33.4	. .	. .	. .	15 6.10	0.32	6.22	10 15 12.00	13.28
	ρ Leonis	48	36.2	37.6	40.2	52.3	53.8	55.5	57.2	58.8	10.9	13.3	15.0	25 55.53	0.13	6.21	10 26 1.61	3.72
	Weisse 520	49	42.2	43.7	46.2	58.4	0.0	1.8	3.4	4.9	17.0	19.6	21.2	30 1.67	— 0.17	+ 6.20	10 30 7.70	— 3.56

CORRECTIONS, &c.

Date.	Error of clock.	Hourly rate.	n	c
1871. h.	s.	s.	s.	s.
April 14, 11.8	+ 8.49	+ 0.030	+ 0.12	— 0.15
15, 11.6	8.00	— 0.029	0.06	0.15
18, 10.8	+ 6.19	— 0.046	+ 0.11	— 0.15

7. Another faint star south preceding.
9. Excessively faint.
15. Cloudy.
30. Very unsteady.

Date and observer.	OBJECT.	Number.	SECONDS OF TRANSIT OVER WIRES.												CORRECTIONS.		Observed Right Ascension.	Reduction to 1870.0.
			I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	X.	XI.	Mean wire.	Inst.	Clock.		
1871.			s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	m. s.	m. s.	s.	h m. s.	s.
Apr. 18	Lalande 20849. .	1	. .	. .	. .	24.8	29.5	34.8	39.6	44.1	. .	. .	. .	44 34.56	− 0.13	+ 6.19	10 44 40.62	− 6.45
Sk.	Weisse 963 . .	2	5.5	7.1	9.8	23.0	24.6	26.4	28.2	29.9	42.9	45.6	47.2	48 26.38	0.12	6.19	10 48 32.45	3.96
	δ Leonis	3	49.0	50.7	53.1	6.0	7.5	9.4	11.3	12.9	25.6	28.2	30.1	7 9.44	0.12	6.18	11 7 15.50	3.98
	δ Crateris . . .	4	28.8	30.4	33.0	45.2	46.7	48.5	50.2	51.8	4.1	6.5	8.3	12 48.50	0.18	6.17	11 12 54.49	3.78
	τ Leonis	5	53.8	55.2	57.7	9.8	11.3	12.9	14.6	16.1	28.1	30.6	32.4	21 12.95	0.14	6.16	11 21 18.97	− 3.86
	Mars I	6	9.4	11.2	12.7	14.5	17.0	. .	17.6	20.2	21.8	23.5	25.5	26 47.34	0.22	6.16	11 26 53.28	
	Mars II . . .	7	28.9	30.4	33.0	45.0	46.4	48.1	49.8	51.4	3.2	5.8	7.4	26 48.13	0.14	6.16	11 26 54.15	
	υ Leonis	8	56.3	57.8	0.4	12.3	13.8	15.5	17.1	18.7	30.6	33.0	34.7	30 15.47	0.15	6.16	11 30 21.48	− 3.87
	β Leonis	9	3.7	5.3	7.9	20.3	21.9	23.6	25.3	26.8	39.1	41.7	43.5	42 23.55	0.16	6.15	11 42 29.54	3.93
	Groombridge 1830	10	23.2	25.2	27.3	29.5	31.3	. .	6.0	9.1	11.3	13.4	15.9	45 49.22	− 22.02	6.15	11 45 33.35	4.27
	Weisse (2) 1076 .	11	2.2	4.1	7.6	. .	. .	. .	. .	. .	. .	. .	. .	55 4.63	+ 23.84	6.14	11 55 34.61	4.38
	Weisse (2) 1086 .	12	24.8	26.8	30.2	46.6	48.8	51.3	53.5	55.6	12.1	15.6	17.9	55 51.20	− 0.11	6.14	11 55 57.23	4.38
	Weisse (2) 1079 .	13	. .	. .	. .	. .	. .	. .	. .	. .	. .	29.1	31.6	56 30.35	− 51.30	6.14	11 55 45.19	− 4.38
	Polaris, S. P. . .	†14	. .	. .	. .	28.5	29.0	36.5	46.0	50.0	. .	. .	. .	10 38.00	+ 1.36	6.08	. . . .	+ 32.19
20	ε Leonis	15	4.7	6.2	9.0	22.1	23.9	25.7	27.3	29.0	42.2	44.8	46.7	38 25.60	− 0.04	6.21	9 38 31.77	− 3.73
	μ Leonis	16	58.2	59.9	2.6	15.9	17.6	19.6	21.3	23.1	36.4	39.2	41.0	45 19.53	− 0.03	6.22	9 45 25.72	3.78
	*+69° 5′ . . .	17	15.5	19.9	26.7	59.4	4.0	8.7	11.4	17.5	51.1	58.0	2.7	59 8.63	+ 0.36	6.24	9 59 15.23	6.13
	Groombridge 1618	18	16.8	19.3	21.8	24.5	26.7	. .	9.0	12.9	15.5	18.1	21.0	3 48.56	− 26.55	6.24	10 3 28.25	4.54
	Weisse 520 . .	19	42.0	43.7	46.1	58.2	59.9	1.6	3.2	4.8	16.8	19.5	21.1	30 1.54	0.23	6.27	10 30 7.58	3.54
	l Leonis	20	3.6	5.0	7.4	19.6	21.3	22.9	24.7	26.2	38.4	40.9	42.5	42 22.95	0.10	6.28	10 42 29.13	3.77
	*−23° 30′ . . .	†21	10.7	12.5	15.0	28.2	29.9	31.9	33.5	35.3	48.1	50.8	53.0	47 31.72	− 0.30	6.29	10 47 37.71	3.61
	Lalande 2194 . .	22	47.4	49.4	52.3	7.4	9.4	11.4	13.5	15.3	30.1	33.3	35.4	56 11.35	+ 0.03	6.30	10 56 17.68	4.19
	δ Leonis	23	48.7	50.3	53.0	5.8	7.4	9.3	11.0	12.6	25.3	28.0	29.9	7 9.21	− 0.05	6.31	11 7 15.47	3.96
	δ Crateris . . .	24	28.6	30.2	32.6	45.0	46.5	48.4	50.0	51.6	3.9	6.5	8.1	12 48.31	− 0.24	6.31	11 12 54.38	3.76
	τ Leonis	25	53.7	55.0	57.6	9.6	11.2	12.8	14.5	16.1	27.9	30.4	32.0	21 12.89	0.14	6.32	11 21 19.07	3.85
	υ Leonis	26	56.1	57.6	0.1	12.1	13.6	15.3	17.0	18.4	30.3	32.9	34.6	30 15.27	0.16	6.33	11 30 21.44	3.86
	*+15° 17′ . . .	27	. .	. .	. .	. .	. .	. .	14.6	17.5	19.1	20.9	23.0	42 19.02	35.56	6.34	11 41 49.80	3.97
	*+15° 17′ . . .	28	. .	. .	. .	55.5	57.1	58.8	0.5	2.1	. .	. .	. .	41 58.80	0.09	6.34	11 42 5.05	3.97
	Groombridge 1860	29	. .	. .	. .	. .	. .	. .	. .	. .	4.0	29.4	44.3	10 25.90	2 50.33	6.38	12 7 41.95	13.19
	*+5° 27′ . . .	30	. .	. .	. .	. .	. .	. .	6.0	8.3	10.1	11.8	13.7	25 9.98	34.51	6.39	12 24 41.86	4.03
	*+5° 27′ . . .	31	. .	. .	. .	56.4	58.8	0.3	. .	. .	15.6	17.2	19.2	25 7.92	26.93	6.39	12 24 47.38	4.03
	θ Virginis . . .	32	51.9	53.6	56.1	7.9	9.5	11.2	12.8	14.3	26.1	28.6	30.3	3 11.12	0.19	6.43	. . . .	− 4.14
	Polaris, S. P. . .	33	. .	. .	. .	35.5	36.0	46.0	54.5	58.5	. .	. .	. .	10 46.10	6.47	6.44	. . . .	+ 31.58
22	ο Virginis . . .	34	13.6	15.1	17.7	29.6	31.3	33.0	34.7	36.2	48.2	50.9	52.6	58 32.99	0.11	6.25	. . . .	− 3.94
Y.	η Virginis . . .	35	54.1	55.7	58.1	10.1	11.7	13.3	14.9	16.4	28.3	30.9	32.5	13 13.27	− 0.16	6.25	. . . .	− 4.00
	Polaris, S. P. . .	36	28.0	36.0	19.0	. .	. .	. .	. .	. .	. .	. .	. .	58 47.67	+11 52.93	6.25	. . . .	+ 30.85
24	α Orionis. . . .	37	45.7	47.3	49.8	1.8	3.4	5.0	6.8	8.3	20.2	22.7	24.4	48 5.04	− 0.12	5.43	. . . .	− 2.26
	Moon I. . . .	38	4.2	5.8	8.5	21.7	23.5	25.4	27.3	29.0	42.1	45.0	46.8	57 25.39	0.06	5.43	5 57 30.76	
	μ Geminorum . .	39	42.3	44.1	46.6	59.6	1.3	3.1	4.9	6.6	19.3	22.1	23.9	15 3.07	0.06	5.43	. . . .	− 2.70
S.	α Leonis	40	. .	. .	. .	40.6	43.2	44.9	56.0	58.8	0.3	2.1	4.0	1 53.74	28.65	5.28	10 1 30.37	3.56
	γ^1 Leonis	41	. .	. .	. .	2.8	5.4	7.2	18.8	21.7	23.3	25.1	27.1	13 16.42	29.82	5.27	10 12 51.87	3.76
	ρ Leonis	42	37.0	38.6	41.0	53.0	54.7	56.4	58.1	59.6	11.7	14.3	16.0	25 56.40	0.11	5.26	10 26 1.55	3.66
	Weisse 520 . .	43	43.0	44.6	47.0	59.2	0.8	2.6	4.2	5.8	17.9	20.4	22.1	30 2.52	0.22	5.26	10 30 7.56	3.49
	l Leonis	44	. .	6.0	8.6	20.7	22.4	24.0	25.7	27.2	39.4	42.0	43.5	42 25.95	2.05	5.25	10 42 29.15	3.73
	*−31° 4′ . . .	†45	. .	. .	. .	. .	. .	. .	36.2	39.2	41.0	42.9	45.3	50 40.92	40.31	5.24	10 50 5.85	3.58
	O. Arg. S. 11114 .	†46	. .	. .	. .	53.4	55.2	57.1	59.2	1.0	. .	. .	. .	58 57.18	− 0.35	5.24	10 59 2.07	3.65
	F. Lal. 1831, (1st *)	47	28.5	34.0	43.0	26.2	32.2	38.6	44.6	50.5	33.7	43.1	49.2	6 38.51	+ 0.40	5.23	11 6 44.14	6.90
	F. Lal. 1831, (2d *)	48	30.3	35.9	44.5	28.4	34.2	40.4	46.4	52.0	35.5	44.6	50.9	6 40.28	+ 0.40	5.23	11 6 45.91	6.90
	δ Crateris . . .	49	29.6	31.1	33.7	46.0	47.6	49.3	51.0	52.6	4.8	7.3	9.1	12 49.28	− 0.23	+ 5.23	11 12 54.28	− 3.73

14. Unsteady; very faint at times.
21. Northward of two stars.
45. Scarcely visible.
46. Observed the brighter of two.

CORRECTIONS, &c.

Date.	Error of clock.	Hourly rate.	n	c
1871. h.	s.	s.	s.	s.
April 20, 11.0	+ 6.30	+ 0.064	+ 0.31	− 0.16
22, 12.1	6.26	. .	0.28	0.16
24, 11.2	+ 5.23	− 0.038	+ 0.28	− 0.16

Date and observer.	OBJECT.	Number.	SECONDS OF TRANSIT OVER WIRES.												CORRECTIONS.		Observed Right Ascension.	Reduction to 1870.0.
			I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	X.	XI.	Mean wire.	Inst.	Clock.		
1871.			s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	m. s.	m. s.	s.	h. m. s.	s.
Apr. 24 S.	Mars I	1	37.2	38.7	41.2	. .	. .	. .	. .	. .	11.5	14.1	15.9	23 56.43	— 0.13	+ 5.22	11 24 1.52	
	Mars II . . .	2	. .	. .	. .	54.1	55.3	57.1	58.8	0.2	. .	. .	. .	23 57.10	— 0.13	5.22	11 24 2.19	
	υ Leonis	3	38.6	40.5	42.4	43.8	46.4	. .	. .	. .	. .	. .	. .	29 42.34	+ 33.90	5.22	11 30 21.46	— 3.83
	Weisse 558 . .	4	. .	. .	. .	48.5	50.2	52.0	53.7	55.3	. .	. .	. .	32 51.94	— 0.11	5.22	11 32 57.05	3.84
	*+15° 17′ . . .	5	. .	. .	. .	12.7	14.3	16.2	17.8	19.4	. .	. .	. .	42 16.08	0.09	5.21	11 42 21.20	3.94
	β Leonis	6	. .	. .	. .	40.1	42.5	44.4	55.5	58.4	59.9	1.7	3.8	42 53.29	— 28.98	5.21	11 42 29.52	3.89
	67 Ursæ Majoris . .	7	37.1	39.7	42.1	44.0	47.7	. .	. .	. .	. .	. .	. .	54 42.12	+ 47.26	5.20	11 55 34.58	4.33
	Weisse (2) 1079 .	8	13.2	15.2	18.6	. .	. .	. .	. .	. .	. .	4.1	6.2	55 35.46	4.22	5.20	11 55 44.88	4.33
	Weisse (2) 1086 .	9	25.3	27.4	30.8	47.0	49.6	51.9	54.3	56.3	12.7	16.2	18.6	55 51.83	+ 0.04	5.20	11 55 57.07	4.33
	Weisse (2) 107. .	10	. .	. .	. .	24.9	26.4	28.2	30.0	31.4	. .	. .	. .	8 28.18	— 0.21	5.20	12 8 33.17	4.00
	η Virginis . . .	11	55.3	56.7	59.1	11.1	12.7	14.3	16.0	17.5	29.2	32.0	33.6	13 14.32	0.16	5.19	12 13 19.35	3.99
	ο Virginis . . .	12	53.2	54.5	57.2	9.0	11.8	12.4	14.1	15.5	27.4	30.0	31.7	3 12.41	0.19	5.16	13 3 17.41	— 4.15
	Polaris, S. P. . .	13	. .	. .	. .	33.5	36.0	45.0	56.0	58.5	. .	. .	. .	10 45.80	— 4.40	5.15	. . . .	+ 30.17
29 Sk.	μ Leonis	14	59.6	1.4	4.0	17.2	19.0	20.9	22.7	24.4	37.8	40.7	42.4	45 20.92	+ 0.02	4.63	9 45 25.57	— 3.64
	Lalande 19627. .	15	28.2	32.7	40.4	13.6	17.8	22.5	27.2	31.2	4.3	11.5	16.5	58 22.35	+ 0.55	4.63	9 58 27.53	5.72
	γ^1 Leonis	16	26.8	28.5	30.9	43.8	45.4	47.2	49.1	50.6	3.2	5.8	7.7	12 47.18	— 0.03	4.63	10 12 51.78	— 3.70
	Moon I. . . .	17	6.3	7.7	10.5	23.1	24.5	26.3	28.2	29.7	42.3	45.0	46.8	27 26.40	0.07	4.63	10 27 30.96	
	l Leonis	18	4.9	6.6	9.2	21.2	22.8	24.5	26.2	27.9	40.0	42.3	44.1	42 24.52	0.09	4.63	10 42 29.06	— 3.67
	*—29° 47′ . . .	†19	42.1	43.5	46.1	0.2	2.2	3.9	5.6	7.4	20.6	23.8	25.8	59 3.75	0.40	4.63	10 59 7.98	3.59
	δ Crateris . . .	20	30.3	31.8	34.3	46.7	48.2	50.0	51.5	53.1	5.4	7.9	9.5	12 49.88	0.27	4.63	11 12 54.24	— 3.68
	Mars I	21	35.1	36.8	39.0	. .	. .	. .	. .	. .	9.4	12.0	13.6	22 54.32	0.12	4.63	11 22 58.83	
	Mars II . . .	22	. .	. .	. .	51.8	53.5	55.0	56.7	58.5	. .	. .	. .	22 55.10	0.12	4.63	11 22 59.61	
	Weisse 558 . .	23	33.1	34.6	37.2	49.3	51.0	52.4	54.3	55.8	8.0	10.4	12.1	32 52.56	0.09	4.63	11 32 57.10	— 3.86
	O. Arg. S. 12254 .	24	38.7	40.3	42.8	55.8	57.6	59.4	1.1	2.8	15.7	18.3	20.2	27 59.34	0.34	4.63	12 28 3.63	4.19
	Weisse 764 . .	25	29.0	30.5	32.9	44.6	46.2	48.8	49.7	51.7	3.0	5.4	7.0	45 48.07	0.17	4.62	12 45 52.52	4.07
	θ Virginis . . .	26	53.9	55.3	57.8	9.7	11.3	12.9	14.7	16.3	28.2	30.6	32.3	3 13.00	0.19	4.62	. . . .	— 4.15
	Polaris, S. P. . .	†27	. .	. .	. .	. .	44.5	53.0	5.0	6.0	. .	. .	. .	11 27.12	— 42.27	4.62	. . . .	+ 28.83
May 1 S.	τ Leonis	28	38.0	39.9	41.6	42.9	45.7	. .	. .	. .	. .	. .	. .	20 41 62	+ 33.99	3.28	11 21 18.89	— 3.76
	Mars I	29	. .	14.3	16.0	17.6	20.2	. .	20.8	23.3	24.9	26.4	. .	22 50.44	— 0.18	3.28	11 22 53.54	
	Mars II. . . .	30	. .	33.5	35.8	48.0	49.4	51.2	52.7	54.4	6.3	8.8	10.4	22 53.05	2.04	3.28	11 22 54.29	
	υ Leonis	31	. .	. .	. .	15.0	16.4	18.1	20.0	21.5	. .	. .	. .	30 18.20	0.16	3.28	11 30 21.32	— 3.78
	ο Virginis . . .	32	. .	18.1	20.5	32.7	34.3	36.0	37.6	39.2	51.2	53.6	. .	58 35.91	0.10	3.27	11 58 39.08	— 3.89
	Moon I. . . .	33	59.6	0.9	3.5	15.7	17.6	19.2	21.0	22.6	34.6	37.3	39.0	14 19.18	0.14	3.27	12 14 22.31	
	β Corvi	34	. .	. .	. .	31.4	33.2	35.0	36.8	38.5	. .	. .	. .	27 34.98	0.33	3.27	12 27 37.92	— 4.18
	θ Virginis . . .	35	55.3	56.7	59.2	11.1	12.7	14.5	16.1	17.6	29.6	32.2	33.8	3 14.44	0.19	3.25	13 3 17.50	— 4.15
	Polaris, S. P. . .	36	. .	. .	. .	44.0	43.0	55.5	3.5	5.0	. .	. .	. .	10 54.20	8.79	3.25	. . . .	+ 28.15
10	Polaris, S. P. . .	37	. .	. .	. .	. .	50.0	4.0	9.0	7.0	. .	. .	. .	11 32.50	— 43.26	0.61	. . . .	+ 23.51
	ζ Virginis . . .	38	48.5	50.0	52.6	4.7	6.1	7.6	9.3	10.8	22.8	25.2	26.7	28 7.66	+ 0.12	0.60	13 28 8.38	— 4.16
	*—12° 9′ . . .	39	43.1	49.8	52.5	4.4	6.3	7.9	9.5	10.1	23.3	26.0	27.4	34 7.85	+ 0.10	0.60	13 34 8.55	4.35
	*+15° 37′ . . .	†40	. .	. .	. .	28.0	30.8	32.3	43.5	46.0	47.8	49.7	51.2	39 41.16	— 28.67	0.60	13 39 13.09	4.09
	*—22° 20′ . . .	41	36.6	38.7	40.6	42.3	45.0	. .	50.0	53.1	54.6	56.4	58.5	50 47.68	+ 0.16	0.60	13 50 48.44	4.61
	ι Virginis . . .	42	56.5	58.0	0.5	12.4	14.0	15.7	17.3	18.9	30.9	33.3	34.8	9 15.66	0.11	0.59	14 9 16.36	4.36
	ε Bootis	43	0.1	2.0	4.9	18.3	20.0	21.8	23.6	25.5	38.8	41.7	43.5	39 21.84	0.20	0.58	14 39 22.62	4.04
	α^2 Libræ	44	25.2	27.1	29.7	42.1	43.7	45.4	47.2	48.8	1.1	3.5	5.3	43 45.37	0.09	0.58	14 43 46.04	4.62
	α^2 Capricorni. . .	45	33.7	35.4	38.2	50.5	52.0	53.8	55.5	57.0	9.2	11.7	13.2	10 53.65	+ 0.09	0.47	20 10 54.21	3.77
	ζ Cygni	46	. .	. .	. .	43.7	46.8	48.3	0.7	4.0	5.5	7.5	9.7	7 58.28	— 31.76	0.45	21 7 26.97	2.69
	β Aquarii . . .	47	26.2	27.6	30.2	42.2	43.8	45.2	47.1	48.8	0.8	3.1	4.6	24 45.42	+ 0.11	0.45	21 24 45.98	— 3.17
	Moon II . . .	48	23.3	25.1	27.9	40.9	42.4	44.2	46.1	47.9	0.9	3.4	5.1	30 44.29	0.08	0.44	21 30 44.81	
	ε Pegasi	49	30.8	32.5	35.0	47.1	48.6	50.3	52.0	53.6	5.5	8.1	9.6	37 50.28	+ 0.15	+ 0.44	21 37 50.87	— 2.89

CORRECTIONS, &c.

Date.	Error of clock.	Hourly rate.	n	c
1871. h.	s.	s.	s.	s.
Apr. 29, 11.0	+ 4.63	— 0.003	+ 0.38	— 0.16
May 1, 12.1	3.27	0.020	0.38	— 0.16
10, 18.2	+ 0.51	— 0.020	+ 0.12	+ 0.12

19. Observed brighter and following of two.
27. Unsteady.
40. Very faint.

May 3. Image west 0r.85 ; clamp west.
Image west 0r.42 ; clamp east.
10. Image east 0r.28 ; clamp east.

Date and observer.	OBJECT.	Number.	SECONDS OF TRANSIT OVER WIRES.												CORRECTIONS.		Observed Right Ascension.	Reduction to 1870.0.
			I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	X.	XI.	Mean wire.	Inst.	Clock.		
1871.			s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	m. s.	m. s.	s.	h. m. s.	s.
May 13	Mars I	1	42.7	44.4	46.8	58.9	0.4	2.1	3.6	5.2	17.3	19.7	21.1	26 2.02	+ 0.12	+ 0.63	11 26 2.77	
Sk.	Mars II . . .	2	24.6	26.6	28.4	29.8	32.4	. .	32.9	35.4	36.9	38.6	40.5	26 2.61	0.20	0.63	11 26 3.44	
	Weisse 558 . .	3	36.7	38.3	40.9	53.0	54.5	56.0	57.9	59.5	11.6	14.1	15.7	32 56.20	0.13	0.64	11 32 56.97	− 3.73
	β Leonis	4	8.7	10.4	13.0	25.3	26.9	28.6	30.3	31.8	44.3	46.8	48.5	42 28.60	0.13	0.64	11 42 29.37	3.74
	Weisse 963 . .	5	2.3	4.0	6.5	18.4	20.1	21.7	23.4	25.0	36.7	39.3	40.8	57 21.65	0.12	0.64	11 57 22.41	3.82
	Weisse 966 . .	6	50.7	52.6	54.3	55.8	58.6	. .	58.8	1.3	3.0	4.6	6.4	57 28.61	0.20	0.64	11 57 29.45	3.82
	η Virginis . . .	7	59.2	0.9	3.3	15.2	16.8	18.5	20.2	21.7	33.6	36.1	37.4	13 18.45	0.12	0.65	12 13 19.22	3.88
	*−31° 41′ . . .	8	16.6	18.5	21.4	35.6	37.4	39.2	41.2	43.0	57.2	0.0	1.6	26 39.25	0.13	0.65	12 26 40.03	4.22
	*−31° 41′ . . .	9	. .	. .	. .	11.3	13.1	15.0	17.1	18.8	. .	. .	. .	27 15.06	0.13	0.65	12 27 15.84	4.22
	O. Arg. S. 12455 .	10	27.6	29.6	32.3	45.3	46.9	48.7	50.6	52.4	5.3	8.1	9.7	42 48.77	+ 0.12	0.66	12 42 49.55	4.23
	*−26° 39′ . . .	11	. .	. .	. .	. .	. .	. .	. .	13.3	15.0	17.0	19.0	49 16.07	− 39.12	0.66	12 48 37.61	4.32
	O. Arg. S. 12523 .	12	26.2	28.1	30.8	44.3	45.9	47.5	49.6	51.4	4.6	7.2	9.2	48 47.71	+ 0.13	0.66	12 48 48.50	4.32
	O. Arg. S. 12533 .	13	27.8	29.7	32.4	45.9	47.3	49.4	51.2	53.0	6.2	9.0	10.9	49 49.35	0.13	0.66	12 49 50.14	4.32
	O. Arg. S. 12691 .	14	42.7	44.6	46.5	48.2	50.9	. .	56.6	59.5	0.1	2.9	4.8	3 23.68	0.20	0.67	13 3 24.55	4.36
	O. Arg. S. 12694 .	15	11.6	13.5	16.3	29.4	31.0	32.7	34.5	36.2	49.2	51.8	53.4	3 32.69	+ 0.12	0.67	13 3 33.48	4.36
	Polaris, S. P. . .	16	. .	. .	. .	48.5	53.5	1.0	8.5	12.0	. .	. .	. .	11 0.70	− 5.85	0.67	. . . .	22.15
	ι Virginis . . .	17	35.2	36.9	39.5	51.5	53.1	54.8	56.6	58.2	10.5	12.8	14.5	19 54.87	+ 0.12	0.67	13 19 55.66	4.29
	O. Arg. S. 12959 .	18	17.3	19.4	21.9	35.8	37.2	39.0	41.1	42.9	56.1	58.8	0.5	27 39.09	0.13	0.67	13 27 39.89	4.57
	*+18° 35′ . . .	19	48.4	50.1	52.8	4.7	6.3	8.0	9.0	11.3	23.6	26.3	27.6	34 8.01	0.13	0.67	13 34 8.81	4.07
	Weisse (2) 899. .	20	54.7	56.4	59.0	11.6	13.2	14.9	16.6	18.4	31.0	33.6	35.1	43 14.95	0.13	0.68	13 43 15.76	4.05
	*−22° 20′ . . .	†21	52.2	54.2	57.3	12.1	14.0	16.1	18.1	20.1	34.9	37.8	39.7	46 16.05	0.12	0.68	13 46 16.85	4.59
	*−22° 20′ . . .	22	56.9	58.8	1.4	14.3	16.1	17.8	19.5	21.2	34.2	37.0	38.4	50 17.78	0.12	0.68	13 50 18.58	4.59
	Weisse (2) 1167 .	23	20.8	. .	25.4	38.2	39.9	41.7	43.6	45.4	58.3	. .	2.6	53 41.77	0.14	0.68	13 53 42.59	4.07
	ε Bootis	24	0.2	1.9	4.8	18.3	19.9	21.6	23.7	25.4	38.9	41.6	43.4	39 21.79	0.14	0.70	14 39 22.63	4.05
	α^2 Libræ	25	25.3	27.1	29.5	42.1	43.6	45.4	47.0	48.8	1.1	2.5	5.2	43 45.24	+ 0.12	+ 0.70	14 43 46.06	− 4.64
16	Polaris, S. P. . .	26	. .	. .	. .	53.5	58.5	7.0	11.5	18.5	. .	. .	. .	11 5.80	− 8.59	− 0.22	. . . .	+ 20.43
E.	α Virginis . . .	27	. .	. .	. .	. .	23.5	25.2	26.9	28.5	40.6	43.1	44.6	18 33.20	− 7.91	0.22	13 18 25.07	− 4.23
	ζ Virginis . . .	28	49.3	50.9	53.4	5.3	6.8	8.4	10.1	11.6	23.7	26.0	27.6	28 8.46	+ 0.11	0.23	13 28 8.34	4.15
	*−12° 9′ . . .	29	49.2	50.9	53.4	5.5	7.1	8.8	10.4	12.0	24.4	26.7	28.4	34 8.80	0.09	0.23	13 34 8.66	4.34
	*+22° 43′ . . .	30	3.4	5.3	7.9	20.8	22.3	24.2	26.0	27.7	40.6	43.2	44.8	37 24.20	0.16	0.23	13 37 24.13	4.05
	*+77° 52′ . . .	31	. .	. .	. .	27.0	34.4	42.2	50.1	57.3	. .	. .	. .	46 42.20	0.98	0.24	13 46 42.94	5.52
	η Bootis	32	. .	. .	. .	30.6	32.2	33.9	35.6	37.3	. .	. .	. .	48 33.92	0.15	0.24	13 48 33.83	4.08
	*+77° 11′ . . .	33	. .	. .	. .	19.7	26.6	34.0	42.0	48.6	. .	. .	. .	54 34.18	0.93	0.24	13 54 34.87	5.33
	α Bootis	34	27.6	29.4	32.0	44.7	46.3	48.1	49.9	51.5	4.2	6.8	8.3	9 48.07	0.15	0.25	14 9 47.97	3.99
	δ Libræ	35	47.1	48.7	51.3	3.4	4.8	6.5	8.1	9.8	21.8	24.3	25.9	54 6.52	+ 0.10	0.27	14 54 6.35	4.53
	Weisse 1091 . .	36	. .	. .	. .	. .	. .	. .	37.7	40.4	41.8	43.6	45.5	59 41.80	− 34.58	0.28	14 59 6.94	4.60
	*−25° 5′ . . .	†37	. .	. .	. .	6.0	7.5	9.3	11.2	13.2	. .	. .	. .	5 9.44	+ 0.07	0.28	15 5 9.23	5.01
	β Libræ	38	46.2	47.9	50.2	2.5	4.0	5.6	7.3	8.8	20.9	23.4	24.9	10 5.61	0.09	0.28	15 10 5.42	4.57
	Lacaille 6337 . .	39	32.6	34.8	37.6	52.5	54.5	56.5	58.7	0.7	15.7	18.6	20.6	13 56.62	0.06	0.28	15 13 56.40	5.53
	*+43° 11′ . . .	40	6.9	8.8	12.6	29.2	31.3	33.4	35.6	38.1	. .	. .	. .	33 24.49	9.14	0.29	15 33 33.34	4.81
	*+43° 11′ . . .	41	16.4	18.5	22.0	38.9	40.6	42.6	45.0	47.0	3.8	7.0	8.9	33 42.79	0.25	0.29	15 33 42.75	4.81
	α Serpentis . . .	42	37.1	38.7	41.3	53.1	54.7	56.5	58.2	59.7	11.8	14.1	15.7	37 56.45	0.12	0.30	15 37 6.27	4.32
	ε Serpentis . . .	43	5.5	7.2	9.7	21.5	23.0	24.7	26.5	27.9	40.0	42.3	43.9	44 24.75	0.12	0.30	15 44 24.57	4.37
17	θ Virginis . . .	44	58.1	59.8	2.4	14.4	15.8	17.5	19.1	20.6	32.8	35.2	36.7	3 17.49	+ 0.10	0.15	13 3 17.44	− 4.11
	Polaris, S. P. . .	45	. .	. .	. .	53.0	58.5	9.0	15.0	20.0	. .	. .	. .	11 7.10	− 8.59	0.14	. . . .	+ 19.74
	α Virginis . . .	46	5.6	7.3	9.8	22.0	23.5	25.2	26.8	28.4	40.5	43.0	44.6	18 25.16	+ 0.09	0.14	13 18 25.11	− 4.24
	ζ Virginis . . .	47	49.2	50.8	53.3	5.3	6.5	8.3	10.0	11.5	23.3	25.9	27.5	28 8.33	0.11	0.13	13 28 8.31	4.15
	Lacaille 5739. .	48	. .	. .	. .	54.4	56.0	57.9	59.9	1.8	. .	. .	. .	46 58.00	0.07	0.12	13 46 57.95	4.72
	η Bootis	49	13.3	15.1	17.8	30.3	32 0	33.6	35.5	37.3	49.8	52.4	53.9	48 33.73	0.15	0.12	13 48 33.76	4.08
	α Bootis	50	27.5	29.2	31.7	44.5	46.3	48.0	49.8	51.4	4.2	6.6	8.1	9 47.94	+ 0.15	− 0.11	14 9 47.98	− 3.99

21. South preceding.
37. The only star visible.

CORRECTIONS, &c.

Date.	Error of clock.	Hourly rate.	n	c
1871. h.	s.	s.	s.	s.
May 13, 13.3	+ 0.67	+ 0.019	+ 0.02	+ 0.12
16, 14.5	− 0.26	− 0.032	0.10	0.11
17, 13.9	− 0.14	− 0.031	+ 0.10	+ 0.11

Date and observer.	OBJECT.	Number.	SECONDS OF TRANSIT OVER WIRES.												CORRECTIONS.		Observed Right Ascension.	Reduction to 1870.0.
			I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	X.	XI.	Mean wire.	Inst.	Clock.		
1871.			s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	m. s.	m. s.	s.	h. m. s.	s.
May 17	β Libræ	1	45.8	47.6	50.3	2.2	3.7	5.4	7.1	8.7	20.7	23.3	24.7	10 5.41	+ 0.09	− 0.08	. . . .	− 4.57
E.	*−31° 49′ . . .	†2	. .	. .	. .	23.5	25.7	27.4	29.6	31.2	. .	. .	. .	22 27.48	+ 0.07	0.07	15 22 27.48	5.32
18	Weisse 963 . .	3	. .	. .	. .	19.3	20.8	22.5	24.2	25.9	37.7	40.0	41.5	57 28.99	− 6.39	0.29	11 57 22.31	3.78
Sk.	Weisse 966 . .	4	. .	. .	. .	26.6	28.0	29.7	31.2	32.8	44.5	47.2	48.7	57 36.09	− 6.39	0.29	11 57 29.41	3.78
	*+4° 5′. . . .	5	10.5	12.3	14.7	26.6	28.2	30.0	31.5	33.2	45.0	47.6	49.0	58 29.87	+ 0.11	0.29	11 58 29.69	3.78
	η Virginis . . .	6	0.1	1.8	4.3	15.9	17.6	19.3	21.0	22.6	34.5	37.1	38.5	13 19.34	+ 0.10	0.29	12 13 19.15	3.85
	*−32° 53′ . . .	7	50.0	51.7	53.5	55.6	57.4	. .	29.1	32.2	34.3	36.3	38.4	27 13.85	− 20.22	0.29	12 26 53.34	4.20
	*+13° 5′ . . .	8	21.1	22.8	25.1	37.7	39.3	41.2	42.7	44.0	56.3	58.7	0.7	3 40.88	+ 0.13	0.27	13 3 40.74	− 4.01
	Polaris, S. P. . .	9	58.0	20.0	33.0	33.0	24.0	. .	2.0	45.5	48.0	0.0	21.0	11 10.45	− 11.38	0.27	. . . .	+ 19.01
	62 Virginis . . .	10	15.3	17.0	19.6	31.7	33.2	35.0	36.6	38.2	50.3	52.8	54.4	13 34.92	+ 0.08	0.27	13 13 34.73	− 4.22
	i Virginis . . .	11	. .	. .	. .	11.2	13.7	15.4	26.4	29.1	30.7	32.4	34.3	20 24.15	− 28.31	0.27	13 19 55.57	4.27
	O. Arg. S. 12959 .	†12	18.5	20.5	22.9	36.4	38.2	39.9	41.8	43.9	57.0	59.6	1.2	27 39.99	0.06	0.26	13 27 39.79	4.56
	η Bootis	13	13.3	15.3	18.0	30.4	32.1	33.8	35.6	37.4	49.8	52.5	54.0	48 33.84	0.14	0.26	13 48 33.72	4.08
	*+77° 11′ . . .	14	. .	. .	. .	19.9	26.7	34.0	41.9	49.5	. .	. .	. .	54 34.40	0.88	0.26	13 54 33.78	5.24
	α Bootis	15	. .	. .	. .	44.9	46.4	48.1	49.8	51.5	. .	. .	. .	9 48.14	0.14	0.25	14 9 48.03	3.99
	ε Bootis	16	1.1	3.0	5.7	19.3	20.8	22.7	24.6	26.3	39.9	42.6	44.4	39 22.76	+ 0.16	0.25	14 39 22.67	− 4.06
19	Polaris, S. P. . .	17	. .	. .	. .	. .	. .	. .	6.0	46.5	51.1	1.0	21.0	34 49.10	−23 49.18	0.67	. . . .	+ 18.27
S.	η Bootis	18	14.0	15.9	18.5	31.0	32.6	34.3	36.1	37.8	50.5	53.0	54.5	48 34.38	+ 0.14	0.68	. . . .	− 4.07
	Weisse (2) 1167 .	19	22.1	23.8	26.6	39.6	41.2	43.0	44.9	46.7	59.7	2.3	3.9	53 43.07	0.15	0.68	13 53 42.54	4.06
	ε Bootis	20	1.5	3.3	6.1	19.6	21.4	23.2	25.1	26.8	40.4	43.1	44.7	39 23.20	0.16	0.72	. . . .	4.06
E.	O. Arg. N. 15005 .	21	26.7	30.1	34.6	58.3	1.0	4.1	7.3	10.5	33.7	38.5	41.3	54 4.19	0.36	0.73	14 54 3.82	4.00
	β Bootis	22	. .	. .	. .	3.3	5.3	7.4	9.5	11.6	. .	. .	. .	57 7.42	0.22	0.73	14 57 6.91	3.96
	c Bootis	†23	19.0	21.0	23.5	36.6	38.3	40.3	42.3	43.8	57.0	59.8	1.4	1 40.27	0.18	0.74	15 1 39.71	4.08
	β Libræ	†24	46.6	48.2	50.8	3.1	4.6	6.2	7.8	9.6	21.6	24.0	25.5	10 6.18	0.08	0.75	15 10 5.51	4.58
	μ^1 Bootis	25	15.0	17.0	19.9	35.4	37.2	39.1	41.3	43.2	58.4	1.6	3.6	19 39.25	0.24	0.75	15 19 38.74	3.95
	O. Arg. S. 14648 .	26	56.5	58.4	1.1	14.3	15.8	17.7	19.5	21.3	34.3	36.9	38.6	26 17.67	0.04	0.76	15 26 16.95	5.08
	O. Arg. S. 14665 .	27	7.6	9.6	12.3	25.6	27.1	28.8	30.7	32.5	45.5	48.3	49.9	27 28.90	+ 0.04	0.76	15 27 28.18	5.08
	α Coronæ Borealis .	28	. .	. .	. .	32.8	35.5	37.0	49.5	52.4	54.0	56.0	58.1	29 46.91	− 31.03	0.76	15 29 25.12	4.05
	α Serpentis . . .	29	37.7	39.3	41.8	53.8	55.3	56.9	58.6	0.2	12.2	14.6	16.2	37 56.96	+ 0.12	0.77	15 37 56.31	4.33
	ε Serpentis . . .	30	. .	. .	. .	21.9	23.5	25.2	26.9	28.5	. .	. .	. .	44 25.20	0.11	0.77	15 44 24.54	4.38
	δ Aquilæ. . . .	†31	42.4	43.8	46.2	58.5	59.9	1.5	3.0	4.4	16.6	18.8	20.5	19 1.42	0.11	0.95	19 19 0.58	3.96
	κ Aquilæ. . . .	†32	39.3	40.9	43.8	55.4	57.2	58.8	0.5	2.2	13.9	16.5	18.2	29 58.79	0.08	0.96	19 29 57.91	4.12
	γ Aquilæ. . . .	†33	49.6	51.5	53.8	6.0	7.5	9.1	11.1	12.8	24.6	27.3	28.5	40 9.25	0.13	0.97	19 40 8.41	3.70
	α Aquilæ. . . .	†34	11.6	13.1	15.9	27.7	29.3	30.9	32.5	34.1	46.4	48.9	50.5	44 30.99	0.12	0.97	19 44 30.14	3.76
	β Aquilæ. . . .	35	41.0	42.6	45.0	57.0	58.5	0.1	1.8	3.7	15.4	17.8	19.4	49 0.16	+ 0.12	0.97	19 48 59.31	− 3.74
	λ Ursæ Minoris . .	36	. .	. .	. .	54.5	17.0	40.0	7.0	31.0	. .	. .	. .	53 41.90	− 14.63	0.98	. . . .	+ 21.08
20	η Virginis . . .	37	1.1	2.6	4.9	16.8	18.3	20.0	21.7	23.2	35.0	37.6	39.2	13 20.04	0.13	0.74	. . . .	− 3.83
Sk.	*−32° 53′ . . .	38	31.6	33.5	36.3	50.5	52.2	54.3	56.3	58.0	12.0	15.1	17.0	26 54.25	0.22	0.73	12 26 53.30	4.17
	O. Arg. S. 12523 .	†39	28.0	29.5	32.2	45.6	47.4	49.4	51.3	53.8	6.2	9.0	10.6	48 49.36	0.20	0.71	12 48 48.45	4.27
	Groombridge 947.	40	. .	. .	. .	4.2	8.9	13.4	18.3	22.6	. .	. .	. .	54 13.48	0.09	0.70	12 54 12.69	4.70
	Weisse (2) 1063 .	41	1.3	2.7	5.2	17.2	18.7	20.4	22.0	23.6	35.5	38.1	39.7	2 20.40	0.12	0.70	13 2 19.58	4.03
	θ Virginis . . .	42	. .	. .	. .	33.4	35.9	37.6	48.6	51.1	52.8	54.3	56.4	3 46.26	− 28.11	0.70	13 3 17.45	− 4.10
	Polaris, S. P. . .	43	. .	. .	. .	47.0	50.5	59.0	6.0	16.0	. .	. .	. .	10 59.70	+ 1.21	0.69	. . . .	+ 17.54
	Weisse 318 . .	44	35.7	37.5	39.7	51.5	53.3	55.0	56.4	58.0	10.0	12.3	14.1	20 54.86	− 0.13	0.68	13 20 54.05	− 4.13
	*−38° 19′ . . .	45	. .	. .	. .	. .	. .	. .	. .	2.0	5.0	7.0	9.3	31 5.82	42.71	0.67	13 30 22.44	4.90
	*+22° 43′ . . .	46	4.1	5.7	8.3	21.5	23.0	24.9	26.8	28.3	41.0	43.6	45.5	37 24.79	0.10	0.67	13 37 24.02	4.04
	*+77° 52′ . . .	47	. .	. .	. .	28.3	36.0	43.4	51.0	58.1	. .	. .	. .	46 43.36	0.14	0.66	13 46 42.56	5.32
	*−37° 27′ . . .	†48	42.1	43.9	47.1	2.3	4.1	6.2	8.4	10.2	25.2	28.4	30.4	53 6.21	0.24	0.66	13 53 5.31	5.06
	α Bootis	49	28.2	29.9	32.6	45.2	46.9	48.7	50.4	52.2	4.6	7.2	9.0	9 48.63	0.10	0.64	14 9 47.89	3.99
	ε Bootis	50	1.8	3.4	6.2	19.7	21.5	23.3	25.1	26.8	40.3	43.1	45.0	39 23.29	− 0.10	− 0.62	14 39 22.57	− 4.06

CORRECTIONS, &c.

Date.	Error of clock.	Hourly rate.	*n*	*c*
1871. h.	s.	s.	s.	s.
May 18, 13.7	− 0.26	− 0.018	+ 0.10	+ 0.10
19, 17.1	− 0.84	− 0.049		
13^h–15^h	. .	. .	+ 0.10	+ 0.10
15^h–16^h	. .	. .	0.14	
19^h–20^h	. .	. .	0.18	
May 20, 13.8	− 0.66	− 0.049	+ 0.10	− 0.13

2. Very faint.
12. North preceding and brighter of two.
23, 24. Unsteady.
31. Flaming.
32, 33. Very unsteady.
34. Unsteady.
39. North following of two.
48. North following and brighter of two ; three stars to northward.

May 19. Image east $0^r.16$; clamp east.
Image west $0^r.19$; clamp west.

Date and observer.	OBJECT.	Number.	SECONDS OF TRANSIT.												CORRECTIONS.		Observed Right Ascension.	Reduction to 1870.0.
			I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	X.	XI.	Mean.	Inst.	Clock.		
1871.			s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	m. s.	m. s.	s.	h. m. s.	s.
May 20	α^2 Libræ	1	27.1	28.6	31.2	43.5	45.1	46.9	48.6	50.2	2.5	5.2	6.8	43 46.88	− 0.16	− 0.61	14 43 46.11	− 4.68
Sk.	Lacaille 6135 . .	2	. .	. .	. .	51.4	54.4	56.3	9.5	12.6	14.5	16.6	18.9	47 6.78	34.01	− 0.61	14 46 32.16	5.26
23	β Corvi	3	14.2	15.8	18.5	31.4	33.0	34.8	36.6	38.4	51.1	54.0	55.6	27 34.85	0.15	+ 3.18	12 27 37.88	4.02
	Weisse 1063 . .	4	. .	. .	. .	. .	34.3	36.0	47.0	49.6	51.1	52.8	54.8	2 46.51	− 29.95	3.16	13 2 19.72	− 4.01
	Polaris, S. P. . .	5	38.0	46.0	31.5	. .	. .	. .	. .	. .	24.5	4.5	5.0	10 54.92	+ 2.92	3.15	. . . .	+ 15.54
	Weisse (2) 241. .	6	8.0	9.8	13.0	27.6	29.6	31.7	33.7	35.6	50.3	53.2	55.5	13 31.64	− 0.11	3.15	13 13 34.68	− 3.97
	α Virginis . . .	7	2.4	4.0	6.6	18.8	20.5	22.2	23.9	25.4	37.4	39.9	41.5	18 22.05	− 0.13	3.15	13 18 25.07	4.22
	*−12° 9′ . . .	8	0.3	1.8	4.5	. .	. .	. .	. .	. .	. .	. .	. .	33 2.20	+ 17.55	3.14	13 33 22.89	4.33
	*−12° 9′ . . .	9	20.0	21.4	23.7	. .	. .	. .	. .	. .	54.5	57.5	59.0	33 39.35	− 0.13	3.14	13 33 42.36	4.33
	Lacaille 5739 . .	10	33.5	35.2	38.0	51.4	53.2	55.0	57.0	58.8	12.3	15.0	17.1	46 55.14	0.16	3.13	13 46 58.11	4.70
	O. Arg. S. 13227 .	11	. .	. .	. .	25.2	26.9	28.8	30.7	32.2	. .	. .	. .	47 28.76	0.16	3.13	13 47 31.73	4.70
	*−37° 27′ . . .	12	38.0	40.1	43.2	. .	. .	. .	. .	. .	21.5	24.7	26.7	53 2.37	0.19	3.13	13 53 5.31	5.06
	α Bootis	13	. .	. .	. .	41.5	43.2	44.9	46.6	48.1	. .	. .	. .	9 44.86	0.11	3.12	14 9 47.87	3.99
	ε Bootis	14	58.0	59.6	2.6	16.1	17.9	19.6	21.7	23.2	36.6	39.2	41.2	39 19.61	0.11	3.11	14 39 22.61	4.06
	α^2 Libræ	15	23.4	25.0	27.4	39.6	41.4	43.1	44.8	46.3	58.8	1.4	3.3	43 43.14	0.14	3.10	14 43 46.10	4.69
	*−26° 17′ . . .	16	50.4	51.9	54.8	8.0	9.8	11.7	13.5	15.1	28.4	31.4	33.1	59 11.65	0.16	3.09	14 59 14.58	5.07
	c Bootis	17	. .	. .	. .	53.5	56.0	57.9	10.0	12.7	14.6	16.4	18.5	2 7.45	30.95	3.09	15 1 39.59	4.09
	*−37° 6′ . . .	18	37.0	38.7	41.5	56.9	58.6	0.6	2.8	5.1	19.9	22.6	24.8	13 0.77	0.19	3.09	15 13 3.67	5.58
	*−36° 6′ . . .	19	38.2	40.1	43.1	58.0	59.8	1.8	3.9	5.8	20.6	23.7	25.8	18 1.89	0.19	3.08	15 18 4.78	5.55
	*−31° 49′ . . .	20	1.9	3.5	6.5	20.7	22.3	24.4	26.3	28.3	42.0	45.1	47.0	22 24.36	0.18	3.08	15 22 27.26	5.37
	O. Arg. S. 14648 .	21	53.2	54.8	57.6	10.8	12.4	14.2	16.0	17.7	30.8	33.4	35.3	26 14.20	0.15	3.08	15 26 17.13	5.11
	O. Arg. S. 14665 .	22	4.4	5.9	8.7	21.7	23.5	25.3	27.1	28.8	42.0	44.7	46.5	27 25.33	0.15	3.08	15 27 28.26	5.11
	*+43° 11′ . . .	23	2.3	4.5	7.7	23.8	26.1	28.5	30.6	32.8	48.8	52.3	54.8	36 28.56	0.12	3.07	15 36 31.51	3.86
	α Serpentis . . .	24	34.2	35.8	38.2	50.1	51.8	53.5	55.0	56.7	8.5	11.0	12.6	37 53.40	0.11	3.07	15 37 56.36	4.36
Y.	ε Serpentis . . .	25	2.7	4.2	6.6	18.6	20.3	22.0	23.7	25.2	36.8	39.5	41.2	44 21.89	0.12	2.87	. . . .	4.40
E.	η Herculis . . .	26	. .	. .	. .	. .	. .	. .	6.3	9.7	11.9	14.0	16.5	39 11.68	44.24	2.73	16 38 30.17	3.82
	κ Ophiuchi . . .	27	13.2	14.6	17.1	29.5	31.1	32.6	34.2	35.8	48.0	50.4	52.1	51 32.59	0.11	2.73	16 51 35.21	4.26
	d Herculis . . .	28	. .	28.3	31.3	45.6	47.6	49.5	51.5	53.4	7.8	10.8	. .	56 49.53	0.12	2.73	16 56 52.14	3.86
	α^1 Herculis . . .	29	. .	. .	. .	41.3	43.0	44.8	46.5	48.0	. .	. .	. .	8 44.72	0.11	2.73	17 8 47.34	− 4.17
	δ Ursæ Minoris . .	30	51.0	16.5	58.0	20.5	45.0	14.0	44.0	6.5	29.5	11.0	40.0	14 14.18	1.19	2.69	. . . .	+ 0.23
	δ Aquilæ	†31	. .	. .	. .	13.2	15.7	17.3	28.5	31.0	32.5	. .	36.1	19 24.90	26.86	2.65	19 18 0.69	− 4.07
	γ Aquilæ	32	46.6	48.1	50.5	2.7	4.5	6.1	7.7	9.2	21.5	23.8	25.6	40 6.03	0.11	2.64	19 40 8.56	3.81
	α Aquilæ	33	8.4	9.8	12.2	24.5	26.1	27.7	29.4	31.0	43.0	45.7	47.1	44 27.72	0.11	2.64	19 44 30.25	3.87
	β Aquilæ	34	37.8	39.3	41.7	53.9	55.4	57.0	58.6	0.2	12.2	14.6	16.3	48 57.00	− 0.11	2.64	19 48 59.53	3.85
	τ Aquilæ	†35	29.3	30.8	33.2	45.4	46.9	48.5	50.1	51.7	3.6	. .	7.8	57 46.73	+ 1.66	2.63	19 57 51.02	− 3.80
24	Moon I. . . .	36	31.9	33.6	36.4	49.5	51.2	53.1	54.9	56.5	9.7	12.5	14.3	20 53.05	− 0.03	2.51	8 20 55.53	
Y.	α Hydræ	37	8.9	10.6	12.4	14.0	15.6	. .	42.9	45.3	47.0	48.7	50.6	21 29.60	17.40	2.46	. . . .	− 2.69
	ε Leonis	38	7.9	9.6	12.3	25.4	27.0	29.0	30.8	32.4	45.4	48.2	50.1	38 28.92	0.02	2.46	. . . .	3.25
	α Leonis	39	8.0	9.5	12.1	24.4	25.9	27.6	29.4	30.9	43.0	45.6	47.4	1 27.62	0.07	2.45	. . . .	− 3.18
S.	Polaris, S. P. . .	40	. .	. .	. .	. .	. .	. .	42.0	32.0	33.0	44.0	35.0	34 37.20	23 35.62	2.34	. . . .	+ 14.93
	η Bootis	41	11.2	12.8	15.3	28.1	29.6	31.4	33.3	34.9	47.2	50.0	51.8	48 31.42	− 0.04	2.31	13 48 33.69	− 4.05
	*+77° 5′ . . .	42	6.9	13.3	24.4	18.5	24.3	32.2	39.7	46.6	39.7	51.3	58.6	54 32.32	+ 0.38	2.30	13 54 35.00	4.94
	α Bootis	†43	25.3	26.9	29.7	1.8	4.4	6.1	17.9	20.5	22.1	23.9	25.9	9 2.23	− 16.50	2.29	14 9 48.02	3.98
	ε Bootis	44	59.0	0.6	3.3	16.8	18.3	20.4	22.3	24.0	37.5	40.4	42.1	39 20.43	0.02	2.28	14 39 22.69	4.06
	α^2 Libræ	45	24.0	25.6	28.2	40.7	42.2	44.0	45.7	47.3	59.3	2.2	3.9	43 43.92	0.06	2.27	14 43 46.13	4.69
	Lalande 27173. .	46	35.2	36.7	39.4	52.0	53.9	55.6	57.3	58.9	11.7	14.4	16.2	49 55.57	0.19	2.27	14 49 57.65	4.86
	Weisse 99 . . .	47	3.0	4.5	7.0	18.9	20.4	22.2	23.7	25.3	37.3	39.7	41.4	7 22.13	0.08	2.26	15 7 24.31	4.46
	β Libræ	48	43.9	45.5	47.8	0.0	1.6	3.3	5.0	6.6	18.5	21.2	22.7	10 3.28	0.14	2.25	15 10 5.39	4.61
E.	α Serpentis . . .	49	35.1	36.4	39.0	51.1	52.5	54.1	55.8	57.2	9.5	12.1	13.9	37 54.25	− 0.09	+ 2.14	15 37 56.30	− 4.37

31. Unsteady.
35. Unsteady.
43. Blurred.

May 23. Image west 0r.17; clamp west.
May 24. Image west 0r.19; clamp west.
Image east 0r.10; clamp east.

CORRECTIONS, &c.

Date.	Error of clock.	Hourly rate.	*n*	*c*
1871. h.	s.	s.	s.	s.
May 23, 13.9	+ 3.13	− 0.033	+ 0.05	− 0.12
23, 18.5	2.68	0.033		
24, 9.7	2.46	0.040	+ 0.20	− 0.11
24, 14.5	+ 2.28	− 0.040		

Date and observer.	OBJECT.	Number.	SECONDS OF TRANSIT.												CORRECTIONS.		Observed Right Ascension.	Reduction to 1870.0.
			I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	X.	XI.	Mean.	Inst.	Clock.		
1871.			s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	m. s.	m. s.	s.	h. m. s.	s.
May 24	ε Serpentis . . .	1	3.4	4.9	7.4	19.5	21.0	22.7	24.2	25.7	37.8	40.3	42.1	44 22.64	— 0.09	+ 2.13	15 44 24.68	— 4.42
E.	ε Coronæ Borealis .	2	52.9	54.6	57.2	10.9	12.5	14.4	16.2	18.1	31.5	34.3	36.2	52 14.44	0.02	2.13	15 52 16.55	4.06
	δ Ophiuchi . . .	3	15.5	17.1	19.7	31.5	33.1	34.7	36.2	37.8	49.8	52.2	54.0	7 34.69	— 0.12	2.12	16 7 36.69	— 4.59
	δ Ursæ Minoris. .	4	. .	. .	. .	21.0	48.5	14.5	40.0	9.0	. .	. .	. .	14 14.60	+ 1.56	2.03	. . . .	+ 0.10
	α Lyræ	†5	9.3	11.1	14.2	29.6	31.5	33.6	35.8	37.7	53.1	56.1	58.3	32 33.66	+ 0.02	2.02	18 32 35.70	— 3.56
	β Lyræ	†6	55.4	57.3	0.3	14.5	16.3	18.4	20.3	22.3	36.4	39.4	41.5	45 18.37	0.00	2.01	18 45 20.38	3.59
25	γ Geminorum . .	†7	. .	. .	. .	. .	. .	. .	. .	46.0	47.6	49.2	51.3	30 48.52	— 36.45	2.37	6 30 14.44	2.40
Sk.	α Canis Majoris. .	8	4.3	6.0	8.6	21.0	22.5	24.3	26.1	27.7	40.2	42.6	44.1	39 24.31	+ 0.03	2.37	6 39 26.71	1.47
	δ Canis Majoris .	9	44.2	45.9	48.7	2.0	3.7	5.6	7.4	9.1	22.5	25.2	26.9	3 5.56	— 0.01	2.37	7 3 7.92	1.39
	δ Geminorum . .	10	. .	. .	. .	38.0	40.5	42.3	54.0	56.7	58.3	0.3	2.3	12 51.55	— 29.84	2.37	7 12 24.08	— 2.64
	Moon I. . . .	11	55.3	57.2	59.9	12.9	14.5	16.3	18.1	19.8	32.7	35.3	37.0	14 16.27	+ 0.15	2.38	9 14 18.80	
	α Hydræ	12	52.8	54.5	57.1	9.0	10.6	12.2	13.9	15.5	27.5	30.0	31.5	21 12.24	0.06	2.38	9 21 14.68	— 2.68
	ε Leonis	13	7.6	9.3	12.2	25.2	27.0	28.6	30.5	32.3	45.4	48.0	49.6	38 28.70	+ 0.18	2.39	9 38 31.27	— 3.24
	Polaris, S. P. . .	14	. .	. .	. .	58.5	4.5	12.0	20.0	26.0	. .	. .	. .	11 12.20	— 11.48	2.41	. . . .	+ 14.34
	α Virginis . . .	†15	. .	. .	. .	37.9	40.5	42.1	53.0	55.7	57.4	59.1	1.0	18 50.84	— 28.19	2.41	. . . .	— 4.21
29	η Virginis . . .	16	57.0	58.7	1.3	13.0	14.6	16.3	18.0	19.5	31.5	34.0	35.5	13 16.31	+ 0.07	2.73	12 13 19.11	3.76
Y.	q Virginis . . .	17	45.8	47.5	50.0	2.1	3.7	5.4	7.1	8.7	20.6	23.2	24.7	27 5.35	0.05	2.74	12 27 8.14	3.88
	f Virginis . . .	18	47.4	49.1	51.6	3.6	5.0	6.8	8.4	9.9	21.9	24.5	25.9	30 6.74	0.06	2.74	12 30 9.54	3.87
	γ Virginis, (1st *) .	19	27.4	29.5	31.0	32.6	35.2	. .	35.4	38.0	39.5	41.2	43.1	35 5.29	0.14	2.74	12 35 8.17	3.88
	γ Virginis, (2d *) .	20	46.2	47.9	50.5	2.2	3.9	5.5	7.1	8.7	20.5	23.0	24.6	35 5.46	0.07	2.74	12 35 8.27	— 3.88
	Moon I. . . .	21	26.0	27.6	30.1	42.5	44.0	45.8	47.4	49.1	1.1	3.6	5.2	42 45.67	0.07	2.74	12 42 48.48	
	38 Virginis . . .	22	13.6	15.2	17.8	29.7	31.2	32.9	34.6	36.2	48.0	50.5	52.1	46 32.89	0.06	2.74	12 46 35.69	— 3.95
	k Virginis . . .	23	39.7	41.4	43.9	55.7	57.3	58.9	0.5	2.1	14.1	16.6	18.2	52 58.95	0.06	2.74	12 53 1.75	3.99
	48 Virginis . . .	24	54.5	56.2	58.8	10.5	12.1	13.8	15.5	17.0	28.9	31.4	33.0	57 13.79	0.06	2.74	12 57 16.59	4.01
	θ Virginis . . .	25	55.2	56.8	59.3	11.3	12.8	14.5	16.2	17.7	29.7	32.1	33.6	3 14.47	+ 0.05	2.74	13 3 17.26	— 4.05
	Polaris, S. P. . .	26	. .	. .	. .	1.5	5.5	15.0	24.0	25.0	. .	. .	. .	11 14.20	— 11.07	2.74	. . . .	+ 11.73
	α Virginis . . .	27	2.7	4.4	6.9	19.0	20.6	22.3	23.9	25.5	37.7	40.2	41.7	18 22.26	+ 0.04	2.74	13 18 25.04	— 4.18
	ζ Virginis . . .	28	46.3	48.1	50.5	2.3	3.9	5.5	7.2	8.7	20.6	23.1	24.6	28 5.53	0.07	2.74	13 28 8.34	— 4.10
30	Moon I. . . .	29	30.3	31.9	34.5	46.8	48.4	50.0	51.8	53.4	5.6	8.1	9.7	36 50.05	0.02	2.91	13 36 52.98	
Sk.	η Bootis	30	10.2	12.0	14.6	27.3	28.9	30.6	32.5	34.0	46.5	49.2	50.8	48 30.60	0.15	2.91	. . . .	— 4.03
	α Bootis	31	24.4	26.0	29.6	41.5	43.1	44.8	46.6	48.2	0.9	3.4	5.2	9 44.88	0.15	2.91	. . . .	3.96
	θ Bootis	32	15.4	18.2	22.1	41.5	44.0	46.8	49.6	52.2	12.1	15.6	18.3	20 46.89	+ 0.37	2.91	. . . .	— 3.89
June 1	Polaris, S. P. . .	33	. .	. .	. .	2.5	6.0	15.0	22.5	27.0	. .	. .	. .	11 14.60	— 10.51	3.10	. . . .	+ 10.24
Sk.	α Virginis . . .	34	. .	. .	. .	18.7	20.2	21.8	23.5	25.0	. .	. .	. .	18 21.84	+ 0.03	3.10	. . . .	— 4.17
	ζ Virginis . . .	35	. .	. .	. .	2.0	3.5	5.2	6.9	8.4	. .	. .	. .	28 5.20	+ 0.06	3.10	. . . .	4.09
	ι^1 Libræ	36	30.2	32.0	34.7	47.3	48.9	50.6	52.4	54.1	6.8	9.3	10.9	4 50.65	— 0.01	3.10	15 4 53.74	— 4.91
2	Moon I. . . .	37	25.0	26.5	29.2	42.7	44.3	46.1	48.0	49.7	2.9	5.5	7.4	38 46.12	0.01	3.12	16 38 49.23	
F.	Moon II . . .	38	54.5	56.4	59.0	11.3	14.0	15.7	17.5	19.3	32.6	35.3	36.8	41 15.67	0.01	3.12	16 41 18.78	
	20 Ophiuchi . . .	39	. .	. .	. .	. .	. .	. .	10.9	13.6	15.0	16.7	18.6	43 14.96	— 34.62	3.12	16 42 43.46	— 4.90
	κ Ophiuchi . . .	40	12.6	14.1	16.7	28.8	30.4	32.0	33.8	35.3	47.5	49.9	51.4	51 32.05	+ 0.10	3.13	. . . .	4.38
Y.	α Ceti.	41	. .	. .	. .	. .	. .	. .	57.6	0.3	2.0	3.5	5.5	56 1.78	— 34.05	3.45	. . . .	— 2.16
3	Polaris, S. P. . .	42	. .	. .	. .	4.5	9.5	18.0	26.0	26.0	. .	. .	. .	11 16.80	— 10.51	3.91	. . . .	+ 7.51
Sk.	α Virginis . . .	43	1.4	3.1	5.7	17.8	19.4	21.1	22.8	24.5	36.5	38.8	40.5	18 21.05	+ 0.03	3.91	13 18 24.99	— 4.16
	*—31° 41′ . . .	44	2.7	4.3	6.8	21.3	23.0	24.8	26.9	28.9	42.3	45.8	47.5	29 24.94	— 0.06	3.90	13 29 28.78	4.62
	*—36° 39′ . . .	45	15.6	17.7	20.9	35.6	37.6	39.6	41.7	43.7	58.5	1.5	3.3	53 39.61	0.08	3.89	13 53 43.42	5.00
	α Bootis	46	23.5	25.0	27.9	40.4	42.0	43.8	45.7	47.3	0.2	2.5	4.2	9 43.86	0.14	3.88	14 9 47.88	3.94
	ε Bootis	47	57.0	58.8	1.5	15.0	16.8	18.7	20.5	22.3	35.7	38.4	40.2	39 18.63	0.17	3.87	14 39 22.67	4.04
	Weisse 1091 . .	48	43.6	45.3	48.0	0.1	1.5	3.4	5.0	6.5	18.5	21.0	22.6	59 3.23	0.03	3.86	14 59 7.12	4.67
	*—37° 1′ . . .	49	2.2	4.3	7.5	22.4	24.3	26.4	28.4	30.4	45.4	48.4	50.5	5 26.36	— 0.08	+ 3.86	15 5 30.14	— 5.58

CORRECTIONS, &c.

Date.	Error of clock.	Hourly rate.	n	c
1871. h.	s.	s.	s.	s.
May 25, 8.9	+ 2.38	+ 0.006	+ 0.20	+ 0.08
29, 13.0	2.74	0.007	0.20	0.07
30, 14.1	2.91	+ 0.007	0.20	0.07
June 1, 13.4	3.10	. .	0.20	0.06
2, 16.9	3.13	— 0.032	0.20	0.06
3, 15.5	+ 3.85	— 0.027	+ 0.20	+ 0.06

5. Flaming badly.
6. Unsteady.
7. Cloudy.
15. Through clouds, rather faint.

Date and observer.	OBJECT.	Number.	SECONDS OF TRANSIT.												CORRECTIONS.		Observed Right Ascension.	Reduction to 1870.0.
			I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	X.	XI.	Mean.	Inst.	Clock.		
1871.			s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	m. s.	m. s.	s.	h. m. s.	s.
June 3	β Libræ	1	42.0	43.9	46.3	58.4	59.9	1.5	3.4	4.9	17.0	19.3	20.9	10 1.59	+ 0.04	+ 3.86	15 10 5.49	− 4.65
Sk.	Lacaille 6337 . .	2	28.7	30.6	33.9	48.9	50.8	52.9	54.9	57.0	11.8	14.7	16.9	13 52.83	− 0.08	3.86	15 13 56.61	5.64
	μ^1 Bootis	3	10.3	12.3	15.6	30.5	32.6	34.8	36.9	38.8	53.9	56.9	58.8	19 34.67	+ 0.24	3.85	15 19 38.76	3.95
	44 Ophiuchi . . .	4	6.6	8.4	11.2	24.1	25.8	27.5	29.3	31.1	44.1	46.9	48.5	18 27.59	− 0.03	3.80	17 18 31.36	5.38
	ξ Serpentis . . .	5	50.0	51.7	54.3	6.7	8.2	10.0	11.6	13.2	25.6	28.1	29.7	30 9.92	+ 0.01	3.80	17 30 13.73	5.06
	ο Serpentis . . .	6	47.9	49.7	52.2	4.4	6.0	7.6	9.4	11.1	23.2	25.8	27.3	34 7.70	0.02	3.79	17 34 11.51	4.97
	μ Herculis . . .	7	0.6	2.6	5.4	18.6	20.5	22.3	24.0	25.9	39.3	42.1	43.9	41 22.29	+ 0.17	3.79	17 41 26.25	− 3.99
	Moon II . . .	8	33.7	35.4	38.2	51.8	53.6	55.4	57.4	59.1	12.4	15.2	17.0	48 55.38	− 0.03	3.79	17 48 59.14	
	4 Sagittarii . . .	9	31.8	33.7	36.5	49.5	51.2	52.9	54.7	56.4	9.5	12.0	13.7	51 52.90	0.03	3.79	17 51 56.66	− 5.35
	μ^1 Sagittarii . . .	10	40.2	42.0	44.5	57.4	59.2	0.8	2.8	4.2	17.0	19.6	21.2	6 0.81	− 0.01	3.78	18 6 4.58	5.21
5	O. Arg. S. 15734 .	11	. .	22.3	25.1	37.3	38.7	40.4	42.4	43.7	56.4	58.7	. .	26 40.56	+ 0.02	3.09	16 26 43.67	5.05
F.	ζ Ophiuchi . . .	12	. .	. .	. .	. .	0.4	1.9	3.6	5.2	17.2	19.8	21.2	30 9.90	− 7.98	3.09	16 30 5.01	4.91
	*—26° 11′ . . .	13	17.2	18.8	20.6	22.6	24.3	. .	54.1	57.1	58.8	0.5	2.9	31 39.69	19.03	3.09	16 31 23.75	5.46
	*—31° 23′ . . .	14	59.3	1.1	4.1	18.0	19.7	21.7	23.6	25.5	39.5	42.4	44.0	42 21.72	0.06	3.07	16 42 24.73	5.72
	*—30° 7′ . . .	15	32.4	34.5	37.5	51.5	. .	55.2	56.8	58.6	12.5	15.4	16.9	48 55.13	0.24	3.06	16 48 57.95	5.66
	κ Ophiuchi . . .	16	12.7	14.4	17.0	. .	30.6	32.3	33.9	35.4	47.6	50.1	51.6	51 32.56	− 0.22	3.06	16 51 35.40	4.41
	Weisse 107. . .	17	33.9	35.7	38.3	50.4	52.1	53.8	55.6	57.3	9.5	12.2	13.6	7 53.85	+ 0.12	3.04	17 7 57.01	4.33
	*—30° 24′ . . .	18	39.6	41.6	44.0	46.0	48.9	. .	59.6	2.8	4.5	6.0	8.0	16 24.10	+ 0.04	3.03	17 16 27.17	5.70
	*—30° 24′ . . .	19	7.5	9.5	12.4	. .	. .	. .	. .	. .	47.9	50.5	52.5	16 30.05	− 0.05	3.03	17 16 33.03	5.70
	*—38° 33′ . . .	20	. .	. .	. .	6.7	9.9	11.8	25.9	29.6	31.2	33.3	35.8	27 23.02	35.62	3.01	17 26 50.41	6.26
	*—34° 37′ . . .	21	21.5	23.8	26.8	41.2	43.2	45.1	47.0	48.9	3.4	6.4	8.2	38 45.05	0.07	3.01	17 38 47.99	5.92
	μ Sagittarii . . .	22	. .	. .	. .	17.9	20.4	22.1	33.7	36.4	38.1	39.9	42.0	6 31.31	29.78	2.97	18 6 4.50	5.25
	δ Ursæ Minoris . .	23	. .	. .	. .	15.5	43.0	10.5	38.0	4.0	. .	. .	. .	14 10.20	4.43	2.96	. . . .	1.02
	51 Cephei, S. P. .	24	. .	. .	. .	44.0	16.5	51.5	24.0	58.0	. .	. .	. .	38 50.80	5.34	2.93	6 38 48.39	6.67
	ζ Aquilæ. . . .	25	. .	. .	. .	42.8	45.4	47.0	. .	0.8	2.4	4.1	6.0	59 55.50	− 28.14	2.90	18 59 30.26	4.19
	τ Aquilæ. . . .	26	29.0	30.7	33.4	45.3	46.9	48.5	50.2	51.8	3.8	6.4	7.7	57 48.52	+ 0.09	2.83	19 57 51.44	− 4.15
	Moon II . . .	27	6.6	8.5	11.1	24.7	26.5	28.3	30.1	31.6	45.3	48.2	49.5	4 28.22	− 0.02	2.82	20 4 31.02	
	π Capricorni. . .	28	34.1	36.0	38.6	51.3	52.8	54.4	56.3	58.0	10.6	13.2	14.4	19 54.52	0.00	2.81	20 19 57.33	− 4.63
	ρ Capricorni. . .	29	8.2	9.8	12.6	25.0	26.7	28.4	30.2	32.0	44.5	47.0	48.4	21 28.44	0.00	2.81	20 21 31.25	4.61
	*—18° 14′ . . .	30	. .	. .	. .	33.5	35.2	36.9	38.7	40.3	52.9	55.4	57.0	21 43.74	6.83	2.81	20 21 39.72	− 4.61
6	Polaris, S. P. . .	31	. .	. .	. .	. .	9.0	18.5	28.0	. .	. .	. .	. .	11 18.50	10.92	2.80	. . . .	+ 5.18
Sk.	*—31° 41′ . . .	32	3.4	5.3	8.3	22.2	24.1	26.0	27.9	29.8	43.8	46.6	48.4	29 25.98	− 0.06	2.79	13 29 28.71	− 4.60
	η Bootis	33	10.5	12.3	14.9	27.5	29.0	30.8	32.5	34.2	46.7	49.5	51.0	48 30.81	+ 0.14	2.77	13 48 33.72	3.99
	*—36° 39′ . . .	34	16.7	18.7	22.0	36.8	38.6	40.7	42.7	44.7	59.5	2.6	4.3	53 40.66	− 0.08	2.76	13 53 43.34	4.97
	α Bootis	35	24.5	26.1	29.0	41.6	43.3	45.0	46.9	48.4	1.0	3.7	5.4	9 44.99	+ 0.14	2.75	14 9 47.88	3.93
	ε Bootis	36	58.0	59.8	2.6	16.2	17.9	19.7	21.6	23.3	36.8	39.5	41.3	39 19.70	0.17	2.72	14 39 22.59	4.02
	Lal. 27173, (1st *).	†37	13.5	15.6	17.4	19.0	21.8	. .	26.2	29.0	30.5	32.2	34.4	49 53.96	+ 0.07	2.71	14 49 56.74	4.89
	Lal. 27173, (2d *).	†38	34.6	36.3	38.8	51.7	53.2	55.1	56.8	58.3	11.3	13.8	15.5	49 55.04	− 0.01	2.71	14 49 57.74	4.89
	*—36° 56′ . . .	39	38.0	39.9	43.2	58.1	59.9	1.9	4.0	6.1	21.0	24.1	26.0	2 2.02	0.08	2.70	15 2 4.64	5.55
	*—37° 1′ . . .	40	13.4	15.5	18.5	23.5	25.5	27.5	29.7	31.6	46.5	49.5	51.2	5 27.49	− 0.08	2.70	15 5 30.11	5.58
	β Libræ	41	43.4	44.9	47.5	59.6	1.1	2.7	4.5	6.0	18.2	20.6	22.2	10 2.79	+ 0.03	2.69	15 10 5.51	4.66
	Lacaille 6343 . .	42	54.2	56.2	59.2	13.7	15.4	17.5	19.4	21.4	36.0	38.8	40.6	14 17.49	− 0.07	2.69	15 14 20.11	5.50
8	ξ Aquarii. . . .	43	48.5	49.9	51.7	54.7	6.9	9.4	10.8	21.8	26.0	27.9	29.9	30 8.86	− 17.23	2.22	21 30 53.85	4.07
Y.	ε Pegasi	44	30.0	31.7	34.2	46.3	47.9	49.5	51.3	52.8	4.8	7.4	8.9	37 49.53	+ 0.10	2.22	21 37 51.85	3.77
	μ Capricorni. . .	45	54.3	56.2	58.6	10.9	12.4	14.2	15.9	17.6	29.9	32.4	33.9	46 14.21	0.01	2.21	21 46 16.43	4.09
	α Aquarii . . .	46	48.6	50.2	52.8	4.6	6.2	7.8	9.6	11.1	13.0	15.5	17.0	59 7.85	0.06	2.20	21 59 10.11	3.79
	θ Aquarii . . .	47	40.5	42.1	44.7	56.7	58.3	0.0	1.6	3.2	15.3	17.7	19.2	9 59.94	0.04	2.20	22 10 2.18	3.83
	η Aquarii. . . .	48	22.7	24.5	27.0	38.6	40.2	41.8	43.5	45.1	56.9	59.4	1.0	28 41.88	+ 0.06	2.18	22 28 44.12	3.63
	λ Aquarii . . .	49	48.1	49.5	51.3	52.9	54.6	. .	21.5	24.2	25.8	27.4	29.3	46 8.46	− 17.17	2.17	22 45 53.46	− 3.57
	Moon II . . .	50	9.3	12.2	13.6	26.2	27.8	29.5	31.3	32.8	45.3	48.0	49.5	59 29.59	+ 0.02	+ 2.16	22 59 31.77	

37. Northward.
38. Southward.

CORRECTIONS, &c.

Date.	Error of clock.	Hourly rate.	n	c
	s.	s.	s.	s.
June 5, 18.5	+ 2.94	− 0.073	+ 0.20	+ 0.06
6, 14.5	2.73	0.056	0.20	0.06
8, 22.1	+ 2.20	− 0.041	+ 0.20	+ 0.06

Date and observer.	OBJECT.	Number.	SECONDS OF TRANSIT.												CORRECTIONS.		Observed Right Ascension.	Reduction. to 1870.0.
			I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	X.	XI.	Mean.	Inst.	Clock.		
1871.			s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	m. s.	m. s.	s.	h. m. s.	s.
June 9	κ Ophiuchi . . .	1	14.3	16.1	18.5	30.6	32.2	33.8	35.5	37.0	49.2	51.6	53.2	51 33.82	+ 0.10	+ 1.42	. . . .	− 4.44
F.	ε Ursæ Minoris . .	2	. .	. .	. .	57.6	9.0	21.2	34.2	45.0	. .	. .	. .	59 21.40	+ 1.90	1.42	16 59 24.72	− 2.99
	Moon II . . .	†3	. .	. .	. .	52.7	55.3	56.9	8.2	10.7	12.4	. .	16.0	50 4.60	− 27.34	1.14	23 49 38.40	
10	Polaris, S. P. . .	4	. .	. .	. .	13.5	18.0	25.0	34.5	37.0	. .	. .	. .	11 25.60	10.51	1.64	. . . .	− 2.33
Sk.	Weisse (2) 265 . .	5	. .	. .	. .	10.0	13.3	15.3	30.5	34.1	36.1	38.5	41.0	15 27.35	38.25	1.64	13 14 50.74	3.75
	α Virginis . . .	6	3.7	5.3	7.9	20.0	21.5	23.3	25.0	26.6	38.6	41.0	42.7	18 23.24	0.03	1.64	. . . .	4.11
	ζ Virginis . . .	7	47.4	49.0	51.5	3.5	5.0	6.6	8.2	9.8	21.6	24.2	25.7	28 6.59	0.06	+ 1.64	. . . .	4.03
15	Polaris, S. P. . .	8	. .	. .	. .	19.5	22.0	32.0	43.0	44.0	. .	. .	. .	11 32.10	− 11.97	− 0.83	. . . .	1.59
	ζ Virginis . . .	9	49.9	51.5	54.0	5.9	7.4	9.1	10.7	12.2	24.1	26.6	28.2	28 9.05	+ 0.05	0.85	13 28 8.25	4.00
	*+77° 5′ . . .	10	. .	. .	. .	18.2	24.7	32.2	39.8	46.8	. .	. .	. .	54 32.34	1.26	0.89	13 54 32.71	3.53
	α Bootis	11	28.2	29.8	32.4	45.1	46.8	48.6	50.3	52.0	4.6	7.2	8.6	9 48.51	+ 0.14	0.91	14 9 47.74	3.87
	ε Bootis	12	. .	. .	. .	19.7	21.5	23.4	25.2	27.0	. .	. .	. .	39 23.36	− 0.19	0.95	14 39 22.60	3.97
	β Libræ	13	46.9	48.7	51.2	3.4	4.9	6.6	8.2	9.7	22.0	24.3	26.0	10 6.54	+ 0.01	1.00	15 10 5.55	4.66
	Lacaille 6343 . .	14	58.0	0.1	3.0	17.5	19.3	21.4	23.2	25.2	39.7	42.5	44.4	14 21.30	− 0.10	1.00	15 14 20.20	5.51
	O. Arg. S. 14669 .	†15	35.0	37.0	39.9	53.6	55.3	57.3	59.1	0.7	14.2	17.0	18.7	27 57.07	0.07	1.02	15 27 55.98	5.32
	α Serpentis . . .	16	38.2	39.7	42.3	54.1	55.9	57.4	59.1	0.7	12.6	15.1	16.5	37 57.42	− 0.08	1.03	15 37 56.47	4.44
	Weisse (2) 1035 .	17	3.6	5.5	8.5	22.0	23.7	25.7	27.6	29.3	43.2	46.0	47.4	42 25.68	+ 0.19	1.04	15 42 24.83	4.07
	*+26° 18′ . . .	†18	47.3	49.3	52.0	5.6	7.2	8.9	10.6	12.6	25.7	28.5	30.2	54 8.90	0.18	1.05	15 54 8.03	4.13
	Weisse 1081 . .	19	. .	. .	. .	49.4	51.0	52.6	54.3	56.0	. .	. .	. .	57 52.66	0.08	1.06	15 57 51.68	4.50
	Weisse 1086 . .	20	42.4	44.1	46.6	. .	. .	. .	. .	. .	17.0	19.4	20.8	58 1.72	+ 0.08	1.06	15 58 0.74	4.50
	*−38° 44′ . . .	†21	. .	. .	. .	. .	. .	. .	37.5	41.0	42.9	44.9	47.5	0 42.76	− 43.83	1.06	15 59 57.87	6.04
	Lacaille 6695 . .	22	. .	. .	. .	18.7	21.9	23.9	. .	. .	. .	. .	. .	0 21.50	− 22.31	1.06	15 59 58.13	6.04
	δ Ophiuchi . . .	23	18.5	20.1	22.6	34.5	36.2	37.7	39.5	40.9	53.0	55.3	56.8	7 37.74	+ 0.04	1.07	16 7 36.71	4.73
16	α¹ Herculis . . .	24	29.7	31.4	34.1	46.3	47.9	49.7	51.4	52.9	5.3	7.8	9.6	8 49.64	0.11	2.15	17 8 47.60	4.43
E.	α Ophiuchi . . .	25	40.6	42.7	45.2	57.3	58.9	0.5	2.3	4.0	16.0	18.6	20.2	29 0.57	+ 0.10	2.16	17 28 58.51	4.48
	μ Herculis . . .	26	. .	. .	. .	25.0	26.5	28.2	30.1	32.0	45.5	48.2	50.0	41 35.69	− 7.14	2.16	17 41 26.39	4.13
	δ Ursæ Minoris. .	27	. .	. .	. .	21.5	48.0	15.0	41.5	9.0	. .	. .	. .	14 15.00	4.97	2.16	. . . .	1.31
	1 Aquilæ. . . .	28	. .	. .	. .	11.8	13.3	15.1	16.7	18.4	30.2	32.9	34.3	28 21.59	− 6.53	2.16	18 28 12.90	4.98
	α Lyræ	29	13.5	15.5	18.9	34.2	36.1	38.0	40.1	42.1	57.3	0.7	2.7	32 38.10	+ 0.26	2.16	18 32 36.20	3.97
	β Lyræ	30	59.9	2.0	4.9	19.1	20.9	22.9	24.9	26.6	41.9	43.0	45.6	45 22.88	0.22	2.17	18 45 20.93	4.04
	ζ Cygni	31	7.9	9.8	12.7	26.6	28.2	30.1	32.2	33.8	47.5	50.2	52.0	7 30.09	0.20	2.18	21 7 28.11	3.84
	1 Pegasi	32	50.0	51.8	54.4	7.1	8.7	10.5	12.2	14.0	26.6	29.2	31.1	16 10.51	0.14	2.18	21 16 8.47	3.97
	β Aquarii . . .	33	29.9	31.5	34.0	46.0	47.6	49.2	50.9	52.5	4.5	7.1	8.5	24 49.25	0.03	2.18	21 24 47.10	3.30
	ξ Aquarii . . .	34	36.9	38.5	40.9	53.3	54.7	56.2	57.8	59.5	. .	. .	. .	30 49.73	6.57	2.18	21 30 54.12	4.30
	ε Pegasi	35	34.8	36.5	38.9	51.0	52.6	54.2	55.8	57.4	9.5	11.8	13.5	37 54.18	0.09	2.19	21 37 52.08	4.00
19	η Herculis . . .	36	8.0	10.0	13.1	28.6	30.6	32.6	34.5	36.8	52.2	55.4	57.5	38 32.66	+ 0.08	2.39	16 38 30.35	3.96
	κ Ophiuchi . . .	37	18.6	20.0	22.5	34.5	36.2	37.8	39.6	41.0	53.2	55.8	57.4	51 37.87	− 0.04	2.39	16 51 35.44	4.51
	Lacaille 7091 . .	38	6.4	8.3	11.5	27.2	29.2	31.3	33.5	35.5	50.5	54.2	56.5	54 31.28	− 0.29	2.39	16 54 28.60	6.38
	α Herculis . . .	†39	31.9	33.7	36.6	51.0	52.9	54.8	56.8	58.6	13.0	16.0	18.0	56 54.85	+ 0.05	2.39	16 56 52.51	4.06
	α¹ Herculis . . .	40	30.4	31.8	34.5	46.8	48.3	50.2	51.9	53.5	5.6	8.3	10.3	8 50.05	− 0.02	2.39	17 8 47.65	4.45
	α Ophiuchi . . .	41	41.4	43.0	45.5	57.7	59.4	1.0	2.6	4.3	16.4	19.0	20.7	29 1.00	− 0.03	2.39	17 28 58.58	4.51
	μ Herculis . . .	42	7.1	8.9	11.6	25.1	26.8	28.7	30.5	32.4	45.8	48.6	50.6	41 28.74	+ 0.03	2.39	17 41 26.38	4.16
	δ Ursæ Minoris. .	43	. .	. .	. .	24.5	50.5	17.5	44.0	12.0	. .	. .	. .	14 17.70	2.31	2.39	. . . .	− 1.13
20	Moon I. . . .	44	39.2	40.8	43.7	. .	. .	. .	. .	. .	16.9	19.7	21.5	4 0.30	+ 0.01	2.25	8 3 58.06	
Y.	α Hydræ	45	57.5	59.0	1.5	13.6	15.2	17.0	18.5	20.1	32.1	34.6	36.3	21 16.85	− 0.11	2.27	. . . .	− 2.45
	ε Leonis	46	2.3	3.9	6.7	29.8	31.4	33.3	35.2	36.8	59.8	2.7	4.5	38 33.31	0.02	2.27	. . . .	2.98
	α Leonis	47	12.4	14.0	16.5	28.7	30.3	32.0	33.8	35.3	47.5	50.0	51.8	1 32.03	0.03	2.27	. . . .	− 2.92
21	Moon I. . . .	48	15.5	17.2	19.9	32.9	34.7	36.4	38.3	40.0	52.8	55.6	57.6	57 36.45	0.00	2.56	8 57 33.89	
	α Hydræ	49	57.8	59.2	1.8	13.8	15.5	17.1	18.6	20.2	32.2	34.8	36.5	21 17.04	0.11	2.56	. . . .	− 2.45
	α Leonis	50	12.8	14.3	17.0	29.0	30.6	32.3	34.0	35.7	47.7	50.3	52.1	1 32.35	0.03	2.57	. . . .	2.92
	γ¹ Leonis	†51	. .	. .	. .	. .	. .	. .	26.0	28.7	30.4	32.3	34.3	13 30.34	− 36.52	− 2.57	. . . .	− 3.08

CORRECTIONS, &c.

Date.	Error of clock.	Hourly rate.	n	c
1871. h.	s.	s.	s.	s.
June 10, 13.4	+ 1.64	. .	+ 0.20	+ 0.06
15, 14.9	− 0.97	− 0.085	0.24	0.05
16, 19.4	2.17	− 0.007	0.24	+ 0.05
19, 17.2	2.39	+ 0.004	0.22	− 0.08
20, 9.7	2.27	− 0.010	+ 0.22	− 0.08
21, 9.9	− 2.57	− 0.011		

3. Cloudy; very faint.
15. Quite faint.
18. Variable star in Corona Borealis.
21. Northward.
39. Rather uncertain.
51. Cloudy.

June 16, 22ʰ. Image west 0ʳ.20; clamp east.
Image west 0ʳ.42; clamp west.

Date and observer.	OBJECT.	Number.	SECONDS OF TRANSIT.												CORRECTIONS.		Observed. Right Ascension.	Reduction to 1870.0.
			I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	X.	XI.	Mean.	Inst.	Clock.		
1871.			s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	m. s.	m. s.	s.	h. m. s.	s.
June 22 Y.	α Leonis	1	13.1	14.7	17.2	29.5	31.0	32.8	34.5	36.1	48.2	50.8	52.5	1 32.76	− 0.03	− 2.99	. . . .	− 2.91
23	α Hydræ	2	58.4	0.0	2.3	14.5	16.0	17.8	19.5	21.1	33.0	35.6	37.2	21 17.76	− 0.11	3.33	. . . .	2.44
	ε Leonis	3	13.5	15.0	17.8	30.7	32.6	34.5	36.8	38.0	50.8	53.8	55.6	38 34.46	+ 0.02	3.33	. . . .	2.97
	α Leonis	4	29.7	31.4	33.1	34.8	36.4	. .	4.0	6.6	8.3	10.0	12.0	1 50.63	− 17.56	3.33	. . . .	− 2.90
	Moon I.	5	9.1	10.7	13.3	25.8	27.5	29.3	30.9	32.4	44.9	47.6	49.4	41 29.17	− 0.03	3.34	10 41 25.80	
Sk.	α Bootis	6	30.9	32.5	35.0	47.7	49.4	51.3	52.8	54.4	7.1	9.9	11.6	9 51.15	0.00	3.38	14 9 47.77	− 3.81
	ε Bootis	7	4.1	5.7	8.8	22.1	24.0	25.8	27.6	29.3	42.7	45.7	47.5	39 25.75	+ 0.03	3.37	14 39 22.41	3.91
	α^2 Libræ	8	29.9	31.4	34.0	46.3	48.0	49.7	51.5	53.0	5.3	7.9	9.6	43 49.69	− 0.14	3.37	14 43 46.18	4.65
	Weisse 99	9	8.6	10.2	12.7	24.6	26.2	27.8	29.5	31.0	42.8	45.2	47.1	7 27.79	0.08	3.37	15 7 24.34	4.47
	Lacaille 6343	†10	0.6	2.4	5.2	19.9	21.8	23.7	25.9	27.7	42.1	45.0	47.0	14 23.75	0.25	3.37	15 14 20.13	5.48
	μ^1 Bootis	11	. .	. .	. .	37.9	39.8	41.9	44.0	46.0	. .	. .	. .	19 41.92	0.07	3.37	15 19 38.62	3.84
	O. Arg. S. 14669	12	38.1	39.7	42.5	56.0	57.7	59.6	1.4	3.2	16.7	19.4	21.3	27 59.60	0.20	3.37	15 27 56.03	5.32
	α Serpentis	13	40.7	42.2	44.6	56.6	58.2	0.0	1.6	3.2	15.1	17.6	19.3	37 59.92	− 0.05	3.37	15 37 56.50	4.43
	Weisse (2) 1035	14	6.3	8.0	10.9	24.4	26.2	28.2	30.0	31.9	45.4	48.1	50.0	42 28.13	+ 0.03	3.37	15 42 24.79	4.04
	O. Arg. S. 15734	15	27.6	29.2	31.7	44.0	45.6	47.5	49.1	50.7	3.0	5.5	7.3	26 47.38	− 0.14	3.36	16 26 43.88	5.16
	η Herculis	16	9.0	10.9	14.3	29.4	31.5	33.6	35.7	37.6	53.1	56.4	58.5	38 33.64	+ 0.08	3.36	16 38 30.36	3.95
	*−30° 7′	17	39.4	41.5	44.3	58.0	59.6	1.8	3.5	5.3	19.1	22.0	24.2	49 1.70	− 0.22	3.36	16 48 58.12	5.82
	Lacaille 7091	18	7.2	9.2	12.4	28.1	29.9	32.4	34.4	36.3	52.0	55.2	57.3	54 32.22	− 0.29	3.36	16 54 28.57	6.41
	ε Ursæ Minoris	19	. .	. .	. .	4.0	14.0	28.0	39.5	51.0	. .	. .	. .	59 27.30	+ 1.02	3.36	. . . .	2.31
	*−35° 20′	20	26.0	28.0	30.9	. .	. .	. .	. .	. .	8.2	11.3	13.4	8 49.63	− 0.26	3.36	17 8 46.01	6.18
	*−35° 20′	21	. .	. .	. .	51.4	53.6	55.5	57.5	59.4	. .	. .	. .	8 55.48	0.26	3.36	17 8 51.86	6.18
	b Ophiuchi	22	14.0	15.6	18.5	31.4	33.2	35.0	36.8	38.5	51.4	54.2	56.2	18 34.98	0.18	− 3.36	17 18 31.44	5.62
27	η Bootis	23	11.8	13.4	16.0	28.5	30.3	32.1	33.8	35.5	47.9	50.6	52.5	48 32.04	0.03	+ 1.52	13 48 33.53	3.81
	κ Virginis	24	41.3	42.9	45.3	57.5	59.0	0.7	2.4	4.0	15.9	18.6	20.3	6 0.72	0.12	1.52	14 6 2.12	− 4.29
	Moon I.	25	24.1	25.8	28.4	40.7	42.3	44.0	45.7	47.3	59.5	2.3	3.9	7 44.00	0.12	1.52	14 7 45.40	
	2 Libræ	26	9.6	11.1	13.7	25.8	27.3	29.0	30.8	32.3	44.4	47.0	48.7	16 29.06	0.12	1.52	14 16 30.46	− 4.38
	ε Bootis	27	59.3	1.1	3.8	17.3	19.0	20.9	22.8	24.5	37.9	40.7	42.6	39 20.90	− 0.01	1.52	14 39 22.41	3.87
	α^2 Libræ	28	24.8	26.4	29.0	41.4	43.0	44.7	46.4	. .	0.2	3.0	4.6	43 44.35	+ 0.19	1.52	14 43 46.06	4.63
	ζ Ophiuchi	29	44.4	45.8	48.3	0.5	2.1	3.8	. .	6.9	19.0	21.7	23.3	30 3.58	− 0.05	1.52	16 30 5.15	5.02
E.	κ Ophiuchi	30	14.9	16.4	18.7	30.8	42.5	34.1	35.7	37.2	49.4	51.9	53.5	51 34.01	0.06	1.45	16 51 35.49	4.53
	α^1 Herculis	31	26.6	28.1	30.6	43.0	44.5	46.3	47.9	49.6	1.9	4.3	6.1	8 46.26	0.05	1.45	17 8 47.66	4.49
	α Ophiuchi	32	37.6	39.1	41.7	54.0	55.5	57.3	58.9	0.4	12.6	15.2	16.9	28 57.20	0.05	1.46	17 28 58.61	4.56
	μ Herculis	33	3.4	5.2	7.8	21.4	23.3	24.9	26.9	28.6	42.0	45.0	46.8	41 25.03	− 0.01	1.46	17 41 26.48	4.20
	δ Ursæ Minoris	34	51.5	16.5	58.5	20.5	46.0	14.5	41.5	9.0	27.5	10.5	39.0	14 14.09	+ 1.56	1.47	. . . .	0.78
	ι Aquilæ	35	52.5	54.0	56.3	8.4	10.0	11.8	13.4	14.9	27.0	29.5	31.2	28 11.73	− 0.11	1.47	18 28 13.09	5.14
	α Lyræ	36	10.2	12.3	15.3	30.6	32.6	34.8	36.9	38.8	54.0	57.1	59.3	32 34.72	+ 0.03	1.47	18 32 36.22	4.09
28	ε Bootis	37	. .	. .	. .	17.0	18.6	20.5	22.3	24.1	. .	. .	. .	39 20.50	− 0.01	2.04	14 39 22.53	3.85
Sk.	α^2 Libræ	38	24.4	25.7	28.3	40.7	42.3	44.0	45.8	47.3	59.5	2.2	4.0	43 44.02	− 0.14	2.04	14 43 45.92	4.63
	β Bootis	39	39.3	41.1	44.4	0.3	2.3	4.4	6.6	9.0	24.5	27.9	30.0	57 4.53	+ 0.03	2.05	14 57 6.61	− 3.68
	Moon I.	40	17.0	18.6	21.1	33.9	35.6	37.2	39.0	40.5	53.2	55.9	57.7	4 37.25	− 0.14	2.05	15 4 39.16	
	β Libræ	41	44.3	45.8	48.2	0.2	1.9	3.6	5.3	6.9	18.7	21.4	23.0	10 3.57	0.12	2.05	15 10 5.50	− 4.61
	ζ^1 Libræ	42	38.7	40.3	42.9	55.3	56.9	58.7	0.3	2.0	14.4	16.9	18.7	20 58.65	0.14	2.05	15 21 0.56	4.88
	γ Libræ	43	58.6	0.1	2.7	15.1	16.6	18.3	20.1	21.6	33.9	36.4	38.1	28 18.32	0.14	2.06	15 28 20.24	4.87
	α Serpentis	44	35.1	36.7	39.1	51.3	52.7	54.4	56.1	57.5	9.4	12.0	13.7	37 54.36	0.07	2.06	15 37 56.35	4.42
	ε Serpentis	45	3.5	5.2	7.6	19.7	21.1	22.9	24.3	26.0	37.8	40.4	42.1	44 22.78	0.08	2.06	15 44 24.76	4.49
	ε Ursæ Minoris	46	. .	. .	. .	58.5	10.0	22.0	34.0	46.0	. .	. .	. .	59 22.10	− 0.67	2.07	. . . .	1.94
29	β Libræ	47	44.9	46.5	49.0	1.0	2.6	4.3	5.9	7.6	19.6	22.1	23.8	10 4.30	+ 0.09	1.07	15 10 5.46	4.61
Y.	α Serpentis	48	35.8	37.5	39.9	51.9	53.5	55.2	56.8	58.3	10.2	12.9	14.5	37 55.14	0.12	1.06	15 37 56.32	4.42
	θ Libræ	49	9.5	11.0	13.7	26.2	27.7	29.5	31.2	32.7	45.1	47.8	49.5	46 29.45	0.07	1.06	15 46 30.58	5.02
	δ Scorpii	50	22.5	24.1	26.8	39.7	41.4	43.1	44.8	46.4	59.4	2.0	3.8	52 43.09	+ 0.05	+ 1.06	15 52 44.20	− 5.24

10. Two other stars in the field.

CORRECTIONS, &c.

Date.	Error of clock.	Hourly rate.	*m*	*n*	*c*
1871. h.	s.	s.	s.	s.	s.
June 23, 9.7	− 3.33	− 0.014	. .	+ 0.22	− 0.08
23, 15.3	− 3.37	+ 0.005	. .	0.22	0.08
27, 14.9	+ 1.52	0.000	. .	0.18	0.09
27, 17.7	1.46	0.014	. .	0.18	0.09
28, 15.1	2.05	+ 0.018	. .	0.18	0.09
29, 16.2	+ 1.05	− 0.023	+ 0.20	+ 0.13	− 0.09

Date and observer.	OBJECT.	Number.	SECONDS OF TRANSIT.												CORRECTIONS.		Observed Right Ascension.	Reduction to 1870.0.
			I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	X.	XI.	Mean.	Inst.	Clock.		
1871.			s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	m. s.	m. s.	s.	h. m. s.	s.
June 29	β Scorpii	1	36.7	38.3	40.9	53.6	55.2	57.1	58.6	0.3	12.9	15.6	17.4	57 56.96	+ 0.06	+ 1.05	15 57 58.07	− 5.17
Y.	ν^1 Scorpii	2	9.2	10.8	13.5	. .	. .	. .	. .	. .	45.4	48.0	49.9	4 29.47	0.06	1.05	16 4 30.58	5.20
	ν^2 Scorpii	3	. .	. .	. .	27.2	28.8	30.7	32.3	33.9	. .	. .	. .	4 30.58	0.06	1.05	16 4 31.69	− 5.20
	Moon I.	4	17.7	19.4	22.0	35.1	36.7	38.5	40.5	42.0	55.0	57.6	59.5	5 38.55	0.04	1.05	16 5 39.64	
	ψ Ophiuchi	5	13.7	15.1	17.9	30.6	32.3	34.0	35.8	37.6	50.0	52.7	54.6	16 34.03	0.06	1.05	16 16 35.14	− 5.27
	χ Ophiuchi	6	13.5	14.9	17.6	30.2	31.8	33.5	35.2	37.0	49.5	52.2	53.9	19 33.57	0.06	1.05	16 19 34.68	5.23
	O. Arg. S. 15734	†7	22.7	24.7	27.2	39.4	40.9	42.6	44.3	45.9	58.3	0.8	2.6	26 42.67	0.07	1.04	16 26 43.78	5.16
	ζ Ophiuchi	8	44.6	46.1	48.6	0.8	2.3	4.0	5.8	7.2	19.3	21.8	23.6	30 4.01	+ 0.08	1.04	16 30 5.13	5.02
	*−37° 3′	9	5.6	7.5	10.7	25.6	27.5	29.4	31.4	33.3	48.2	51.5	53.6	47 29.48	− 0.02	1.05	16 47 30.51	6.22
	*−34° 20′	†10	51.7	53.5	56.7	10.9	12.7	14.7	16.6	18.7	33.1	36.1	38.3	39 14.82	0.00	1.05	17 39 15.86	6.22
	μ Sagittarii	11	43.5	45.0	47.8	0.4	1.9	3.8	5.6	7.3	20.0	22.8	24.5	6 3.87	+ 0.06	1.01	18 6 4.94	5.60
	δ Ursæ Minoris	12	. .	. .	. .	23.5	49.0	18.5	45.0	11.0	. .	. .	. .	14 17.40	+ 0.92	1.01	. . . .	0.57
July 2	51 Cephei, S. P.	13	. .	. .	. .	45.0	18.0	52.0	26.5	59.0	. .	. .	. .	38 52.10	− 2.29	0.78	. . . .	7.13
	β^1 Lyræ	14	57.4	59.2	2.1	38.1	41.3	43.2	56.3	59.3	1.1	3.2	5.5	45 38.79	18.58	0.78	18 45 20.99	4.22
	ζ Aquilæ	15	10.3	11.8	14.4	26.7	28.3	30.0	31.8	33.3	45.4	48.0	49.9	59 29.99	0.06	0.78	18 59 30.71	4.61
	π Sagittarii	16	46.4	48.0	50.6	3.4	5.1	6.9	9.6	10.3	23.0	25.8	27.5	2 6.96	0.19	0.78	19 2 7.55	5.62
	d Sagittarii	17	46.3	47.9	50.5	3.2	4.7	6.6	8.3	9.9	22.4	25.2	26.9	10 6.54	0.18	0.78	19 10 7.14	5.52
	ρ^1 Sagittarii	18	52.6	54.2	56.8	9.5	11.0	12.8	14.5	16.2	28.6	31.3	33.0	14 12.77	0.17	0.78	19 14 13.38	5.48
	δ Aquilæ	19	41.6	43.1	45.6	57.7	59.2	0.8	2.4	3.9	15.8	18.4	20.0	19 0.77	0.09	0.78	19 19 1.46	− 4.88
	Moon II	20	. .	. .	. .	41.0	43.9	45.8	58.2	1.0	2.7	4.7	6.9	30 55.52	31.89	0.78	19 30 24.41	
	β Aquilæ	21	40.3	41.9	44.4	56.4	57.9	59.7	1.4	2.9	14.7	17.4	18.9	48 59.63	− 0.08	0.78	19 49 0.33	− 4.75
3	γ Aquilæ	22	48.4	50.0	52.5	4.7	6.2	7.8	9.6	11.1	23.3	25.8	27.4	40 7.89	+ 0.10	1.44	19 40 9.43	4.69
Sk.	α Aquilæ	23	10.1	11.7	14.4	26.4	27.9	29.6	31.3	32.8	45.0	47.6	48.9	44 29.61	0.09	1.45	19 44 31.15	− 4.76
	λ Ursæ Minoris	24	. .	. .	. .	13.0	38.0	5.5	32.0	53.0	. .	. .	. .	54 4.30	10.97	1.45	. . . .	+ 0.21
	α^2 Capricorni	25	34.3	36.0	38.5	50.7	52.3	53.9	55.8	57.3	9.5	12.1	13.7	10 54.01	0.04	1.45	20 10 55.50	− 5.20
	π Capricorni	26	36.3	37.9	40.5	53.0	54.7	56.4	58.3	59.9	12.6	15.0	16.6	19 56.47	0.03	1.45	20 19 57.95	5.33
	ε Delphini	27	43.7	45.3	47.8	0.0	1.6	3.3	4.9	6.4	18.6	21.2	22.7	27 3.28	0.10	1.45	20 27 4.78	4.61
	Moon II	28	31.1	33.0	35.9	49.2	50.9	52.7	54.6	56.2	9.6	12.3	13.8	36 52.66	0.01	1.45	20 36 54.12	
	ε Aquarii	29	22.2	23.9	26.5	38.6	40.1	41.7	43.3	45.0	57.1	59.6	1.1	40 41.74	0.05	1.45	20 40 43.24	− 5.01
	μ Aquarii	30	22.4	24.0	26.7	38.6	40.2	41.8	43.6	45.2	57.0	59.5	1.2	45 41.84	0.05	1.46	20 45 43.35	4.97
	ν Cygni	31	56.8	58.8	2.0	17.9	20.0	22.2	24.4	26.5	42.2	45.3	47.0	52 22.10	0.21	1.46	20 52 23.77	4.43
4	α Herculis	32	26.0	27.6	30.2	42.5	44.2	45.8	47.5	49.3	1.5	4.1	5.5	8 45.84	+ 0.12	1.73	17 8 47.69	3.48
Y.	*−37° 21′	33	40.1	42.3	45.7	0.4	2.2	4.4	6.5	8.7	23.4	26.6	28.6	29 4.45	− 0.05	1.73	17 29 6.13	6.41
	μ^1 Sagittarii	34	. .	. .	. .	19.3	22.1	23.7	35.2	38.2	39.8	41.7	43.6	6 32.95	− 29.76	1.75	18 6 4.94	5.64
	1 Aquilæ	35	51.9	53.6	56.2	8.1	9.6	11.4	13.0	14.7	26.6	29.1	30.7	28 11.35	+ 0.05	1.76	18 28 13.16	5.20
	ξ Aquarii	36	33.2	34.9	37.4	49.5	51.0	52.7	54.4	55.9	8.0	10.5	12.0	30 52.68	0.05	1.83	21 30 54.56	− 4.79
	Moon II	37	46.8	48.5	51.3	4.2	5.7	7.6	9.4	11.1	24.1	26.8	28.4	39 7.63	0.01	1.83	21 39 9.47	
	μ Capricorni	38	55.5	57.4	59.8	11.9	13.5	15.3	17.0	18.7	30.8	33.5	35.0	46 15.31	0.03	1.84	21 46 17.18	− 4.84
	α Aquarii	39	49.8	51.4	54.0	5.7	7.3	9.0	10.6	12.4	24.0	26.8	28.1	59 9.01	0.07	1.84	21 59 10.92	4.53
5	θ Aquarii	40	41.7	43.4	45.9	57.9	59.5	1.0	3.0	4.4	16.4	19.0	20.5	10 1.15	0.05	1.80	22 10 3.00	4.61
Sk.	π Aquarii	41	21.5	23.2	25.6	37.6	39.2	40.9	42.5	44.1	56.0	58.4	59.9	18 40.81	0.07	1.80	22 18 42.68	4.45
	η Aquarii	42	23.8	25.4	27.9	39.9	41.5	43.0	44.7	46.2	58.2	0.6	2.1	28 43.03	0.07	1.80	22 28 44.90	4.42
	κ Aquarii	43	44.4	46.2	48.7	0.6	2.3	3.9	5.7	7.1	19.1	20.6	23.1	31 3.79	0.06	1.80	22 31 5.65	− 4.48
	Moon II	44	12.9	14.5	17.3	29.9	31.4	33.2	34.8	36.5	49.2	51.7	53.4	36 33.16	0.03	1.80	22 36 34.99	
	λ Aquarii	45	33.0	34.6	37.1	49.1	50.7	52.3	54.0	55.5	7.7	10.2	11.7	45 52.35	0.05	1.80	22 45 54.20	− 4.40
	78 Aquarii	46	31.0	32.7	35.2	47.2	48.6	50.4	51.9	53.6	5.7	8.2	9.6	47 50.37	0.05	1.80	22 47 52.22	4.39
	α Pegasi	47	. .	. .	. .	16.1	17.7	19.4	21.2	22.8	. .	. .	. .	58 19.44	0.12	1.80	22 58 21.36	4.19
	θ Piscium	48	5.3	7.0	9.5	21.5	22.9	24.6	26.2	27.9	39.9	42.3	43.8	21 24.63	0.09	1.80	23 21 26.52	4.10
	ε Piscium	49	54.3	55.9	58.4	10.2	11.9	13.5	15.2	16.9	28.8	31.4	32.8	56 13.57	0.09	1.80	. . . .	3.58
	Polaris	†50	. .	. .	. .	12.5	16.0	25.0	34.5	37.5	. .	. .	. .	11 25.10	+ 10.23	+ 1.80	. . . .	− 19.92

CORRECTIONS, &c.

Date.	Error of clock.	Hourly rate.	n	c
1871. h.	s.	s.	s.	s.
July 2, 19.2	+ 0.78	0.000	+ 0.20	− 0.10
3, 20.2	1.45	+ 0.010	0.14	+ 0.07
4, 19.8	1.79	0.024	0.18	0.07
5, 23.0	+ 1.80	+ 0.002	+ 0.18	+ 0.07

7. Faint.
10. Only star.
50. Very steady.

July 3. Image west $0^{r}.42$; clamp west.
Image west $0^{r}.16$; clamp east.

Date and observer.	OBJECT.	Number.	SECONDS OF TRANSIT.												CORRECTIONS.		Observed Right Ascension.	Reduction to 1870.0.
			I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	X.	XI.	Mean.	Inst.	Clock.		
1871.			s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	m. s.	m. s.	s.	h. m. s.	s.
July 6	α Ophiuchi	1	36.9	38.6	41.2	53.3	54.9	56.7	58.3	0.0	12.0	14.6	16.3	28 56.62	+ 0.12	+ 1.88	. . . .	− 4.58
Y.	O. Arg. S. 18074	2	47.1	48.8	51.4	4.0	5.6	7.3	9.1	10.8	23.4	25.7	27.5	13 7.34	+ 0.02	1.89	18 13 9.25	5.54
	*−26° 26′	3	26.4	27.8	30.7	44.1	45.6	47.2	49.3	50.1	4.5	7.2	8.8	15 47.43	− 0.01	1.89	18 15 49.31	5.91
	*−28° 51′	4	55.8	57.7	0.5	14.0	15.6	17.4	19.3	21.5	35.0	37.7	39.6	20 17.65	0.01	1.89	18 20 19.53	6.03
	*−33° 7′	5	33.3	35.5	38.5	52.7	54.4	56.2	58.3	0.2	14.5	17.6	19.1	23 56.39	0.03	1.89	18 23 58.25	6.26
	O. Arg. S. 18526	6	30.3	32.2	34.8	48.0	49.5	51.4	53.1	55.1	8.3	11.1	12.7	32 51.50	0.00	1.89	18 32 53.39	5.86
	Weisse 971	7	21.5	23.0	. .	37.9	39.5	40.9	42.8	44.5	56.6	59.2	1.1	39 42.70	1.51	1.89	18 39 43.08	5.36
	β Lyræ	8	. .	. .	. .	37.0	40.0	41.8	54.8	58.0	59.6	1.7	4.0	45 52.11	− 32.99	1.89	. . . .	4.24
	β Aquilæ	9	39.0	40.8	43.4	55.2	56.8	58.5	0.2	1.7	13.6	16.2	17.7	48 58.46	+ 0.09	1.90	. . . .	− 4.81
	λ Ursæ Minoris	†10	. .	. .	. .	. .	. .	. .	34.0	0.0	17.0	46.0	28.0	24 13.00	−29 58.46	1.90	. . . .	+ 0.23
	*+27° 30′	11	1.8	3.4	6.3	19.6	21.4	22.9	24.9	26.9	40.4	43.0	44.7	31 23.21	+ 0.17	1.90	20 31 25.28	− 4.38
	Weisse 841	12	49.4	51.0	52.6	54.3	55.9	. .	22.8	25.7	27.1	28.7	30.5	34 9.80	− 17.12	1.90	20 33 54.58	5.03
	Weisse 846	13	. .	. .	. .	58.7	0.2	1.9	3.4	5.1	. .	. .	. .	34 1.86	+ 0.05	1.90	20 34 3.81	5.03
	*+34° 54′	14	. .	. .	. .	. .	. .	. .	43.3	46.7	48.5	50.5	52.7	37 48.34	− 41.32	1.90	20 37 8.92	4.28
	Lalande 40043	15	. .	. .	. .	. .	. .	. .	55.3	58.6	0.4	2.6	4.7	38 0.32	− 41.32	1.90	20 37 20.90	4.28
	*+34° 54′	16	22.0	23.9	26.2	28.1	30.1	. .	. .	. .	. .	. .	. .	38 26.06	+ 0.21	1.90	20 38 28.17	4.28
	*+34° 54′	17	40.0	41.9	44.0	46.0	47.9	. .	. .	. .	. .	. .	. .	38 43.96	0.21	1.90	20 38 46.07	4.28
	Weisse (2) 1357	18	15.2	17.1	20.1	34.4	36.5	38.2	40.4	42.1	. .	. .	. .	41 30.50	+ 8.01	1.90	20 41 40.41	4.29
	*+33° 54′	19	. .	. .	. .	57.6	59.6	1.6	3.7	5.4	19.9	22.8	24.7	42 9.41	− 7.61	1.90	20 42 3.70	4.29
	*−30° 3′	20	55.0	56.7	58.7	0.4	2.1	. .	33.4	36.5	38.1	39.9	42.1	1 18.29	19.70	1.90	21 1 0.49	5.60
	α Pegasi	†21	. .	. .	3.8	. .	. .	19.2	. .	. .	35.0	50.2	6.0	58 34.82	− 15.42	1.90	. . . .	4.22
7	α Leonis	22	7.9	9.5	12.1	24.3	25.9	27.5	29.3	30.9	43.1	45.7	47.2	1 27.58	+ 0.11	1.97	. . . .	2.83
Sk.	ι Piscium	23	59.2	0.7	3.2	15.1	16.6	18.2	20.0	21.5	33.5	36.0	37.4	33 18.31	0.08	1.60	23 33 19.99	4.16
	ω Piscium	24	21.3	22.9	25.7	37.6	39.0	40.5	42.3	43.8	55.9	58.3	59.7	52 40.64	0.09	1.59	23 52 42.32	4.04
	α Andromedæ	25	20.6	22.5	25.5	39.0	40.8	42.5	44.5	46.3	59.9	2.6	4.3	1 42.59	0.15	1.59	0 1 44.33	4.06
	γ Pegasi	26	15.1	. .	19.4	31.7	33.2	34.9	36.7	38.2	50.5	. .	54.6	6 34.92	0.11	1.59	0 6 36.62	− 3.97
	Moon II	27	1.1	2.7	5.3	17.5	19.0	20.7	22.4	24.1	36.3	38.9	40.4	19 20.76	0.06	1.58	0 19 22.40	
	β Ceti	28	45.5	47.3	49.9	2.7	4.0	5.8	7.5	9.3	21.8	24.4	26.0	37 5.84	0.03	1.57	0 37 7.44	− 3.70
	Polaris	29	. .	. .	. .	18.5	22.5	28.0	38.0	43.0	. .	. .	. .	11 30.00	8.58	1.56	. . . .	21.52
8	α Serpentis	30	35.8	37.4	39.9	51.9	53.5	55.2	56.8	58.5	10.3	13.0	14.5	37 55.16	0.09	1.05	15 37 56.30	4.37
Y.	ε Serpentis	31	4.2	6.0	8.5	20.3	21.8	23.5	25.0	26.7	38.7	41.2	42.6	44 23.50	0.08	1.05	15 44 24.63	4.45
	Weisse 439	32	49.1	50.7	53.2	5.2	6.9	8.4	10.2	11.7	23.6	26.1	27.6	24 8.43	0.08	1.01	16 24 9.52	4.59
	Weisse 873	33	10.2	11.9	14.5	26.3	27.8	29.5	31.1	32.7	44.6	47.2	48.7	46 29.50	+ 0.07	0.99	16 46 30.56	4.78
	Lacaille 7091	34	2.5	. .	7.8	23.3	25.4	27.5	29.5	31.7	47.1	. .	52.5	54 27.48	− 0.02	0.98	16 54 28.44	6.44
	Weisse 1033	35	. .	. .	. .	. .	. .	. .	58.5	1.4	2.8	4.4	6.4	56 2.70	34.45	0.98	16 55 29.23	5.07
	Weisse 1048	36	. .	. .	. .	29.5	32.2	33.6	. .	. .	. .	. .	. .	56 31.77	17.46	0.98	16 56 14.29	5.07
	*−35° 20′	37	41.5	43.2	45.3	47.3	49.3	. .	. .	. .	. .	. .	. .	8 45.32	0.01	0.97	17 8 46.28	6.22
	*−35° 23′	38	. .	. .	. .	10.0	13.0	14.9	28.2	31.4	33.1	35.4	37.6	9 25.45	− 34.07	0.97	17 8 52.35	6.22
	Weisse 322	39	1.8	3.5	6.0	17.9	19.5	21.0	22.7	24.3	36.1	38.7	40.1	19 21.05	+ 0.08	0.96	17 19 22.09	4.81
	α Ophiuchi	40	38.0	39.5	42.1	54.4	56.0	57.7	59.3	1.0	13.2	15.7	17.3	28 57.65	0.11	0.94	17 28 58.70	4.58
	O. Arg. N. 17415	41	20.0	24.5	31.1	. .	. .	. .	. .	. .	53.7	0.4	4.8	37 12.42	0.55	0.94	17 37 13.91	3.08
	O. Arg. N. 17420	42	. .	. .	. .	11.9	16.4	21.0	25.7	28.7	. .	. .	. .	37 20.74	+ 0.54	0.94	17 37 22.22	3.08
	*−34° 21′	43	. .	. .	. .	33.5	36.5	38.2	51.5	54.6	56.3	58.5	0.7	39 48.72	− 33.65	0.94	17 39 16.01	6.28
	*−31° 43′	44	46.0	47.7	51.0	. .	. .	. .	. .	. .	27.8	30.7	32.6	45 9.30	0.01	0.93	17 45 10.22	6.31
	*−34° 43′	45	. .	. .	. .	6.9	8.8	10.8	12.7	14.7	. .	. .	. .	45 10.78	0.01	0.93	17 45 11.70	6.31
	B. A. C. 6043	46	. .	. .	. .	. .	. .	. .	56.5	59.8	1.8	3.7	6.1	46 1.58	− 41.47	0.93	17 45 21.04	6.31
	*−24° 11′	47	1.3	3.3	5.9	18.9	20.5	22.5	24.3	25.8	39.0	41.7	43.5	56 22.43	+ 0.03	0.92	17 56 23.38	5.80
	*−24° 12′	48	. .	. .	. .	56.9	59.7	1.3	13.2	15.9	17.6	19.5	21.5	57 10.70	− 30.42	0.92	17 56 41.20	5.80
	*−21° 3′	49	21.0	22.8	24.4	26.4	28.5	. .	. .	. .	. .	. .	. .	5 24.62	+ 36.68	0.91	18 6 2.21	5.68
	*−21° 3′	50	46.9	48.7	51.3	. .	. .	. .	. .	. .	23.7	26.4	27.9	6 7.48	+ 0.02	+ 0.91	18 6 8.41	− 5.68

10. Steady.

21. Observation made with eye and ear over B_3, C_3, D_1, E_1, and E_6.

CORRECTIONS, &c.

Date.	Error of clock.	Hourly rate.	*n*	*c*
1871. h.	s.	s.	s.	s.
July 6, 18.7	+ 1.89	+ 0.005	+ 0.18	+ 0.07
7, 0.0	1.59	− 0.027	0.14	0.07
8, 17.4	+ 0.95	− 0.057	+ 0.14	+ 0.07

Date and observer.	OBJECT.	Number.	SECONDS OF TRANSIT OVER WIRES.												CORRECTIONS.		Observed Right Ascension.	Reduction to 1870.0.
			I.	II.	III.	IV.	V.	VI.	VII.	VIII	IX.	X.	XI.	Mean wire.	Inst.	Clock.		
1871.			s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	s.	m. s.	m. s.	s.	h. m. s.	s.
July 8	δ Ursæ Minoris	1	. .	. .	. .	44.0	9.5	40.0	5.5	. .	. .	. .	. .	14 24.75	− 9.91	+ 0.90	. . . .	+ 0.63
Y.	O. Arg. S. 18526	2	. .	. .	. .	9.3	11.9	13.6	25.7	28.5	30.2	32.2	34.1	33 23.19	− 30.67	0.89	18 32 53.41	− 5.88
	Weisse 971	3	22.5	23.8	26.5	38.8	40.3	42.1	43.6	45.2	57.6	0.0	1.8	39 42.02	+ 0.04	0.88	18 39 42.94	5.38
	β^1 Lyræ	4	57.0	58.9	1.9	16.2	18.1	20.1	22.2	23.9	38.0	41.0	42.9	45 20.02	0.18	0.87	18 45 21.07	4.26
	*−8° 21′	5	8.9	10.9	12.8	14.1	16.9	. .	17.7	20.5	22.0	23.8	25.6	51 47.32	0.14	0.87	18 51 48.33	5.25
	*−8° 20′	6	. .	. .	. .	55.3	56.5	58.2	59.9	1.8	. .	. .	. .	51 58.34	0.06	0.87	18 51 59.27	5.25
	Weisse 1293	7	25.3	27.2	29.0	30.5	33.0	. .	33.9	36.6	38.1	39.9	41.8	52 3.53	0.14	0.87	18 52 4.54	5.25
	κ Aquilæ	8	38.5	40.3	42.8	54.7	56.4	58.0	59.7	1.3	13.4	15.8	17.4	29 58.03	0.06	0.83	19 29 58.92	5.20
9	θ Ceti	9	15.0	16.5	19.2	31.2	32.8	34.5	36.1	37.7	49.8	52.3	53.8	17 34.45	0.06	0.56	. . . .	3.50
	η Piscium	10	14.9	16.6	19.2	31.5	33.1	. .	36.5	38.0	50.4	53.0	54.5	24 34.77	+ 0.11	0.56	. . . .	− 3.70
	Moon II	11	. .	. .	. .	. .	. .	. .	58.0	0.8	2.4	4.1	6.0	54 2.26	− 34.80	0.54	1 53 28.00	
	α Arietis	12	13.0	14.8	17.5	50.5	52.1	54.0	55.7	57.4	30.3	33.0	34.7	59 53.91	+ 0.14	0.53	. . . .	− 3.68
12	γ^2 Ursæ Majoris	13	. .	. .	. .	48.1	52.8	58.1	3.7	8.9	. .	. .	. .	20 58.32	0.66	0.23	15 20 59.21	2.11
	α Coronæ Borealis	14	52.7	54.7	57.6	11.0	13.7	14.5	16.3	18.1	31.5	34.5	35.9	29 14.59	0.15	0.23	. . . .	3.88
	α Serpentis	15	36.5	38.3	40.8	52.8	54.3	55.9	57.5	59.2	11.2	13.6	15.1	37 55.93	0.09	0.23	. . . .	− 4.34
Sk.	Moon II	16	3.2	4.9	7.5	20.5	22.0	23.7	25.7	27.2	40.0	42.6	44.2	16 23.77	0.12	0.33	4 16 24.22	
	α Tauri	17	10.4	12.2	14.9	27.3	28.8	30.7	32.2	33.9	46.2	48.8	50.4	28 30.53	0.11	0.33	4 28 30.97	− 3.10
	β Orionis	18	59.9	1.6	4.1	16.2	17.8	19.3	21.1	22.7	34.8	37.1	38.7	8 19.39	0.06	0.34	5 8 19.79	2.31
	β Tauri	19	45.4	47.3	50.1	3.6	5.3	7.2	9.1	11.0	. .	. .	. .	17 59.87	7.53	0.34	5 18 7.74	3.23
	ε Orionis	20	19.8	21.6	24.1	35.9	37.3	39.0	40.8	42.2	54.3	56.7	58.3	29 39.09	0.07	0.34	5 29 39.50	2.46
	α Orionis	21	51.0	52.6	55.0	7.0	8.6	10.0	11.8	13.5	25.5	27.8	29.5	48 10.21	+ 0.09	0.35	5 48 10.65	2.65
13	Polaris, S. P.	†22	. .	. .	. .	. .	. .	51.5	0.0	. .	. .	. .	. .	12 25.75	− 30.25	0.27	. . . .	26.71
	α Virginis	23	4.7	6.5	9.0	21.1	22.6	24.3	26.0	27.5	39.8	42.2	43.8	18 24.32	+ 0.05	+ 0.27	. . . .	− 3.80

CORRECTIONS, &c.

Date.	Error of clock.	Hourly rate.	n	c
1871. h.	s.	s.	s.	s.
July 9, 1.6	+ 0.55	− 0.040	+ 0.14	+ 0.07
12, 5.2	+ 0.34	+ 0.012	+ 0.14	+ 0.07

22. Dense clouds passing; observation over C_3 and C_4.

OBSERVATIONS

WITH THE

MURAL CIRCLE.

1871.

DATE.	Number.	OBJECT.	Magnitude.	No. of mic. readings.	Transit Wires.	MICROSCOPES.							MICROMETER.		
						A.	B.	C.	D.	E.	F.	Mean.	Observed.	Nadir cor.	Corr'd.
						° ′ ″	″	″	″	″	″	″		r.	r.
1871. Jan. 3	1	12 Eridani	5.0	3	III–VII.	88 20 0.2	15.1	11.7	17.7	10.7	0.8	9.37	28.038	−0.075	27.966
	2	Lalande 6888, (1st *)	. .	2	I, IX.	17 50 0.9	16.4	14.0	20.4	12.1	0.6	10.73	31.233	. .	31.116
	3	Lalande 6888, (2d *)	. .	3	III–VII.	" " "	"	"	"	"	"	"	31.401	. .	31.318
	4	Groombridge 745	8.3	3	IV–VI.	343 5 3.9	17.4	17.0	21.5	15.2	3.4	13.07	28.185	. .	28.098
	5	Anon. 3h 47m 19s	. .	1	V.	" " "	"	"	"	"	"	"	27.442	. .	27.367
	6	Anon. 3h 47m 54s	. .	1	V.	" " "	"	"	"	"	"	"	25.396	. .	25.321
	7	Nadir	. .	.	. .	199 59 54.9	72.3	67.1	75.8	64.9	57.9	65.48	30.125	. .	. .
	8	Moon S.	. .	3	III–VII.	39 30 2.2	18.8	15.6	23.2	15.1	5.8	13.45	26.523	. .	26.444
	9	Weisse V, 56.	9.5	2	VII, IX.	54 45 4.9	20.4	17.8	24.8	17.7	6.1	15.28	35.623	. .	35.559
	10	Jupiter N.	. .	2	I, IX.	36 19 58.8	74.8	72.1	78.7	71.4	60.8	69.43	28.691	. .	28.596
	11	Jupiter S..	. .	3	III–VII.	" " "	"	"	"	"	"	"	27.003	. .	26.924
	12	Σ Cat. Gen. 577	. .	3	IV–VI.	4 20 0.0	15.7	11.3	18.0	11.2	0.7	9.48	30.089	. .	30.010
	13	Groombridge 990	8.3	1	V.	7 35 2.3	21.0	16.6	23.8	14.7	1.9	13.38	35.451	. .	35.376
6	14	Jupiter S..	. .	4	I, II, VIII, IX.	36 20 4.2	15.8	15.1	20.2	14.2	1.0	11.75	24.795	−0.015	24.764
	15	Jupiter N.	. .	3	IV–VI.	" " "	"	"	"	"	"	"	26.350	. .	26.334
	16	Lacaille 1918.	. .	3	III–VII.	86 9 61.3	74.1	73.7	79.1	71.9	58.6	69.78	32.705	. .	32.695
	17	Nadir	. .	.	. .	199 59 61.3	74.2	73.5	79.0	71.4	59.1	69.75	30.326	. .	. .
7	18	24 Tauri	. .	3	VI, VIII, IX.	35 9 57.4	75.1	70.2	78.2	68.4	56.9	67.70	29.392	−0.073	29.317
	19	28 Tauri	. .	2	VII, IX.	" " "	"	"	"	"	"	"	32.318	. .	32.242
	20	Nadir	. .	.	. .	199 59 52.8	73.1	67.1	78.8	64.8	55.5	65.35	30.120	. .	. .
17	21	δ Persei	. .	3	III–VII.	11 30 1.9	20.0	16.0	23.5	14.5	4.0	13.32	27.913	−0.069	27.834
	22	Weisse III, 751	. .	3	V–IX.	46 50 0.4	14.7	11.8	18.9	12.1	2.2	13.35	30.179	. .	30.112
	23	Nadir	. .	.	. .	199 59 57.4	73.2	68.8	77.8	67.7	61.1	67.67	30.189	. .	. .
	24	Nadir	. .	.	. .	200 4 55.8	73.8	68.0	78.2	67.9	60.2	67.32	39.730	. .	. .
	25	Nadir	. .	.	. .	199 54 59.0	77.1	70.9	80.8	70.9	63.6	70.38	20.678	. .	. .
	26	Nadir	. .	.	. .	199 59 52.4	72.0	65.1	74.1	65.2	57.9	64.45	30.086	. .	. .
Mar. 4	27	O. Arg. S. 10122.	. .	3	III–VII.	83 29 58.8	76.8	71.3	80.7	70.6	62.0	70.03	33.463	−0.021	33.446
	28	Moon N.	. .	3	III–VII.	40 40 0.1	14.8	10.5	19.2	8.9	4.4	9.65	31.031	. .	31.007
	29	A Leonis	. .	3	III–VII.	48 15 0.7	16.1	12.1	22.8	12.1	5.3	11.52	29.540	. .	29.517
	30	Nadir	. .	.	. .	199 59 56.3	72.3	67.9	80.0	65.1	63.8	67.57	30.125	. .	. .
6	31	Weisse VI, 1579.	. .	3	IV–VI.	73 40 3.0	10.3	10.0	18.3	9.5	3.0	9.02	32.529	+0.115	32.645
	32	Weisse VI, 1587.	. .	2	VII, VIII.	" " "	"	"	"	"	"	"	31.492	. .	31.615
	33	Weisse VII, 93	. .	3	V–VII.	73 25 2.1	10.1	10.0	18.2	10.6	2.9	8.98	28.318	. .	28.436
	34	Anon. 7h 12m 0s	9.0	3	VI–VIII.	88 20 1.8	10.7	8.4	15.8	10.0	2.6	8.22	27.407	. .	27.533
	35	63 Geminorum	. .	3	IV–VI.	37 10 1.4	8.0	7.2	13.7	9.0	1.2	6.75	28.218	. .	28.332
	36	Anon. 7h 30m 29s	8.5	3	IV–VI.	88 35 3.5	13.5	12.2	17.3	13.0	4.2	10.62	31.435	. .	31.552
	37	Anon. 7h 30m 40s	8.5	3	VII–IX.	" " "	"	"	"	"	"	"	24.780	. .	24.915
	38	Anon. 7h 19m 13s	9.5	3	IV–VI.	86 15 1.9	11.9	10.7	17.1	12.0	2.1	9.28	26.933	. .	27.050
	39	Anon. 8h 28m 30s	9.0	3	III–VII.	48 45 2.0	9.6	10.0	16.0	11.0	3.7	8.72	29.566	. .	29.679
	40	O. Arg. S. 8852	. .	3	III–VII.	85 40 2.6	13.3	11.9	19.0	12.0	2.5	10.22	30.824	. .	30.944
	41	O. Arg. N. 9342, (1st *)	. .	3	V–VII.	347 35 2.6	10.4	12.1	18.5	10.9	3.2	9.62	27.179	. .	27.276
	42	O. Arg. N. 9342, (2d *)	. .	3	V–VII.	" " "	"	"	"	"	"	"	27.992	. .	28.089
	43	21 Leonis	. .	3	IV–VI.	46 25 2.4	10.8	11.0	16.8	11.3	2.9	9.20	27.138	. .	27.252
	44	Nadir	. .	.	. .	200 0 1.0	11.0	8.9	17.5	7.2	2.4	8.00	30.140	. .	. .
	45	Lacaille 4324.	8.0	3	III–VII.	86 25 0.5	11.4	9.0	16.2	10.0	1.6	8.12	28.347	. .	28.467
	46	Lalande 20482	8.5	3	VI–VIII.	69 20 1.9	14.4	13.2	19.0	12.6	3.5	10.77	30.577	. .	30.697
	47	O. Arg. S. 10944.	. .	3	III–VII.	84 45 2.9	14.4	14.5	21.3	14.2	3.8	11.85	29.683	. .	29.803
	48	Lacaille 4624.	. .	3	V–VII.	87 45 3.5	14.6	11.6	21.0	13.2	3.5	11.23	29.618	. .	29.737
	49	Rumker 3539	. .	3	III–VII.	49 0 2.9	14.1	12.9	23.0	13.2	5.1	11.87	29.100	. .	29.213
	50	Moon N.	. .	3	III–VII.	49 40 4.0	14.4	13.6	19.5	14.0	5.1	11.77	26.200	. .	26.313
	51	B. A. C. 3925.	. .	2	VII, IX.	66 0 3.9	14.8	13.6	21.0	13.7	5.1	12.02	31.092	. .	31.212
	52	Weisse (2) XI, 600	. .	3	III–VII.	34 50 5.0	14.4	13.0	21.8	13.4	4.8	12.07	28.674	. .	28.785
8	53	Lacaille 2085.	. .	3	V–VII.	93 20 7.7	16.0	14.1	20.0	17.1	9.6	14.08	30.351	+0.132	30.488
	54	Weisse (2) VI, 79	9.0	3	IV–VI.	27 25 1.3	10.0	9.9	15.8	12.7	5.5	9.20	26.340	. .	26.470
	55	Weisse (2) VI, 136	8.0	3	III–VII.	" " "	"	"	"	"	"	"	33.946	. .	34.072
	56	Anon. 6h 44m 22s	7.0	3	III–VII.	87 25 2.2	10.1	8.5	15.3	11.0	5.1	8.70	35.949	. .	36.086
	57	Lalande 13427	. .	3	V–VII.	10 20 2.9	12.2	11.4	17.8	14.2	4.9	10.57	31.192	. .	31.318
	58	Weisse VII, 93	. .	3	III–VII.	73 30 2.9	10.6	10.2	18.6	13.5	4.5	10.05	37.839	. .	37.974
	59	Anon. 7h 17m 44s	8.5	3	III–VII.	73 50 3.7	10.6	11.1	17.8	11.8	5.0	10.00	29.390	. .	29.525
	60	Anon. 7h 19m 31s	. .	3	III–VII.	" " "	"	"	"	"	"	"	27.125	. .	27.260
	61	68 Geminorum	. .	3	VI–VIII.	42 45 4.5	12.6	11.3	17.8	15.0	5.0	11.03	26.030	. .	26.159
	62	Weisse VII, 1477	9.0	3	III–VII.	46 30 3.6	10.9	11.5	17.0	13.6	4.5	10.18	28.857	. .	28.987
	63	ψ^2 Cancri	. .	3	III–VII.	33 0 3.7	13.5	9.4	18.2	14.3	6.9	11.00	30.902	. .	31.029
	64	Anon. 8h 10m 10s	9.0	3	V–VII.	27 50 3.8	14.3	12.3	17.5	15.0	6.8	11.62	21.743	+0.132	21.872

Number.	Barometer.	THERM'S.		Instrumental corrections.	Apparent Zenith Distance.	Refraction.	Observed Declination.	Reduction to 1870.0.	Observer.	REMARKS.
		At.	Ex.							
	in.	°	°	′ ″	° ′ ″	′ ″	° ′ ″	″		
1	30.062	37.2	31.6	+ 1 3.7	S. 68 21 13.0	+ 2 32.1	− 29 30 5.9	+ 2.0	Y.	Good observation.
2	. .	. .	. .	− 35.0	N. 2 10 24.2	2.3	+ 41 4 5.8	− 14.7	Y.	
3	. .	. .	. .	− 41.3	2 10 30.6	2.3	+ 41 4 12.1	14.7	Y.	
4	. .	. .	. .	+ 59.5	36 53 47.4	45.6	+ 75 48 12.3	19.6	Y.	
5	. .	. .	. .	+ 1 22.4	36 53 24.5	45.6	+ 75 47 49.4	19.3	Y.	
6	30.070	37.0	30.7	+ 2 26.5	N. 36 52 20.4	+ 45.6	+ 75 46 45.2	19.3	Y.	
7	. .	. .	. .	. .	. . . .	. .	. . . .	. .	Y.	Mercury very steady.
8	30.080	37.0	30.2	+ 1 51.3	S. 19 32 4.8	−32 27.3	+ 19 54 1.7	. .	Y.	Limb jagged.
9	. .	. .	. .	− 2 54.3	34 42 21.0	+ 42.2	+ 4 10 36.1	0.0	Y.	Faint.
10	. .	. .	. .	+ 44.0	16 20 53.4	17.2	+ 22 32 2.4	. .	Y.	
11	30.082	36.5	30.8	+ 1 36.3	S. 16 21 45.7	17.3				
12	. .	. .	. .	− 0.3	N. 15 39 50.8	17.0	+ 54 33 47.1	5.3	Y.	
13	. .	. .	. .	− 2 48.6	N. 12 27 35.2	13.4	+ 51 21 27.9	− 4.1	Y.	
14	. .	. .	. .	+ 2 44.0	S. 16 22 55.7	17.2	+ 22 30 50.9	. .	F.	
15	29.990	37.0	31.5	+ 1 54.8	16 22 6.6	17.2				
16	. .	. .	. .	− 1 24.5	66 8 45.3	2 16.1	− 27 17 22.2	+ 5.9	F.	
17	. .	. .	. .	. .	. . . .	. .	. . . .	. .	F.	
18	. .	. .	. .	+ 21.4	15 10 29.1	16.7	+ 23 42 53.4	− 10.5	Y.	
19	30.130	30.2	24.6	− 1 10.2	S. 15 8 57.4	16.7	+ 23 44 25.1	10.4	Y.	
20	. .	. .	. .	. .	. . . .	. .	. . . .	. .	Y.	
21	30.196	39.2	32.0	+ 1 7.8	N. 8 28 38.9	9.1	+ 47 22 27.2	17.8	Y.	
22	. .	. .	. .	− 3.5	S. 26 50 9.8	30.8	+ 12 2 58.6	− 6.9	Y.	
23	. .	. .	. .	. .	. . . .	. .	. . . .	. .	Y.	
24	. .	. .	. .	. .	. . . .	. .	. . . .	. .	Y.	
25	. .	. .	. .	. .	. . . .	. .	. . . .	. .	Y.	
26	. .	. .	. .	. .	. . . .	. .	. . . .	. .	Y.	
27	. .	. .	. .	− 1 47.9	63 28 22.1	+ 2 0.2	− 24 36 43.1	+ 23.8	Y.	Mr. Wurdeman repaired the telescope micrometer, after which Mr. Gardner inserted new threads in the old scores, and the proper adjustments in level. collimation, and stellar focus were made, before the observations of the 4th March.
28	30.028	43.0	34.2	− 31.5	20 39 38.1	− 3 59.3	+ 18 18 0.5	. .	Y.	
29	30.030	42.2	34.1	+ 15.1	28 15 26.6	+ 32.4	+ 10 37 40.2	22.0	Y.	
30	. .	. .	. .	. .	. . . .	. .	. . . .	. .	Y.	
31	. .	. .	. .	− 1 22.8	53 38 46.2	1 20.5	− 14 46 27.5	16.1	F.	
32	30.132	47.0	42.9	− 50.6	53 39 18.5	1 20.6	− 14 46 59.8	16.1	F.	
33	. .	. .	. .	+ 49.0	53 25 58.0	1 20.0	− 14 33 38.7	16.8	F.	
34	. .	. .	. .	+ 1 17.2	68 21 25.5	2 28.8	− 29 30 15.1	20.3	F.	
35	30.140	46.5	41.2	+ 52.2	17 10 59.0	18.4	+ 21 42 21.8	7.9	F.	
36	. .	. .	. .	− 48.6	68 34 22.0	2 30.8	− 29 43 13.6	21.2	F.	
37	. .	. .	. .	+ 2 39.2	68 37 49.8	2 31.4	− 29 46 42.0	21.2	F.	
38	30.160	44.0	39.5	+ 1 32.4	66 16 41.6	2 15.4	− 27 25 17.8	22.7	F.	
39	. .	. .	. .	+ 10.1	28 45 18.8	32.9	+ 10 7 47.6	16.4	F.	
40	. .	. .	. .	− 29.6	S. 65 39 40.7	2 11.2	− 26 48 12.6	23.1	F.	
41	. .	. .	. .	+ 1 25.3	N. 32 23 25.1	37.9	+ 71 17 42.2	4.7	F.	
42	. .	. .	. .	+ 59.8	N. 32 23 50.5	37.9	+ 71 18 7.7	4.7	F.	
43	30.170	43.5	41.9	+ 1 26.1	S. 26 26 35.3	29.7	+ 12 26 34.3	18.0	F.	
44	. .	. .	. .	. .	. . . .	. .	. . . .	. .	F.	
45	. .	. .	. .	+ 48.0	66 25 56.1	2 17.2	− 27 34 34.0	24.2	F.	
46	30.176	43.0	36.8	− 21.8	49 19 49.0	1 10.0	− 10 27 19.7	24.2	F.	
47	. .	. .	. .	+ 6.2	64 45 18.0	2 7.0	− 25 53 45.8	24.0	F.	
48	30.178	42.5	35.7	+ 8.2	67 45 19.5	2 26.6	− 28 54 6.9	23.5	F.	
49	. .	. .	. .	+ 24.6	29 0 36.5	+ 33.5	+ 9 52 29.3	24.9	F.	
50	. .	. .	. .	+ 1 55.5	29 42 7.2	−12 15.6	+ 9 23 47.6	. .	F.	
51	. .	. .	. .	− 37.9	45 59 34.1	+ 1 2.5	− 7 6 57.3	24.6	F.	
52	30.176	42.0	35.2	+ 38.0	14 50 50.1	16.0	+ 24 2 33.1	25.3	F.	
53	. .	. .	. .	− 15.3	73 19 58.8	3 12.6	− 34 29 32.2	+ 17.0	F.	Extremely faint; hazy.
54	. .	. .	. .	+ 1 50.5	7 26 59.7	7.6	+ 31 26 31.9	− 2.0	F.	
55	30.008	51.0	48.2	− 2 7.5	7 23 1.7	7.6	+ 31 30 30.0	− 1.8	F.	
56	. .	. .	. .	− 3 10.6	S. 67 21 58.1	2 19.5	− 28 30 38.4	+ 18.9	F.	
57	. .	. .	. .	− 41.3	N. 9 40 30.7	10.0	+ 48 34 20.0	− 3.2	F.	
58	30.020	50.0	47.3	− 4 9.7	S. 53 26 0.3	1 18.9	− 14 33 40.0	+ 17.0	F.	
59	. .	. .	. .	+ 14.9	53 50 24.9	1 20.0	− 14 58 5.6	17.8	F.	
60	. .	. .	. .	+ 1 25.8	53 51 35.8	1 20.2	− 14 59 16.7	18.0	F.	
61	. .	. .	. .	+ 2 0.3	22 47 11.3	24.6	+ 16 6 3.3	10.0	F.	
62	. .	. .	. .	+ 31.7	26 30 41.9	29.3	+ 12 22 28.1	13.0	F.	
63	. .	. .	. .	− 32.2	12 59 38.8	13.6	+ 25 53 46.9	10.3	F.	
64	. .	. .	. .	+ 4 14.5	S. 7 54 26.2	+ 8.2	+ 30 59 4.9	+ 9.6	F.	

DATE.	Number.	OBJECT.	Magnitude.	No. of mic. readings.	Transit Wires.	MICROSCOPES.							MICROMETER.		
						A.	B.	C.	D.	E.	F.	Mean.	Observed.	Nadir cor.	Corr'd.
1871.						° ′ ″	″	″	″	″	″	″	r.	r.	r.
Mar. 8	1	Weisse 294 . . .	6.0	3	VII–IX.	71 5 4.4	13.6	12.8	20.9	15.2	7.5	12.40	31.451	+0.132	31.593
	2	Nadir	. .	.	. . .	200 0 1.9	10.2	8.6	15.9	10.3	4.5	8.57	30.142	. .	. .
14	3	O. Arg. S. 5522 . .	9.0	3	III–VII.	86 30 2.9	15.8	12.3	21.9	13.5	6.9	12.22	32.613	–0.036	32.582
	4	O. Arg. S. 5718 . .	8.8	2	V, VII.	86 5 3.4	17.2	13.6	22.8	14.9	7.2	13.18	28.599	. .	28.568
	5	O. Arg. S. 5762 . .	8.0	3	V–IX.	" " "	"	"	"	"	"	"	34.578	. .	34.555
	6	Weisse VI, 1618. .	8.5	2	IV, VI.	73 44 58.0	73.2	69.1	79.0	70.2	63.0	68.75	40.379	. .	40.344
	7	Nadir	. .	.	. . .	199 59 51.5	64 9	60.3	69.8	60.5	56.0	60.50	29.917	. .	. .
	8	B. A. C. 2827. . .	. .	3	III–VII.	82 30 4.0	18.5	13.4	22.0	15.2	6.4	13.25	31.016	. .	30.984
15	9	Lacaille 2641. . .	. .	3	IV, V, VI.	83 54 61.1	51.0	61.5	56.0	69.8	63.7	60.52	33.195	– 0.108	33.088
	10	Anon. $7^h 4^m 26^s$ . .	. .	3	VII–IX.	" " "	"	"	"	"	"	"	35.808	. .	35.717
	11	Lacaille 2767. . .	. .	3	III–VII.	94 29 62.1	53.6	62.4	56.5	70.5	61.6	61.12	28.238	. .	28.137
	12	B. A. C. 2651. . .	7.0	3	III–VII.	88 49 61.1	52.3	60.0	53.9	69.0	60.8	59.52	34.056	. .	33.954
	13	B. A. C. 2655. . .	7.0	3	IV–VI.	" " "	"	"	"	"	"	"	28.638	. .	28.532
	14	Weisse VIII, 415 .	. .	3	III–VII.	44 59 61.9	52.5	61.8	53.5	70.8	60.2	60.12	33.822	. .	33.712
	15	g Mali	4.8	3	IV–VI.	84 39 62.0	54.2	64.4	57.4	71.8	61.1	61.82	29.944	. .	29.841
	16	O. Arg. S. 8806 . .	7.5	3	VII–IX.	84 49 62.5	54.0	64.6	57.1	72.4	62.1	62.12	28.741	. .	28.651
	17	Anon. $8^h 50^m 11^s$.	. .	3	IV–VI.	91 44 62.1	54.5	62.3	55.8	70.1	61.6	61.07	26.353	. .	26.247
	18	Dorpat 1343, (1st *).	9.0	3	IV–VI.	53 14 61.0	52.1	60.5	53.1	69.3	59.8	59.30	34.085	. .	33.976
	19	Dorpat 1343, (2d *) .	. .	2	VIII, IX.	" " "	"	"	"	69.0	"	59.25	34.805	. .	34.697
	20	Nadir	. .	.	. .	199 59 60.6	52.1	61.1	54.8	67.3	61.5	59.57	30.094	. .	. .
	21	Lacaille 4052. . .	. .	3	III–VII.	91 9 60.4	52.6	61.5	54.0	67.8	59.0	59.22	23.339	. .	23.237
16	22	Nadir	. .	.	. .	200 0 2.0	2.8	6.2	4.8	11.2	5.0	5.33	30.266	–0.235	. .
	23	Nadir	. .	.	. .	199 55 2.4	3.6	7.5	5.6	12.8	6.1	6.33	20.727	. .	. .
	24	Nadir	. .	.	. .	200 5 2.1	4.1	8.0	6.6	13.8	7.2	6.93	39.902	. .	. .
	25	Nadir	. .	.	. .	200 0 0.2	1.5	4.8	2.2	10.8	4.0	3.92	30.221	. .	. .
21	26	B. A. C. 2266. . .	6.0	3	III–VII.	87 14 60.9	59.2	64.8	61.3	69.8	62.6	63.10	33.050	–0.252	32.803
	27	Lalande 13427 . .	8.5	3	IV–VI.	10 20 6.1	6.8	13.0	7.0	17.8	7.9	9.77	31.610	. .	31.355
	28	Weisse (2) 135 . .	. .	3	III–VII.	33 40 4.2	4.2	11.1	5.1	15.8	7.9	8.05	31.386	. .	31.129
	29	Anon. $7^h 13^m 20^s$.	9.5	1	V.	33 35 5.6	4.5	11.6	5.3	15.7	8.1	8.47	27.554	. .	27.302
	30	β Canis Minoris . .	. .	3	III–VII.	50 20 4.1	1.8	8.9	3.0	13.2	6.2	6.20	29.822	. .	29.569
	31	B. A. C. 2521. . .	7.0	1	V.	338 20 4.3	1.3	11.3	1.8	13.1	4.9	6.12	31.826	. .	31.574
	32	Weisse (2) VII, 1263	8.5	3	III–VII.	27 55 3.3	2.4	9.2	4.3	14.4	5.9	6.58	33.508	. .	33.250
	33	ψ^2 Cancri	. .	3	III–VII.	33 0 1.2	1.2	6.5	1.8	11.4	4.1	4.37	31.150	. .	30.893
	34	Anon. $8^h 10^m 10^s$.	9.3	3	IV–VI.	27 50 4.2	3.5	8.7	4.8	13.7	5.8	6.78	27.014	. .	26.760
	35	ϕ^2 Cancri, (1st *) . .	. .	2	IV, IX.	31 29 58.0	56.5	62.8	55.4	67.4	59.0	59.85	26.138	. .	25.880
	36	ϕ^2 Cancri, (2d *) . .	. .	2	VI, VIII.	" " "	"	"	"	"	"	"	26.232	. .	25.976
	37	B. A. C. 2883. . .	6.5	3	III–VII.	89 55 6.4	6.4	10.5	5.5	14.1	5.9	8.13	27.346	. .	27.100
	38	Weisse (2) VIII, 856	8.8	2	VI, VIII.	15 44 59.2	57.9	63.7	57.5	67.1	59.4	60.80	30.217	. .	29.951
	39	O. Arg. N. 9342, (1st *)	. .	3	IV–VI.	347 35 5.5	2.8	12.7	5.5	14.5	7.0	8.00	27.562	. .	27.301
	40	Anon. $8^h 50^m 32^s$.	7.0	2	VII, IX.	96 40 0.7	1.2	6.9	2.1	10.9	3.0	4.13	30.200	. .	29.927
	41	Anon. $9^h 12^m 13^s$.	9.0	3	III–VII.	87 25 2.9	4.8	8.4	5.8	14.4	5.9	7.03	26.172	. .	25.925
	42	ζ^1 Antliæ, (1st *) . .	7.5	2	I, IX.	90 10 3.4	5.5	9.0	4.8	14.7	5.7	7.18	29.196	. .	28.974
	43	ζ^1 Antliæ, (2d *) . .	6.0	3	III–VII.	" " "	"	"	"	"	"	"	29.499	. .	29.253
	44	Anon. $9^h 32^m 37^s$.	8.0	2	VII, IX.	95 10 5.6	5.5	12.0	7.0	16.2	7.1	8.90	28.290	. .	28.018
	45	Anon. $9^h 41^m 29^s$.	9.0	3	III–VII.	88 30 3.4	3.7	9.0	4.5	13.0	5.5	6.52	26.662	. .	26.416
	46	Weisse (2) IX, 1003.	8.5	3	IV–VI.	14 20 1.3	0.4	7.2	0.6	9.2	1.4	3.35	33.773	. .	33.518
	47	Anon. $10^h 1^m 29^s$.	8.0	2	III, V.	83 10 1.9	2.5	8.8	3.9	11.5	3.1	5.28	29.900	. .	29.650
	48	Anon. $10^h 2^m 3^s$.	8.5	3	V–IX.	" " "	"	"	"	"	"	"	26.688	. .	26.447
	49	Anon. $10^h 8^m 40^s$.	7.3	3	III–VII.	97 30 1.6	4.1	7.9	3.1	11.7	3.7	5.35	26.921	. .	26.677
	50	Anon. $10^h 16^m 53^s$.	8.5	3	III–VII.	86 15 1.8	2.8	7.8	4.8	11.8	3.4	5.80	33.387	. .	33.140
	51	Weisse X, 425 . .	8.0	3	III–VII.	48 50 3.2	1.7	8.5	4.2	13.6	5.2	6.07	34.149	. .	33.895
	52	Anon. $10^h 36^m 4^s$.	8.5	3	III–VII.	94 35 1.3	1.8	8.9	4.2	11.9	2.9	5.17	30.741	. .	30.496
	53	O. Arg. N. 11176 .	9.0	3	IV–VI.	356 5 5.1	5.3	13.2	7.6	14.7	7.1	8.83	31.659	. .	31.401
	54	Anon. $10^h 53^m 18^s$.	8.5	3	III–VII.	94 40 0.9	2.5	8.5	5.9	12.7	4.2	5.78	32.246	. .	32.001
	55	Nadir	. .	.	. .	200 0 0.2	2.2	6.9	5.4	10.0	5.1	4.97	30.272	. .	. .
22	56	B. A. C. 2521. . .	. .	3	IV–VI.	338 19 59.0	51.6	63.2	51.3	65.4	57.4	57.98	31.468	–0.162	31.289
	57	Weisse (2) VII, 1263	8.5	1	IX.	27 54 62.1	55.5	64.5	58.8	71.5	62.2	62.43	33.322	. .	33.135
	58	ψ^2 Cancri.	. .	1	V.	32 59 63.4	55.0	62.8	54.5	71.8	62.9	61.73	30.965	. .	30.803
	59	ϕ^2 Cancri, (1st *) . .	. .	3	II–VIII.	31 29 62.6	55.8	64.5	55.1	71.2	62.5	61.95	25.962	. .	25.790
	60	ϕ^2 Cancri, (2d *) . .	. .	2	III, VII.	" " "	"	"	"	"	"	"	26.122	. .	25.952
	61	υ^3 Cancri.	. .	3	VI–VIII.	34 19 63.4	55.5	63.2	55.8	70.2	62.3	61.73	25.342	. .	25.175
	62	δ Hydræ	. .	3	III–VII.	52 44 64.0	54.0	65.0	57.2	70.9	63.1	62.37	32.143	. .	31.980
	63	Nadir	. .	.	. .	199 59 63.6	55.6	64.3	58.0	69.8	63.0	62.38	30.238	. .	. .
	64	Lacaille 3920. . .	. .	2	V, VII.	85 44 63.9	55.9	65.5	59.1	71.7	62.9	63.17	23.524	. .	23.367
	65	23 Leonis	. .	3	III–VII.	45 9 64.1	57.7	65.6	57.2	71.2	62.9	63.12	24.146	–0.162	23.982

Number.	Barometer.	THERM'S.		Instrumental corrections.	Apparent Zenith Distance.	Refraction.	Observed Declination.	Reduction to 1870.0.	Observer.	REMARKS.
		At.	Ex.							
	in.	°	°	′ ″	° ′ ″	′ ″	° ′ ″	″		
1	30.016	49.0	45.9	− 49.9	S. 51 4 22.5	+ 1 12.7	− 12 11 56.0	+ 20.2	F.	
2	. .	. .	. .	. .	. . . . .	. .	. . . . .	. .	F.	
3	30.134	50.0	46.6	− 1 20.8	66 28 51.4	2 14.6	− 27 37 26.7	18.8	Y.	
4	. .	. .	. .	+ 44.8	66 5 58.0	2 12.2	− 27 14 31.0	19.1.	Y.	
5	. .	. .	. .	− 2 22.6	66 2 50.6	2 11.9	− 27 11 23.2	19.2	Y.	
6	. .	. .	. .	− 5 23.9	53 39 44.9	1 20.0	− 14 47 25.6	16.8	Y.	
7	. .	. .	. .	. .	. . . . .	. .	. . . . .	. .	Y.	
8	30.120	49.1	45.5	− 30.8	62 29 42.4	1 52.9	− 23 37 56.1	23.4	Y.	
9	29.990	59.5	57.4	− 1 36.7	63 53 23.8	1 56.6	− 25 1 41.1	20.0	F.	Cleaned and adjusted microscopes D and F; also, adjusted zero readings of B, C, and E.
10	. .	. .	. .	− 2 59.0	63 52 1.5	1 56.4	− 25 0 18.7	20.0	F.	
11	. .	. .	. .	+ 58.3	74 30 59.5	3 24.6	− 35 40 44.8	22.7	F.	
12	. .	. .	. .	− 2 3.8	68 47 55.7	2 27.2	− 29 56 43.7	23.4	F.	
13	30.000	58.5	56.2	+ 46.0	68 50 45.5	2 27.6	− 29 59 33.8	23.5	F.	
14	. .	. .	. .	− 1 56.2	24 58 3.9	26.8	+ 13 55 8.6	14.6	F.	
15	. .	. .	. .	+ 5.0	64 40 6.8	2 1.2	− 25 48 28.7	24.3	F.	
16	. .	. .	. .	+ 42.2	64 50 44.4	2 2.1	− 25 59 7.3	24.4	F.	
17	. .	. .	. .	+ 1 57.5	71 46 58.6	2 53.5	− 32 56 12.8	25.8	F.	
18	. .	. .	. .	− 2 4.5	33 12 54.8	37.9	+ 5 40 6.6	20.3	F.	
19	. .	. .	. .	− 2 27.1	33 12 32.2	37.8	+ 5 40 29.3	20.3	F.	
20	. .	. .	. .	. .	. . . . .	. .	. . . . .	. .	F.	
21	. .	. .	. .	+ 3 31.8	71 14 31.0	2 48.8	− 32 23 40.5	26.4	F.	
22	. .	. .	. .	. .	. . . . .	. .	. . . . .	. .	Y.	
23	. .	. .	. .	. .	. . . . .	. .	. . . . .	. .	Y.	
24	. .	. .	. .	. .	. . . . .	. .	. . . . .	. .	Y.	
25	. .	. .	. .	. .	. . . . .	. .	. . . . .	. .	Y.	
26	. .	. .	. .	− 1 27.8	S. 67 13 35.3	2 16.1	− 28 22 12.2	+ 19.8	Y.	
27	29.700	56.0	51.3	− 42.4	N. 9 40 32.7	9.8	+ 48 34 21.7	− 4.2	Y.	
28	. .	. .	. .	− 35.3	S. 13 39 32.7	14.0	+ 25 13 52.5	+ 4.8	Y.	
29	. .	. .	. .	+ 1 24.5	13 36 32.9	14.0	+ 25 16 52.4	5.4	Y.	Faint.
30	29.700	55.2	50.4	+ 13.5	S. 30 20 19.7	33.7	+ 8 32 45.8	+ 11.7	Y.	
31	. .	. .	. .	− 49.3	N. 41 40 43.2	51.3	+ 80 35 13.7	− 8.5	Y.	
32	29.692	55.0	49.4	− 1 41.8	S. 7 53 24.8	8.0	+ 31 0 6.4	+ 6.2	Y.	
33	29.694	54.7	49.0	− 28.0	12 59 36.4	13.3	+ 25 53 49.5	9.4	Y.	
34	. .	. .	. .	+ 1 41.5	7 51 48.2	8.0	+ 31 1 43.0	8.4	Y.	
35	. .	. .	. .	+ 2 9.0	11 32 8.8	11.8	+ 27 21 18.6	10.3	Y.	
36	. .	. .	. .	+ 2 6.0	11 32 5.9	11.8	+ 27 21 21.6	10.3	Y.	
37	29.696	54.2	48.7	+ 1 30.8	S. 69 56 38.9	2 37.0	− 31 5 36.7	25.6	Y.	
38	. .	. .	. .	+ 1.5	N. 4 14 57.7	4.3	+ 43 8 41.2	7.0	Y.	
39	. .	. .	. .	+ 1 24.5	N. 32 23 27.5	36.7	+ 71 17 43.4	0.6	Y.	
40	29.692	54.0	47.2	+ 2.3	S. 76 40 6.4	3 59.8	− 37 50 27.0	27.1	Y.	
41	. .	. .	. .	+ 2 7.6	67 27 14.6	2 18.7	− 28 35 54.1	26.5	Y.	
42	. .	. .	. .	+ 32.1	70 10 39.3	2 39.4	− 31 19 39.5	26.7	Y.	
43	29.698	53.2	47.4	+ 23.4	70 10 30.6	2 39.4	− 31 19 30.7	26.7	Y.	
44	. .	. .	. .	+ 1 2.1	75 11 11.0	3 35.7	− 36 21 7.4	27.2	Y.	
45	. .	. .	. .	+ 1 52.2	S. 68 31 58.7	2 26.4	− 29 40 45.9	26.8	Y.	
46	. .	. .	. .	− 1 50.1	N. 5 41 46.8	5.8	+ 44 35 31.8	13.3	Y.	
47	. .	. .	. .	+ 11.0	S. 63 10 16.2	1 54.2	− 24 18 31.2	26.8	Y.	
48	29.696	53.2	47.3	+ 1 51.2	63 11 56.5	1 54.3	− 24 20 11.6	26.8	Y.	
49	. .	. .	. .	+ 1 44.1	77 31 49.4	4 16.4	− 38 42 26.5	27.7	Y.	
50	. .	. .	. .	− 1 38.3	66 13 27.5	2 11.0	− 27 21 59.3	27.1	Y.	
51	. .	. .	. .	− 2 2.0	28 48 4.1	31.9	+ 10 5 3.2	22.9	Y.	
52	. .	. .	. .	− 15.5	S. 74 34 49.6	3 27.7	− 35 44 38.0	27.3	Y.	
53	29.700	52.7	45.4	− 43.9	N. 23 55 35.0	25.8	+ 62 49 40.1	14.7	Y.	
54	. .	. .	. .	− 1 2.7	S. 74 39 3.1	3 29.1	− 35 48 53.0	+ 26.9	Y.	
55	. .	. .	. .	. .	. . . . .	. .	. . . . .	. .	Y.	
56	. .	. .	. .	− 40.4	N. 41 40 42.4	50.9	+ 80 35 12.5	− 8.5	F.	
57	29.762	59.0	54.9	− 1 38.2	S. 7 53 24.3	7.9	+ 31 0 7.0	+ 6.2	F.	
58	. .	. .	. .	− 25.2	12 59 36.6	13.2	+ 25 53 49.5	9.3	F.	
59	. .	. .	. .	+ 2 11.8	11 32 13.8	11.7	+ 27 21 13.8	10.2	F.	
60	. .	. .	. .	+ 2 6.8	11 32 8.7	11.7	+ 27 21 18.9	10.2	F.	
61	. .	. .	. .	+ 2 31.0	14 22 32.8	14.7	+ 24 30 51.8	11.5	F.	
62	29.760	58.0	54.1	− 1 2.0	32 44 0.4	36.8	+ 6 9 2.0	17.4	F.	
63	. .	. .	. .	. .	. . . . .	. .	. . . . .	. .	F.	
64	. .	. .	. .	+ 3 27.7	65 48 30.9	2 7.2	− 26 56 58.8	26.8	F.	
65	29.750	56.5	51.5	+ 3 8.4	S. 25 13 11.6	+ 27.1	+ 13 40 0.6	+ 20.0	F.	

DATE.	Number.	OBJECT.	Magnitude.	No. of mic. readings.	Transit Wires.	MICROSCOPES.							MICROMETER.		
						A.	B.	C.	D.	E.	F.	Mean.	Observed.	Nadir cor.	Corr'd.
1871.						° ′ ″	″	″	″	″	″	″	r.	r.	r.
Mar. 24	1	Lacaille 2767, (1st *).	. .	2	IV, VI.	94 30 4.9	1.9	9.5	3.8	12.6	3.8	6.08	28.660	−0.146	28.517
	2	Lacaille 2767, (2d *).	. .	1	V.	" " "	"	"	"	"	"	"	28.440	. .	28.294
	3	Weisse VII, 756.	. .	2	VIII, IX.	48 10 5.8	0.7	8.7	4.9	13.0	4.1	6.20	27.493	. .	27.343
	4	Anon. $7^h 34^m 26^s$	7.8	3	IV–VI.	93 20 5.0	2.2	9.3	7.1	12.7	3.5	6.63	25.939	. .	25.795
	5	Anon. $7^h 35^m 8^s$	9.2	3	VII–IX.	" " "	"	"	"	"	"	"	29.014	. .	28.892
	6	O. Arg. S. 7476	. .	2	VI, VII.	82 20 5.1	1.5	8.3	5.8	11.5	2.0	5.70	29.115	. .	28.974
	7	Weisse VIII, 294	. .	3	III–VII.	71 5 6.6	1.2	10.0	6.1	13.3	5.1	7.05	31.490	. .	31.346
	8	O. Arg. S. 8610	. .	3	IV–VI.	88 50 4.9	1.4	8.5	4.9	12.3	4.2	6.03	34.900	. .	34.756
	9	Lacaille 3459.	. .	3	III–VII.	92 25 6.1	1.8	9.5	6.6	12.1	3.1	6.53	32.222	. .	32.082
	10	Anon. $8^h 34^m 58^s$	. .	2	IV, VI.	" " "	"	"	"	"	"	"	30.975	. .	30.830
	11	Anon. $8^h 49^m 47^s$	. .	3	III–VII.	91 45 5.5	2.0	8.6	6.8	12.0	3.0	6.32	26.707	. .	26.567
	12	Lalande 18122, (1st *)	. .	3	V–VII.	5 40 4.8	1.1	11.3	5.0	11.6	3.2	6.17	31.160	. .	31.007
	13	Lalande 18122, (2d *)	. .	2	VIII, IX.	" " "	"	"	"	"	"	"	31.544	. .	31.351
	14	λ Leonis	. .	2	V, VII.	35 19 62.2	57.0	67.5	60.5	69.0	59.2	62.57	27.831	. .	27.682
	15	Anon. $9^h 37^m 0^s$	7.5	3	III–VII.	93 49 61.9	60.2	66.5	64.2	70.6	58.9	63.72	30.564	. .	30.425
	16	Lacaille 4031.	. .	3	III–VII.	93 14 61.1	58.2	65.5	63.1	68.6	57.8	62.38	28.612	. .	28.459
	17	Anon. $9^h 50^m 43^s$.	6.5	2	VIII, IX.	98 59 62.8	61.2	67.2	63.1	70.3	58.9	63.92	27.188	. .	27.078
	18	Lalande 19627	9.0	3	V–VII.	349 49 63.0	58.5	68.5	63.5	69.0	57.9	63.40	30.394	. .	30.233
	19	Groombridge 1618	7.0	3	VII–IX.	8 49 63.3	58.8	67.9	64.4	70.1	58.0	63.75	35.218	. .	35.041
	20	Anon. $10^h 8^m 49^s$	8.0	3	IV–VI.	88 59 62.8	59.9	67.3	64.4	70.6	60.0	64.17	26.643	. .	26.499
	21	Groombridge 1633	. .	1	V.	335 39 63.6	58.2	68.5	61.5	69.7	59.6	63.52	26.985	. .	26.839
	22	δ Antliæ	6.0	3	III–VII.	88 45 3.8	3.1	8.8	6.6	12.1	1.1	5.92	24.391	. .	24.251
	23	Anon. $10^h 41^m 4^s$	8.0	2	VI, VII.	94 15 3.5	0.4	6.6	5.6	9.8	0.0	4.32	29.654	. .	29.516
	24	Anon. $10^h 41^m 36^s$	8.0	3	VI–VIII.	" " "	"	"	"	"	"	"	26.345	. .	26.218
	25	Anon. $10^h 53^m 36^s$	. .	3	V–VII.	71 30 2.8	1.9	8.6	5.9	11.9	1.8	5.48	28.918	. .	28.774
	26	p^2 Leonis.	. .	3	III–VII.	58 9 62.3	59.8	66.8	65.2	71.4	61.3	64.47	27.723	. .	27.577
	27	Weisse (2) XI, 58	. .	3	V–VII.	25 34 61.1	59.1	65.5	63.5	67.3	58.8	62.55	31.017	. .	30.868
	28	Lacaille 4703.	. .	3	IV–VI.	98 40 1.9	1.0	5.0	2.9	8.6	2.8	3.70	36.665	. .	36.521
	29	Lacaille 4746.	7.0	3	III–VII.	96 14 61.2	62.2	72.6	65.2	71.2	58.8	65.20	27.097	. .	26.958
	30	Nadir	. .	.	. .	199 59 60.1	57.5	65.7	63.1	64.8	59.1	61.72	30.201	. .	. .
25	31	B. A. C. 2266	. .	3	III–VII.	87 15 2.0	1.8	6.8	5.8	7.1	2.0	4.25	33.270	−0.294	32.981
	32	B. A. C. 2363	. .	3	III–VII.	34 0 1.4	0.0	7.2	2.0	6.8	2.1	3.25	34.934	. .	34.636
	33	O. Arg. S. 6430	7.0	3	V–IX.	86 0 2.7	5.0	11.7	7.1	10.2	4.0	6.78	30.586	. .	30.305
	34	Anon. $7^h 20^m 3^s$	9.0	3	III–VII.	48 30 1.8	0.0	6.2	2.5	6.7	2.0	3.20	38.871	. .	38.575
	35	Weisse (2) VII, 728	8.3	3	III–VII.	18 10 4.2	3.1	10.8	5.0	9.4	3.1	5.93	37.113	. .	36.811
	36	Anon. $7^h 43^m 8^s$	8.5	3	V–IX.	20 44 59.6	58.8	65.7	59.9	66.2	57.6	61.30	28.754	. .	28.445
	37	B. A. C. 2846	. .	3	III–VII.	84 35 3.2	6.1	11.5	7.9	10.4	5.2	7.38	32.048	. .	31.759
	38	Weisse VIII, 618	7.5	3	III–VII.	45 40 0.8	2.5	8.8	4.1	7.9	2.2	4.38	32.391	. .	32.095
	39	Weisse VIII, 851	9.0	2	VII, IX.	54 5 2.9	4.1	9.8	5.4	9.8	3.4	5.90	36.566	. .	36.272
	40	Weisse VIII, 1146	8.0	3	V–IX.	45 10 1.0	2.2	7.9	4.1	8.1	2.4	4.28	30.334	. .	30.037
	41	Anon. $8^h 57^m 11^s$	8.5	1	V.	5 10 1.9	1.7	8.8	3.7	6.9	1.6	4.10	33.798	. .	33.504
	42	B. A. C. 3202	7.0	3	III–VII.	50 40 1.0	1.9	7.7	4.1	7.8	3.1	4.27	35.863	. .	35.568
	43	Lacaille 3928.	5.8	3	III–VII.	83 35 1.7	4.1	8.9	6.8	8.5	2.9	5.48	30.362	. .	30.072
	44	Anon. $9^h 40^m 18^s$	9.0	3	III–VII.	46 50 2.9	2.1	8.5	5.0	9.1	2.8	5.07	27.098	. .	26.802
	45	B. A. C. 3456	6.0	3	III–VII.	26 40 1.2	2.8	8.3	5.7	7.8	1.0	4.47	31.750	. .	31.450
	46	B. A. C. 3603	6.5	3	III–VII.	65 50 4.2	5.1	10.8	8.1	10.8	4.3	7.22	27.989	. .	27.696
	47	Nadir	. .	.	. .	200 0 0.0	1.2	6.5	6.0	4.9	2.0	3.43	30.266	. .	. .
28	48	Weisse (2) VII, 135	8.5	3	III–VII.	33 40 2.9	5.1	10.8	6.6	10.7	5.3	6.90	31.386	−0.289	31.087
	49	Anon. $7^h 13^m 46^s$	8.5	2	VII, IX.	89 49 59.2	61.1	65.8	62.2	65.8	59.8	62.32	28.976	. .	28.704
	50	Anon. $7^h 24^m 39^s$	. .	1	V.	82 55 6.0	7.1	11.6	9.7	12.8	5.5	8.78	28.932	. .	28.643
	51	Anon. $7^h 33^m 59^s$	8.5	3	III–VII.	48 30 3.4	2.7	8.1	4.8	9.6	4.4	5.50	34.919	. .	34.628
	52	Anon. $7^h 43^m 8^s$	8.5	3	III–VII.	20 45 2.4	1.8	8.4	4.7	9.2	2.9	4.90	28.832	. .	28.535
	53	λ Ursæ Minoris, S. P.	. .	3	2, V, 4.	327 49 58.6	59.2	66.5	60.3	65.2	59.0	61.47	30.619	. .	30.334
	54	O. Arg. S. 8343	9.3	2	VII, IX.	83 45 3.5	7.1	11.1	9.4	10.2	5.2	7.75	26.949	. .	26.678
	55	Weisse (2) VIII, 381.	9.0	3	III–VII.	18 29 60.4	61.3	67.3	62.6	66.7	59.4	62.95	27.387	. .	27.090
	56	B. A. C. 2883	6.0	3	V–IX.	89 55 1.3	3.2	8.0	4.2	6.2	1.1	4.00	27.456	. .	27.182
	57	Weisse VIII, 856	7.7	3	III–VII.	15 45 1.9	1.8	8.0	3.0	5.5	0.5	3.45	30.396	. .	30.098
	58	Anon. $8^h 50^m 10^s$	9.3	3	III–VII.	90 25 4.7	9.4	12.4	9.9	11.4	4.9	8.78	28.053	. .	27.770
	59	Lalande 18122 (1st *)	7.8	3	IV–VI.	5 40 3.1	5.9	12.6	8.3	9.3	4.1	7.22	31.402	. .	31.109
	60	Lalande 18122, (2d *)	8.0	2	III, VII.	" " "	"	"	"	"	"	"	31.769	. .	31.476
	61	B. A. C. 3202	7.5	3	IV–VI.	50 40 1.1	5.1	10.1	6.9	8.8	4.2	6.03	35.884	. .	35.595
	62	Lalande 19022	8.3	3	III–VII.	15 35 3.1	5.6	10.6	7.0	9.6	3.0	6.48	30.283	. .	29.985
	63	Weisse IX, 867	9.2	3	III–VII.	70 10 1.2	4.3	9.9	6.9	8.7	3.3	5.72	28.214	. .	27.927
	64	Weisse (2) IX, 1003.	9.3	3	V–IX	14 20 3.1	6.5	11.9	7.4	9.2	3.0	6.85	33.786	. .	33.468
	65	Lalande 19627	8.5	3	IV–VI.	349 50 2.7	3.9	12.2	7.2	9.2	3.0	6.37	30.775	−0.289	30.478

Number.	Barometer.	THERM'S.		Instrumental corrections.	Apparent Zenith Distance.	Refraction.	Observed Declination.	Reduction to 1870.0.	Observer.	REMARKS.
		At.	Ex.							
	in.	°	°	′ ″	° ′ ″	′ ″	° ′ ″	″		
1	. .	. .	. .	+ 46.4	S. 74 30 52.5	+ 3 30.6	− 35 40 43.9	+ 23.3	F.	
2	. .	. .	. .	+ 53.4	74 30 59.5	3 30.6	− 35 40 50.9	23.3	F.	
3	30.128	51.0	43.8	+ 1 23.2	28 11 29.4	31.8	+ 10 41 38.1	11.4	F.	
4	. .	. .	. .	+ 2 11.7	73 22 18.3	3 16.0	− 34 31 55.0	24.1	F.	
5	. .	. .	. .	+ 34.7	73 20 41.3	3 15.6	− 34 30 17.7	24.1	F.	
6	. .	. .	. .	+ 32.1	62 20 37.8	1 52.7	− 23 28 51.3	22.4	F.	
7	. .	. .	. .	− 42.2	51 4 24.9	1 13.4	− 12 11 59.0	21.3	F.	
8	30.144	50.0	42.9	− 2 28.9	68 47 37.1	2 31.9	− 29 56 29.8	25.6	F.	
9	. .	. .	. .	− 1 5.2	72 24 1.3	3 5.6	− 33 33 27.7	26.6	F.	
10	. .	. .	. .	− 26.0	72 24 40.5	3 5.8	− 33 34 7.0	26.6	F.	
11	. .	. .	. .	+ 1 47.5	S. 71 46 53.8	2 59.2	− 32 56 13.8	10.9	F.	
12	. .	. .	. .	− 31.5	N. 14 20 25.4	15.2	+ 53 14 19.9	6.7	F.	
13	. .	. .	. .	− 42.3	N. 14 20 36.1	15.2	+ 53 14 30.6	6.7	F.	
14	. .	. .	. .	+ 1 12.6	S. 15 21 15.2	16.4	+ 23 32 7.7	16.2	F.	
15	. .	. .	. .	− 13.3	73 49 50.4	3 23.4	− 34 59 34.5	28.1	F.	
16	. .	. .	. .	+ 48.2	73 15 50.6	3 16.2	− 34 25 27.6	28.1	F.	Duplex; observed the center.
17	30.168	48.0	40.2	+ 1 31.5	S. 79 1 35.4	4 59.5	− 40 12 55.7	28.5	F.	
18	. .	. .	. .	− 7.3	N. 30 10 3.9	34.8	+ 69 4 17.9	8.3	F.	
19	. .	. .	. .	− 2 37.8	N. 11 12 34.1	11.8	+ 50 6 25.2	12.8	F.	
20	. .	. .	. .	+ 1 49.6	S. 69 1 53.8	2 34.9	− 30 10 49.5	27.8	F.	
21	. .	. .	. .	+ 1 39.0	N. 44 18 17.5	58.4	+ 83 12 55.1	7.5	F.	
22	. .	. .	. .	+ 3 0.0	S. 68 48 5.9	2 33.2	− 29 57 0.0	27.8	F.	
23	. .	. .	. .	+ 15.2	74 15 19.5	3 29.6	− 35 25 9.8	27.8	F.	
24	. .	. .	. .	+ 1 58.4	74 17 2.8	3 30.1	− 35 26 53.6	27.8	F.	
25	. .	. .	. .	+ 38.4	51 30 43.8	1 15.3	− 12 38 19.9	26.2	F.	
26	30.172	46.0	38.6	+ 1 15.9	38 11 20.4	47.2	+ 0 41 31.7	25.1	F.	
27	. .	. .	. .	− 27.2	5 34 35.4	5.9	+ 33 19 58.0	20.8	F.	
28	. .	. .	. .	− 3 24.2	78 36 39.5	4 49.9	− 39 47 50.2	27.0	F.	
29	30.176	45.0	38.8	+ 1 35.2	76 16 40.4	4 1.1	− 37 27 2.3	26.8	F.	
30	. .	. .	. .	. .	. . . . .	. .	. . . . .	. .	F.	
31	30.166	53.2	45.5	− 1 33.3	67 13 30.9	2 19.9	− 28 22 11.6	20.0	Y.	Mar. 25. Before observing adjusted microscopes D and E
32	. .	. .	. .	− 2 25.2	13 57 38.1	14.7	+ 24 55 46.5	5.0	Y.	
33	30.166	53.0	45.1	− 9.6	65 59 57.2	2 12.1	− 27 8 30.1	21.1	Y.	
34	. .	. .	. .	− 4 28.5	S. 28 25 34.7	32.1	+ 10 27 32.5	11.0	Y.	
35	. .	. .	. .	− 3 33.3	N. 1 53 27.4	0.2	+ 40 47 6.8	1.2	Y.	
36	30.180	52.3	43.8	+ 48.7	S. 0 45 50.0	0.8	+ 38 7 48.5	3.5	Y.	
37	. .	. .	. .	− 55.1	64 34 12.3	2 4.5	− 25 42 37.5	25.1	Y.	
38	30.186	51.2	42.6	− 1 5.6	25 38 58.8	28.6	+ 13 14 11.9	14.9	Y.	
39	. .	. .	. .	− 3 16.4	34 1 49.5	40.2	+ 4 51 9.6	18.0	Y.	
40	. .	. .	. .	− 1.2	S. 25 10 3.1	28.0	+ 13 43 8.1	16.2	Y.	
41	30.180	50.5	42.0	− 1 49.7	N. 14 51 45.6	15.8	+ 53 45 40.7	5.6	Y.	
42	. .	. .	. .	− 2 54.3	S. 30 37 9.9	35.3	+ 8 15 54.0	19.7	Y.	
43	30.176	50.0	41.4	− 2.2	63 35 3.2	1 59.5	− 24 43 23.5	27.0	Y.	
44	. .	. .	. .	+ 1 40.2	26 51 45.2	30.2	+ 12 1 23.8	20.1	Y.	Faint.
45	30.180	49.2	41.0	− 45.4	6 39 19.1	7.0	+ 32 14 13.2	16.6	Y.	
46	. .	. .	. .	+ 1 12.2	45 51 19.4	1 1.5	− 6 58 41.6	25.5	Y.	
47	. .	. .	. .	. .	. . . . .	. .	. . . . .	. .	Y.	
48	30.072	50.0	42.8	− 34.0	13 39 32.9	14.4	+ 25 13 52.0	4.8	Y.	
49	. .	. .	. .	+ 40.6	69 50 42.9	2 40.4	− 30 59 44.0	22.4	Y.	
50	. .	. .	. .	+ 42.5	62 55 51.3	1 15.8	− 24 3 27.8	21.6	Y.	Cloudy.
51	30.084	49.0	41.7	− 2 24.9	28 27 40.6	32.2	+ 10 25 26.5	12.1	Y.	
52	. .	. .	. .	+ 45.9	S. 0 45 50.8	0.8	+ 38 7 47.7	3.4	Y.	
53	30.090	48.2	41.2	− 10.5	N. 52 10 9.0	1 16.5	+ 88 54 55.2	9.0	Y.	
54	. .	. .	. .	+ 1 44.0	S. 63 46 51.8	2 0.4	− 24 55 12.9	24.6	Y.	Faint.
55	30.100	47.2	40.8	+ 1 31.1	N. 1 28 25.9	1.5	+ 40 22 6.7	5.6	Y.	
56	. .	. .	. .	+ 1 28.2	S. 69 56 32.2	2 41.9	− 31 5 34.9	26.5	Y.	
57	. .	. .	. .	− 3.0	N. 4 14 59.6	4.4	+ 43 8 43.3	6.3	Y.	
58	30.116	46.4	40.0	+ 1 9.8	S. 70 26 18.6	2 46.5	− 31 35 25.9	27.4	Y.	
59	30.120	46.0	40.0	− 34.7	N. 14 20 27.5	15.3	+ 53 14 22.0	6.2	Y.	
60	. .	. .	. .	− 46.2	N. 14 20 39.0	15.3	+ 53 14 33.5	6.2	Y.	
61	. .	. .	. .	− 2 55.2	S. 30 37 10.8	35.4	+ 8 15 53.1	19.7	Y.	
62	. .	. .	. .	+ 0.5	N. 4 24 53.0	4.6	+ 43 18 36.9	11.4	Y.	
63	. .	. .	. .	+ 1 4.9	S. 50 11 10.6	1 11.6	− 11 18 43.0	25.2	Y.	
64	. .	. .	. .	− 1 48.6	N. 5 41 41.7	6.0	+ 44 35 27.0	12.2	Y.	
65	. .	. .	. .	− 15.0	N. 30 10 8.6	+ 34.8	+ 69 4 22.7	+ 7.5	Y.	

DATE.	Number.	OBJECT.	Magnitude.	No. of mic. readings.	Transit Wires.	MICROSCOPES.							MICROMETER.		
						A.	B.	C.	D.	E.	F.	Mean.	Observed.	Nadir cor.	Corr'd.
1871.						° ′ ″	″	″	″	″	″	″	r.	r.	r.
Mar. 28	1	Weisse X, 76.	9.0	3	III–VII.	46 55 5.2	6.7	11.8	8.4	11.6	4.7	8.07	31.366	−0.289	31.075
	2	Groombridge 1633	6.0	3	IV–VI.	335 40 0.8	2.5	9.9	4.4	6.8	1.9	4.38	27.266	. .	26.976
	3	B. A. C. 3603.	. .	3	III–VII.	65 49 58.2	60.2	66.9	63.3	65.5	58.8	62.15	27.856	. .	27.568
	4	Anon. 10^h 36^m 5^s	. .	3	III–VII.	94 35 4.8	9.6	13.9	13.2	13.6	5.9	10.17	31.155	. .	30.873
	5	Lacaille 4438.	7.3	3	V–IX.	96 15 2.2	7.3	11.8	9.1	10.3	2.8	7.25	25.326	. .	25.055
	6	Lacaille 4508.	8.0	3	III–VII.	101 15 1.5	3.7	7.7	6.9	6.4	0.9	4.52	33.428	. .	33.148
	7	Lacaille 4553.	7.8	3	III–VII.	101 19 58.4	62.2	65.3	64.4	64.5	58.1	62.15	28.305	. .	28.025
	8	Anon. 11^h 1^m 52^s	. .	3	V–IX.	99 4 60.2	62.6	66.8	64.0	65.8	59.0	63.07	34.049	. .	33.780
	9	Nadir	. .	.	. .	200 0 1.1	4.7	8.9	9.0	6.8	3.3	5.63	30.333	. .	. .
Apr. 3	10	O. Arg. S. 11557.	. .	2	V, VII.	88 34 61.3	58.5	65.5	59.5	66.0	59.4	61.70	25.958	−0.152	25.811
	11	Mars, S.	. .	2	VI, VII.	53 24 63.6	59.3	66.9	62.3	67.4	61.0	63.42	22.529	. .	22.377
	12	Mars, N.	. .	2	VIII, IX.	" " "	"	"	"	"	"	"	23.278	. .	23.125
	13	Anon 12^h 1^m 53^s.	. .	3	III–VII.	86 9 61.5	58.8	66.6	63.2	67.0	58.8	62.65	30.587	. .	30.440
	14	Nadir	. .	.	. .	199 59 62.0	57.4	66.0	62.9	63.7	60.0	62.00	30.216	. .	. .
4	15	ψ^2 Cancri.	. .	3	III–VII.	32 59 61.9	60.4	65.2	58.3	68.2	64.3	63.05	31.213	−0.289	30.919
	16	Weisse VIII, 294	7.0	3	III–VII.	71 4 61.6	58.4	64.7	59.4	67.8	64.9	62.80	31.414	. .	31.127
	17	Weisse VIII, 1274	9.0	3	III–VII.	66 19 62.3	59.4	66.0	60.0	68.6	65.7	63.67	29.672	. .	29.384
	18	Lalande 18122, (1st *)	8.3	2	III, VII.	5 40 3.1	0.8	8.3	0.4	9.2	5.8	4.60	31.367	. .	31.058
	19	Lalande 18122, (2d *)	8.5	3	IV–VI.	" " "	"	"	"	"	"	"	31.716	. .	31.423
	20	B. A. C. 3255.	. .	3	III–VII.	29 59 63.0	59.4	66.9	60.6	70.2	65.3	64.23	35.901	. .	35.607
	21	Weisse (2) IX, 650	. .	3	III–VII.	37 9 60.0	56.3	63.7	56.3	66.1	61.5	60.65	31.465	. .	31.172
	22	Anon. 9^h 37^m 41^s	9.0	3	III–VII.	88 5 4.1	2.3	7.8	1.1	9.5	6.1	5.15	31.553	. .	31.269
	23	Weisse (2) IX, 1003.	8.5	3	III–VII.	14 19 61.5	59.8	65.9	57.7	67.4	62.8	62.52	33.881	. .	33.583
	24	Lalande 19627	8.8	1	V.	349 49 62.0	57.6	67.3	59.8	68.1	62.2	62.83	30.856	. .	30.567
	25	B. A. C. 3456.	6.5	2	VII, IX.	26 40 1.7	0.4	6.7	0.2	8.4	3.3	3.45	31.750	. .	31.444
	26	Weisse X, 115	9.0	2	VII, IX.	46 20 2.7	0.9	7.2	0.4	10.4	4.9	4.42	26.818	. .	26.525
	27	Rumker 3171	9.0	3	III–VII.	46 55 3.7	1.1	6.8	0.7	10.4	5.2	4.65	34.994	. .	34.703
	28	Rumker 3211	8.5	2	VII, IX.	46 34 61.1	57.1	64.7	58.2	67.4	63.7	62.03	28.859	. .	28.566
	29	Lacaille 4363	6.5	3	III–VII.	86 59 61.8	59.3	65.9	60.8	67.7	64.5	63.33	34.516	. .	34.232
	30	Weisse (2) X, 774	9.0	3	V–IX.	22 35 3.9	1.9	8.2	0.9	10.4	5.9	5.20	31.251	. .	30.947
	31	Anon. 10^h 48^m 8^s	8.0	3	III–VII.	89 20 5.0	3.1	9.0	2.1	11.2	6.4	6.13	32.455	. .	32.172
	32	Anon. 11^h 1^m 4^s.	7.5	3	III–VII.	91 40 4.9	2.2	7.2	2.8	11.1	5.3	5.58	25.886	. .	25.603
	33	Nadir	. .	.	. .	199 59 60.4	57.4	63.8	59.1	65.5	63.3	61.58	30.202	. .	. .
	34	Mars, S.	. .	2	III, VII.	53 24 61.5	58.2	64.8	58.2	66.6	63.3	62.10	32.972	. .	32.681
	35	Mars, N.	. .	2	V, IX.	" " "	"	"	"	"	"	"	33.702	. .	33.413
	36	Moon, S.	. .	2	I, III.	58 59 60.8	59.1	65.2	58.3	67.9	64.9	62.70	30.536	. .	29.915
	37	Moon, N.	. .	2	VII, IX.	58 30 4.1	2.2	8.9	3.1	12.1	7.9	6.38	35.952	. .	35.986
6	38	Anon. 11^h 9^m 2^s.	9.2	2	IV, VI.	359 30 2.5	2.7	10.2	5.3	7.2	2.2	5.02	29.303	−0.291	29.005
	39	Rumker 3575	9.5	1	V.	40 20 0.2	1.4	7.1	2.6	6.2	2.6	3.35	31.601	. .	31.310
	40	Weisse XI, 446	8.3	3	III–VII.	50 10 0.9	0.0	7.0	1.9	6.2	2.1	3.02	27.271	. .	26.979
	41	Anon. 11^h 32^m 41^s	10.0	2	VII, IX.	57 10 oblit.	2.2	7.0	3.0	7.2	3.4	3.86	27.196	. .	26.908
	42	Weisse XI, 592	9.5	2	V, VII.	" " "	"	"	"	"	"	"	24.792	. .	24.502
	43	Weisse XI, 773	8.8	3	III–VII.	44 40 3.5	3.3	10.1	5.2	8.8	4.3	5.87	28.625	. .	28.332
	44	Weisse XI, 947	. .	2	VII, IX.	50 20 4.1	4.3	10.3	6.9	10.1	6.1	6.97	29.348	. .	29.055
	45	Groombridge 1860	. .	3	I, 3, 5.	334 40 2.8	1.7	8.9	4.0	8.0	3.1	4.75	27.988	. .	27.706
	46	4 Canum Venaticorum	. .	2	VII, IX.	15 34 59.4	59.7	66.1	60.8	64.7	59.1	61.63	24.104	. .	23.802
	47	Anon. 12^h 27^m 21^s	8.5	2	VII, IX.	90 40 2.8	3.2	8.1	4.9	6.1	1.1	4.37	35.160	. .	34.892
	48	Weisse XII, 549	7.0	3	III–VII.	66 34 58.7	59.3	66.4	62.0	63.7	60.0	61.68	26.946	. .	26.656
	49	Lacaille 5283.	7.0	3	III–VII.	83 0 1.2	0.8	7.7	3.5	4.9	0.9	3.17	28.990	. .	28.703
	50	Nadir	. .	.	. .	200 0 0.0	1.2	6.8	5.1	4.3	2.4	3.30	30.259	. .	. .
	51	Moon, S.	. .	3	III–VII.	71 0 2.1	2.9	8.2	6.7	7.8	4.3	5.33	33.028	. .	32.739
7	52	23 Leonis	6.0	3	IV–VI.	45 9 62.9	56.5	63.8	58.0	67.5	63.2	61.98	24.180	−0.176	24.003
	53	Rumker 3211.	. .	3	III–VII.	46 34 62.9	54.7	63.6	56.4	67.2	62.0	61.13	28.714	. .	28.536
	54	Lalande 20849	. .	3	III–VII.	348 19 63.6	56.0	69.0	58.2	67.3	64.0	63.02	27.150	. .	26.947
	55	Weisse (2) X, 1112	. .	3	III–VII.	21 59 64.0	57.3	67.6	58.6	70.0	64.8	63.72	23.445	. .	23.262
	56	O. Arg. S. 11446.	. .	3	VII–IX.	86 54 68.3	59.5	69.5	64.2	71.2	66.2	66.48	27.135	. .	26.978
	57	Lacaille 4814.	. .	2	V, VII.	97 29 63.8	57.2	66.0	59.2	69.4	63.9	63.25	33.430	. .	33.260
	58	Nadir	. .	.	. .	199 59 62.0	51.6	62.1	54.1	62.0	61.5	58.88	30.140	. .	. .
8	59	Lacaille 4162.	. .	2	IV, VI.	93 14 60.0	54.1	61.2	53.1	62.2	62.7	58.88	32.548	−0.295	32.263
	60	Σ Cat. Gen. 1198, (1st *)	. .	3	III–VII,	14 19 65.5	60.8	67.8	58.8	70.2	68.0	65.18	29.503	. .	29.199
	61	Rumker 3203.	7.0	3	III–VII.	42 29 67.0	61.8	67.9	59.5	72.1	70.0	66.38	33.405	. .	33.107
	62	Weisse (2) X, 513	8.5	3	V–IX.	43 19 63.1	57.7	64.9	55.4	66.6	65.6	62.22	30.983	. .	30.684
	63	Anon. 10^h 36^m 43^s	8.0	3	III–VII.	53 54 63.0	55.8	63.8	55.1	67.1	66.0	61.80	31.421	. .	31.125
	64	Anon. 10^h 36^m 54^s	8.0	1	IX.	" " "	"	"	"	"	"	"	25.490	−0.295	25.195

Number.	Barometer.	THERM'S.		Instrumental corrections.	Apparent Zenith Distance.	Refraction.	Observed Declination.	Reduction to 1870.0.	Observer.	REMARKS.
		At.	Ex.							
	in.	°	°	′ ″	° ′ ″	′ ″	° ′ ″	″		
1	30.140	45.2	38.7	− 33.7	S. 26 54 34.4	+ 30.4	+ 11 58 34.4	+ 21.5	Y.	
2	. .	. .	. .	+ 1 34.7	N. 44 18 20.9	58.5	+ 83 12 58.7	6.6	Y.	
3	. .	. .	. .	+ 1 16.2	S. 45 51 18.3	1 1.8	− 6 58 40.8	25.8	Y.	
4	. .	. .	. .	− 27.3	74 34 42.8	3 34.5	− 35 44 38.1	28.8	Y.	
5	30.150	44.3	37.8	+ 2 34.8	76 17 42.1	4 1.7	− 37 28 4.6	29.3	Y.	
6	. .	. .	. .	− 1 38.6	81 13 26.0	6 12.4	− 42 25.59.2	28.8	Y.	
7	30.156	44.2	37.7	+ 1 1.8	81 21 4.0	6 17.6	− 42 33 42.4	28.6	Y.	
8	. .	. .	. .	− 1 58.4	79 3 4.7	5 1.8	− 40 14 27.2	28.4	Y.	
9	. .	. .	. .	. .	. . . .	. .	. . . .	. .	Y.	
10	. .	. .	. .	+ 2 11.2	68 37 12.9	2 26.9	− 29 46 0.6	28.4	F.	
11	. .	. .	. .	+ 3 58.7	33 29 2.1	31.1	+ 5 24 17.8	. .	F.	Correction for defective illumination of south limb = 0″.05.
12	29.584	51.0	45.8	+ 3 35.3	33 28 38.7	31.0				
13	. .	. .	. .	− 13.8	66 9 48.9	2 10.4	− 27 18 20.0	27.4	F.	Cloudy.
14	. .	. .	. .	. .	. . . .	. .	. . . .	. .	F.	
15	29.818	60.3	59.7	− 28.8	12 59 34.3	13.1	+ 25 53 51.9	8.5	Y.	
16	. .	. .	. .	− 35.3	51 4 27.5	1 10.4	− 12 11 58.7	21.5	Y.	
17	29.830	59.8	56.5	+ 19.3	S. 46 20 23.0	59.8	− 7 27 43.6	22.4	Y.	
18	. .	. .	. .	− 33.1	N. 14 20 28.5	14.6	+ 53 14 22.4	5.0	Y.	
19	. .	. .	. .	− 44.6	N. 14 20 40.0	14.7	+ 53 14 33.9	4.9	Y.	
20	29.836	59.0	55.2	− 2 55.6	S. 9 57 8.6	10.1	+ 28 56 20.6	13.7	Y.	
21	. .	. .	. .	− 36.7	17 9 24.0	17.7	+ 21 43 57.6	16.3	Y.	
22	. .	. .	. .	− 39.7	S. 68 4 25.4	2 20.8	− 29 13 7.0	28.9	Y.	
23	. .	. .	. .	− 1 52.2	N. 5 41 49.7	5.6	+ 44 35 34.5	10.9	Y.	
24	. .	. .	. .	− 17.8	N. 30 10 14.9	33.1	+ 69 4 27.3	5.8	Y.	
25	. .	. .	. .	− 45.2	S. 6 39 18.2	6.6	+ 32 14 14.4	15.3	Y.	
26	29.832	59.0	59.2	+ 1 48.8	26 21 53.2	28.2	+ 12 31 17.8	21.0	Y.	
27	. .	. .	. .	− 2 27.3	26 52 37.4	28.8	+ 12 0 33.0	21.5	Y.	
28	. .	. .	. .	+ 44.9	26 35 46.9	28.5	+ 12 17 23.8	21.7	Y.	
29	29.840	59.2	59.2	− 2 12.5	66 57 50.8	2 13.0	− 28 6 24.5	29.3	Y.	
30	. .	. .	. .	− 29.7	2 34 35.5	2.6	+ 36 19 1.2	16.8	Y.	
31	. .	. .	. .	− 1 8.0	69 18 58.1	2 29.9	− 30 27 48.8	29.5	Y.	
32	29.836	59.1	57.1	+ 2 17.7	71 42 23.3	2 51.0	− 32 51 35.0	29.5	Y.	
33	. .	. .	. .	. .	. . . .	. .	. . . .	. .	Y.	
34	. .	. .	. .	− 1 23.9	33 23 38.2	30.4	+ 5 29 42.2	. .	Y.	Correction for defective illumination of south limb = 0″.05.
35	29.830	59.0	57.4	− 1 46.9	33 23 15.2	+ 30.3				
36	. .	. .	. .	+ 2.7	39 0 5.4	−36 41.5	+ 0 46 38.0	. .	Y.	Correction for defective illumination of north limb = 6″.65.
37	29.816	58.8	57.2	− 3 7.4	S. 38 26 58.9	−36 20.3				
38	30.012	54.5	49.2	+ 31.2	N. 20 29 23.8	+ 21.8	+ 59 23 24.9	13.4	Y.	
39	. .	. .	. .	− 41.0	S. 20 19 22.3	21.6	+ 18 33 55.3	22.5	Y.	
40	. .	. .	. .	+ 1 34.6	30 11 37.6	34.0	+ 8 41 27.7	24.4	Y.	
41	. .	. .	. .	+ 1 36.8	37 11 40.7	44.3	+ 1 41 14.3	25.6	Y.	Correction, − 1″.29, applied to mean of C, D, E, and F.
42	. .	. .	. .	+ 2 52.2	37 12 56.0	44.3	+ 1 39 58.9	25.7	Y.	
43	. .	. .	. .	+ 52.2	24 40 58.1	26.8	+ 14 12 14.3	24.0	Y.	
44	. .	. .	. .	+ 29.6	S. 30 20 36.6	34.2	+ 8 32 28.5	25.0	Y.	
45	. .	. .	. .	+ 1 11.8	N. 45 18 43.4	59.0	+ 84 13 21.7	13.6	Y.	
46	29.996	54.0	48.9	+ 3 14.1	N. 4 21 44.3	4.5	+ 43 15 28.0	20.7	Y.	
47	. .	. .	. .	− 2 33.2	S. 70 37 31.2	2 44.6	− 31 46 36.5	26.6	Y.	
48	. .	. .	. .	+ 1 44.7	46 36 46.4	1 2.1	− 7 44 9.2	26.1	Y.	
49	30.004	53.8	48.8	+ 40.6	63 0 43.8	+ 1 54.2	− 24 8 58.8	26.1	Y.	
50	. .	. .	. .	. .	. . . .	. .	. . . .	. .	Y.	
51	30.000	53.0	48.4	− 1 25.8	50 58 39.5	−62 10.1	− 11 2 50.2	. .	Y.	
52	29.950	62.5	63.3	+ 3 7.8	25 13 9.8	+ 26.7	+ 13 40 2.8	19.2	F.	
53	. .	. .	. .	+ 45.8	S. 26 35 47.0	28.4	+ 12 17 23.9	21.6	F.	
54	29.954	63.0	62.3	+ 1 35.6	N. 31 38 21.4	35.0	+ 70 32 35.6	9.1	F.	
55	. .	. .	. .	+ 3 31.0	S. 2 3 34.7	2.0	+ 36 50 2.5	17.2	F.	
56	. .	. .	. .	+ 1 34.6	66 56 41.1	2 12.6	− 28 5 14.5	29.1	F.	
57	. .	. .	. .	− 1 42.1	77 28 21.2	4 10.4	− 38 38 52.3	29.5	F.	
58	. .	. .	. .	. .	. . . .	. .	. . . .	. .	F.	Hazy and cloudy.
59	29.978	69.0	66.2	− 1 10.9	S. 73 13 48.0	3 4.5	− 34 23 13.3	30.6	Y.	Hazy.
60	. .	. .	. .	+ 25.1	N. 5 39 29.7	5.6	+ 44 33 14.6	12.3	Y.	
61	. .	. .	. .	− 1 37.3	S. 22 28 29.1	23.4	+ 16 24 46.8	20.4	Y.	
62	29.975	69.0	65.2	− 21.4	23 19 40.8	24.3	+ 15 33 34.1	20.8	Y.	
63	. .	. .	. .	− 35.2	33 54 26.6	37.9	+ 4 58 34.7	23.8	Y.	
64	. .	. .	. .	+ 2 30.5	S. 33 57 32.3	+ 38.0	+ 4 55 29.0	+ 23.8	Y.	

DATE.	Number.	OBJECT.	Magnitude.	No. of mic. readings.	Transit Wires.	MICROSCOPES.							MICROMETER.		
						A.	B.	C.	D.	E.	F.	Mean.	Observed.	Nadir cor.	Corr'd.
1871.						° ′ ″	″	″	″	″	″	″	r.	r.	r.
April 8	1	Σ Cat. Gen. 1248	. .	2	VII, IX.	33 44 63.9	56.8	65.8	56.0	68.2	66.3	62.83	29.755	−0.295	29.448
	2	Anon. $10^h 52^m 48^s$	8.0	3	III–VII.	81 24 64.4	56.9	64.9	56.8	66.2	66.2	62.57	28.712	. .	28.421
	3	Weisse XI, 349	. .	3	III–VII.	55 20 6.8	0.8	9.0	1.9	12.1	9.1	6.62	29.319	. .	29.023
	4	Weisse (2) XI, 540	7.0	3	V–IX.	33 9 61.8	56.2	62.7	54.5	66.6	65.1	61.15	32.557	. .	32.254
	5	B. A. C. 3992.	6.0	3	III–VII.	43 54 66.2	60.8	66.9	59.1	69.4	68.9	65.22	33.883	. .	33.585
	6	Groombridge 1830	. .	3	III–VII.	20 15 7.9	2.6	10.8	2.1	14.2	10.5	8.02	30.570	. .	30.267
	7	Lalande 22585	6.0	3	V–IX.	68 34 64.1	59.8	66.2	60.1	68.1	68.4	64.45	29.763	. .	29.474
	8	Anon. $12^h 1^m 53^s$.	. .	3	V–IX.	86 10 5.7	2.2	8.2	2.2	10.3	8.9	6.25	30.747	. .	30.465
	9	Weisse XII, 107.	6.5	3	IV–VI.	68 24 63.4	59.2	66.8	58.8	67.8	67.8	63.97	28.106	. .	27.801
	10	Weisse XII, 114.	8.8	2	VII, IX.	“ “ “	“	“	“	“	“	“	28.465	. .	28.178
	11	Lalande 23219	9.0	2	IV, VI.	63 49 61.2	54.4	61.2	54.9	64.2	63.2	59.85	32.508	. .	32.214
	12	Weisse XII, 515.	8.5	3	III–VII.	57 55 5.7	0.8	7.9	0.9	11.0	9.8	6.02	25.968	. .	25.673
	13	Lacaille 5283.	7.0	3	III–VII.	82 59 64.1	58.7	65.8	59.5	68.5	66.8	63.90	28.951	. .	28.660
	14	Nadir	. .	.	. .	199 59 63.9	57.7	66.1	59.9	66.1	68.7	63.73	30.278	. .	. .
10	15	Groombridge 1618	. .	3	III–VII.	8 49 62.2	51.5	63.5	53.8	62.6	60.6	59.03	35.104	−0.147	34.945
	16	Groombridge 1633	. .	3	IV–VI.	335 39 63.4	49.3	66.0	51.1	63.2	61.3	59.05	27.136	. .	26.964
	17	Lalande 20849	. .	3	IV–VI.	348 19 63.5	50.4	66.9	55.1	62.8	61.9	60.10	27.087	. .	26.932
	18	Nadir	. .	.	. .	199 59 63.5	52.4	63.2	56.8	61.7	62.9	60.08	30.150	. .	. .
11	19	B. A. C. 2885.	6.0	3	III–VII.	92 59 65.4	59.6	66.4	61.1	65.8	66.7	64.17	25.228	−0.286	24.948
	20	ρ^3 Cancri	. .	3	III–VII.	30 29 65.4	58.7	67.8	59.8	70.2	69.3	65.20	33.668	. .	33.377
	21	Anon. $8^h 51^m 46^s$.	9.0	1	V.	5 44 65.8	59.8	70.2	61.0	69.6	67.9	65.72	34.518	. .	34.232
	22	Anon. $8^h 56^m 48^s$.	8.5	1	VII.	5 4 62.7	57.0	66.1	55.9	65.9	65.2	62.13	24.350	. .	24.046
	23	*e* Mali	6.5	3	V–IX.	88 39 60.7	55.5	63.2	55.2	62.8	63.9	60.22	26.567	. .	26.296
	24	Lacaille 3834.	7.0	3	III–VII.	92 9 64.8	59.8	67.3	61.8	66.6	66.1	64.40	27.823	. .	27.543
	25	Weisse (2) IX, 650	9.2	3	III–VII.	37 9 60.8	54.8	63.2	54.0	64.1	63.8	60.12	31.438	. .	31.148
	26	Anon. $9^h 39^m 51^s$.	9.5	1	V.	47 54 62.7	53.3	62.9	55.8	65.2	64.6	60.75	31.682	. .	31.396
	27	Anon. $9^h 46^m 26^s$.	9.3	3	III–VII.	43 34 64.1	57.1	65.8	57.9	66.7	67.0	63.10	32.492	. .	32.203
	28	Lalande 19627	8.8	3	IV–VI.	349 49 62.8	55.3	68.4	58.2	67.0	65.1	62.80	30.919	. .	30.625
	29	Anon. $10^h 6^m 41^s$.	10.0	1	V.	96 19 63.2	57.2	66.6	59.2	66.2	65.9	63.05	26.697	. .	26.411
	30	Lacaille 4393.	8.0	3	III–VII.	84 59 62.4	56.7	66.6	59.9	66.2	65.7	62.92	32.965	. .	32.684
	31	Weisse X, 757	9.0	3	III–VII.	48 24 63.1	55.4	65.2	57.9	66.1	65.7	62.23	34.519	. .	34.231
	32	Anon. $10^h 53^m 1^s$.	8.5	2	IV, VI.	92 59 65.2	58.5	66.7	60.7	65.3	65.8	63.70	26.440	. .	26.164
	33	Anon. $11^h 0^m 59^s$.	9.5	1	V.	47 59 64.8	58.8	56.7	59.1	67.8	67.1	64.05	33.737	. .	33.451
	34	Anon. $11^h 1^m 7^s$	9.5	1	IX.	“ “ “	“	“	“	“	“	“	31.143	. .	30.853
	35	Lamont 3284.	8.0	3	III–VII.	58 19 61.7	56.6	65.2	57.8	65.8	66.1	62.20	27.202	. .	26.916
	36	Nadir	. .	.	. .	199 59 60.0	52.8	61.8	55.3	60.9	62.7	58.92	30.114	. .	. .
12	37	Anon. $10^h 36^m 33^s$	7.5	3	II–VIII.	53 55 4.1	0.4	5.1	0.7	3.0	0.2	2.25	31.407	−0.206	31.199
	38	Anon. $10^h 36^m 44^s$	8.2	2	III, IX.	“ “ “	“	“	“	“	“	“	25.435	. .	25.227
	39	Weisse (2) X, 1174	. .	1	V.	14 44 62.2	57.9	66.8	60.0	63.2	58.6	61.45	35.340	. .	35.134
	40	Lalande 1831.	. .	3	III–VII.	344 44 62.8	56.5	67.7	60.9	64.2	59.5	61.93	32.659	. .	32.419
	41	Lacaille 4732.	. .	3	IV–VI.	85 4 60.3	55.1	65.0	61.0	60.8	56.9	59.85	26.647	. .	26.441
	42	Mars S.	. .	3	II, V, VIII.	52 49 62.0	56.9	66.0	61.1	62.4	58.1	61.08	29.809	. .	29.601
	43	Mars N.	. .	2	III, VII.	“ “ “	“	“	“	“	“	“	30.385	. .	30.178
	44	Weisse XI, 773	. .	2	V, VI.	44 39 62.6	55.8	65.7	60.0	63.0	62.6	61.62	28.392	. .	28.186
	45	B. A. C. 4200.	. .	3	III–VII.	62 44 61.5	57.1	64.8	61.5	61.3	57.8	60.67	26.541	. .	26.336
	46	B. A. C. 4255.	. .	3	III–VII.	62 34 61.4	58.0	64.0	62.0	61.2	57.7	60.72	34.700	. .	34.495
	47	35 Virginis	. .	3	III–VII.	54 34 62.2	57.2	66.0	61.8	62.2	57.8	61.20	27.562	. .	27.355
	48	O. Arg. S. 12529.	. .	2	II, VIII.	85 29 61.9	62.7	66.9	63.3	62.8	58.0	62.60	26.688	. .	26.502
	49	O. Arg. S. 12533.	. .	2	III, VII.	“ “ “	“	“	“	“	“	“	25.160	. .	24.964
	50	Weisse XII, 1063	. .	3	III–VII.	52 59 62.3	56.4	66.0	61.8	61.9	58.3	61.13	34.320	. .	34.113
	51	Weisse XIII, 169	. .	3	IV–VI.	63 59 62.1	57.6	66.3	65.6	61.9	57.8	61.88	31.650	. .	31.444
	52	B. A. C. 4496.	. .	3	III–VII.	58 59 62.6	59.0	68.7	65.6	65.0	59.0	63.32	25.874	. .	25.668
	53	Nadir	. .	.	. .	199 59 62.9	58.9	66.6	64.0	60.5	59.1	62.00	30.270	. .	. .
14	54	Anon. $12^h 24^m 44^s$	. .	3	IV–VI.	91 45 4.0	3.6	10.8	9.4	4.8	1.2	5.63	24.050	−0.194	23.858
	55	Lacaille 5189.	6.5	3	VII–IX.	99 9 64.6	63.2	70.0	67.0	64.8	58.0	64.60	31.595	. .	31.430
	56	B. A. C. 4256.	. .	3	IV–VI.	88 30 3.1	1.4	8.5	7.5	5.2	0.3	4.33	22.533	. .	22.341
	57	Anon. $12^h 36^m 30^s$	. .	3	III–VII.	99 24 64.5	63.0	66.5	66.3	63.6	59.1	63.83	29.082	. .	28.896
	58	O. Arg. S. 12538.	. .	2	V, VI.	80 19 63.6	62.7	69.3	67.0	66.2	59.5	64.72	29.582	. .	29.389
	59	O. Arg. S. 12564.	. .	3	III–VII.	“ “ “	“	“	“	“	“	“	34.390	. .	34.200
	60	Lacaille 5387.	. .	3	VI–VIII.	86 40 4.7	1.9	10.8	9.2	5.8	0.6	5.50	28.508	. .	28.324
	61	Weisse XIII, 87.	. .	3	IV–VI.	69 44 62.2	59.6	68.1	67.7	64.5	59.9	63.67	30.846	. .	30.653
	62	O. Arg. S. 12733.	. .	3	VII–IX.	88 19 63.6	63.4	68.1	65.5	64.2	59.0	63.93	28.129	. .	27.954
	63	Anon. $13^h 21^m 18^s$	. .	3	IV–VI.	91 39 62.6	60.0	67.8	66.5	63.2	56.9	62.83	31.053	. .	30.861
	64	Lacaille 5646.	. .	3	IV–VI.	84 44 62.3	69.2	69.0	67.6	64.0	57.7	64.93	31.612	. .	31.419
	65	Lacaille 5682.	. .	3	III–VII.	93 49 63.0	59.3	66.4	65.0	63.4	55.8	62.15	23.258	−0.194	23.071

Number.	Barometer.	THERM'S.		Instrumental corrections.	Apparent Zenith Distance.	Refraction.	Observed Declination.	Reduction to 1870.0.	Observer.	REMARKS.
		At.	Ex.							
	in.	°	°	′ ″	° ′ ″	′ ″	° ′ ″	″		
1	. .	. .	. .	+ 17.3	S. 13 45 20.1	+ 13.8	+ 25 8 5.3	+ 19.3	Y.	
2	29.966	68.3	64.2	+ 49.4	61 25 52.0	1 43.4	− 22 33 56.2	29.1	Y.	
3	. .	. .	. .	+ 30.6	35 20 37.2	40.1	+ 3 32 21.9	25.2	Y.	
4	. .	. .	. .	− 1 10.6	13 8 50.6	13.2	+ 25 44 35.5	21.3	Y.	
5	. .	. .	. .	− 1 52.2	23 53 13.0	25.1	+ 15 0 1.2	23.6	Y.	
6	29.963	68.0	63.1	− 8.4	0 14 59.6	0.2	+ 38 38 39.4	19.5	Y.	
7	. .	. .	. .	+ 16.5	48 35 20.9	1 4.2	− 9 42 45.8	27.1	Y.	
8	. .	. .	. .	− 14.6	66 9 51.7	2 7.5	− 27 18 20.0	28.1	Y.	
9	. .	. .	. .	+ 1 8.8	48 26 12.8	1 3.9	− 9 33 37.4	26.8	Y.	
10	29.960	67.7	62.7	+ 57.1	48 26 1.0	1 3.8	− 9 33 25.6	26.8	Y.	
11	. .	. .	. .	− 1 9.3	43 48 50.5	54.5	− 4 56 5.8	26.3	Y.	Faint.
12	. .	. .	. .	+ 2 15.5	37 57 21.5	44.4	+ 0 55 33.3	25.7	Y.	
13	29.970	67.0	58.8	+ 42.0	S. 63 0 45.9	1 51.7	− 24 8 58.4	26.3	Y.	
14	. .	. .	. .	. .	. . . .	. .	. . . .	. .	Y.	
15	29.804	70.0	66.7	− 2 34.8	N. 11 12 35.8	11.1	+ 50 6 26.2	9.8	F.	
16	. .	. .	. .	+ 1 35.1	44 18 25.9	54.6	+ 83 12 59.8	3.5	F.	
17	29.794	69.0	65.1	+ 1 36.1	N. 31 38 23.8	34.6	+ 70 32 37.7	8.3	F.	Faint; hazy.
18	. .	. .	. .	. .	. . . .	. .	. . . .	. .	F.	
19	29.914	71.1	70.2	+ 2 38.2	S. 73 2 42.4	3 0.6	− 34 12 3.7	28.0	Y.	
20	. .	. .	. .	− 1 45.8	S. 10 28 19.4	10.3	+ 28 25 9.5	10.7	Y.	
21	. .	. .	. .	− 2 12.5	N. 14 17 6.8	14.2	+ 53 11 0.3	3.0	Y.	
22	29.910	71.2	69.6	+ 3 6.4	N. 14 51 51.4	14.8	+ 53 45 45.5	3.3	Y.	
23	. .	. .	. .	+ 1 56.0	S. 68 41 56.2	2 22.2	− 29 50 39.2	28.9	Y.	
24	29.934	71.0	69.4	+ 1 16.9	72 11 21.3	2 52.0	− 33 20 34.1	30.1	Y.	
25	. .	. .	. .	− 36.0	17 9 24.2	17.3	+ 21 43 57.8	15.8	Y.	
26	. .	. .	. .	− 43.7	27 54 17.0	29.6	+ 10 58 52.6	19.7	Y.	Very faint.
27	. .	. .	. .	− 1 9.0	S. 23 33 54.1	24.4	+ 15 19 20.7	18.7	Y.	
28	29.948	71.2	69.1	− 19.6	N. 30 10 16.8	32.5	+ 69 4 28.5	4.6	Y.	
29	. .	. .	. .	+ 1 52.4	S. 76 21 55.4	3 46.1	− 37 32 2.3	31.6	Y.	Very faint; uncertain.
30	29.956	71.0	68.8	− 1 24.0	64 58 38.9	1 59.3	− 26 6 59.0	30.1	Y.	
31	. .	. .	. .	− 2 12.5	28 22 49.7	30.3	+ 10 30 19.2	22.7	Y.	
32	. .	. .	. .	+ 2 0.1	73 2 3.8	3 1.4	− 34 11 26.0	31.0	Y.	
33	. .	. .	. .	− 1 48.1	27 58 16.0	29.8	+ 10 54 53.5	23.2	Y.	Rev. doubtful.
34	. .	. .	. .	− 26.7	27 59 37.3	29.8	+ 10 53 32.1	23.2	Y.	
35	29.984	70.6	68.3	+ 1 36.6	38 21 38.8	44.4	+ 0 31 16.1	25.6	Y.	Cloudy.
36	. .	. .	. .	. .	. . . .	. .	. . . .	. .	Y.	
37	29.866	61.0	53.2	− 37.5	33 54 24.7	38.7	+ 4 58 35.8	23.8	F.	
38	. .	. .	. .	+ 2 29.5	S. 33 57 31.7	38.8	+ 4 55 28.7	23.8	F.	
39	. .	. .	. .	− 2 40.8	N. 5 17 39.3	5.3	+ 44 11 23.9	14.9	F.	
40	. .	. .	. .	− 1 15.7	N. 35 16 13.8	40.8	+ 74 10 33.8	9.0	F.	Double star; observed first.
41	. .	. .	. .	+ 1 51.4	S. 65 6 51.3	2 3.7	− 26 15 15.7	29.9	F.	
42	29.854	60.0	52.2	+ 12.5	32 50 13.6	30.4	+ 6 3 4.3	. .	F.	Correction for defective illumination of south limb = 0″.08.
43	. .	. .	. .	− 5.6	32 49 55.5	30.4				
44	. .	. .	. .	+ 56.8	24 40 58.4	26.6	+ 14 12 14.3	23.5	F.	
45	. .	. .	. .	+ 1 54.8	42 46 55.4	53.5	− 3 54 9.6	26.4	F.	
46	. .	. .	. .	− 2 20.8	42 32 40.0	53.0	− 3 39 53.8	26.2	F.	
47	. .	. .	. .	+ 1 22.8	34 36 24.0	39.9	+ 4 16 35.3	25.4	F.	
48	. .	. .	. .	+ 1 49.5	65 31 52.1	2 6.5	− 26 40 19.4	26.6	F.	Very faint.
49	29.864	57.0	50.8	+ 2 37.7	65 32 40.3	2 6.6	− 26 41 7.6	26.6	F.	
50	. .	. .	. .	− 2 8.8	32 57 52.4	37.5	+ 5 55 9.4	25.0	F.	
51	. .	. .	. .	− 45.2	43 59 16.7	55.8	− 5 6 33.3	25.3	F.	
52	29.856	56.0	50.5	+ 2 15.7	39 2 19.0	47.0	− 0 9 26.7	24.4	F.	
53	. .	. .	. .	. .	. . . .	. .	. . . .	. .	F.	
54	. .	. .	. .	+ 3 12.3	71 48 18.0	2 55.4	− 32 57 34.1	28.4	F.	
55	. .	. .	. .	− 44.8	79 9 19.8	4 55.0	− 40 20 35.6	28.5	F.	
56	. .	. .	. .	+ 3 59.8	68 34 4.2	2 27.3	− 29 42 52.3	27.9	F.	
57	29.676	51.0	44.5	+ 34.5	79 25 38.3	5 2.6	− 40 37 1.7	27.8	F.	
58	. .	. .	. .	+ 19.1	60 20 23.8	1 42.0	− 21 28 26.6	26.8	F.	
59	. .	. .	. .	− 2 11.5	60 17 53.2	1 41.8	− 21 25 55.8	26.6	F.	
60	. .	. .	. .	+ 52.5	66 40 58.0	2 14.4	− 27 49 33.1	26.4	F.	
61	. .	. .	. .	− 20.4	49 44 43.2	1 8.7	− 10 52 12.7	25.7	F.	
62	29.658	50.0	44.2	+ 1 4.1	68 21 8.0	2 25.8	− 29 29 54.5	25.7	F.	
63	. .	. .	. .	− 27.0	71 39 35.9	2 54.0	− 32 48 50.6	24.8	F.	
64	. .	. .	. .	− 44.4	64 44 20.5	2 2.9	− 25 52 44.1	24.1	F.	
65	. .	. .	. .	+ 3 37.0	S. 73 53 39.1	+ 3 19.2	− 35 3 19.0	+ 25.4	F.	

DATE.	Number.	OBJECT.	Magnitude.	No. of mic. readings.	Transit Wires.	MICROSCOPES.							MICROMETER.		
						A.	B.	C.	D.	E.	F.	Mean.	Observed.	Nadir cor.	Corr'd.
1871.						° ′ ″	″	″	″	″	″	″	r.	r.	r.
Apr. 14	1	Lacaille 5798, (1st *)	8.0	2	II, VIII.	95 29 63.6	61.8	69.6	67.6	65.1	57.2	64.15	30.908	−0.194	30.735
	2	Lacaille 5798, (2d *)	7.0	3	III–VII.	“ “ “	“	“	“	“	“	“	33.175	. .	32.988
	3	Lacaille 5925. . .	. .	3	IV–VI.	95 39 62.9	61.3	68.2	66.8	63.4	58.5	63.52	27.447	. .	27.255
	4	Lacaille 6020. . .	7.0	3	IV–VI.	93 29 62.6	60.4	67.0	66.9	64.1	58.8	63.30	24.130	. .	23.938
	5	Nadir	. .	.	. .	199 59 62.0	58.8	66.8	64.1	60.0	58.2	61.65	30.247	. .	. .
15	6	Weisse X, 702 . .	8.5	3	III–VII.	44 50 3.8	2.8	7.9	4.0	7.1	3.4	4.83	30.953	−0.314	30.637
	7	Weisse (2) X, 1112 .	7.5	3	III–VII.	22 5 1.2	0.4	5.4	1.0	5.6	1.2	2.47	33.199	. .	32.878
	8	F. Lalande 1831. .	7.7	3	IV–VI.	344 45 3.0	2.0	10.1	3.2	9.2	3.8	5.22	32.936	. .	32.612
	9	Weisse XI, 349 . .	. .	3	III–VII.	55 20 2.8	1.7	7.3	6.0	7.3	3.8	4.82	29.345	. .	29.030
	10	Mars, S.	. .	2	I, IX.	52 45 0.9	0.0	6.1	3.4	5.2	2.2	2.97	34.778	. .	34.459
	11	Mars, N.	. .	3	III–VII.	“ “ “	“	“	“	“	“	“	35.494	. .	35.179
	12	Anon. $11^h 40^m 40^s$.	. .	3	III–VII.	94 0 2.3	0.9	6.6	2.3	5.8	0.7	3.10	26.857	. .	26.550
	13	Groombridge 1830 .	. .	3	III–VII.	20 15 4.4	3.4	10.7	5.4	8.5	4.7	6.18	30.558	. .	30.236
	14	Lalande 22585 . .	. .	3	III–VII.	68 35 3.8	3.5	9.7	6.8	8.6	5.0	6.23	29.926	. .	29.614
	15	Weisse XII, 107. .	7.0	3	III–VII.	68 25 6.2	5.2	12.4	8.0	10.7	7.2	8.28	28.291	. .	27.979
	16	4 Canum Venaticorum	6.0	3	IV–VI.	15 35 5.1	4.8	11.0	6.1	8.1	4.7	6.63	24.346	. .	24.029
	17	Weisse XII, 549. .	. .	3	V–IX.	66 35 2.9	2.2	9.1	5.0	7.2	4.1	5.08	27.078	. .	26.759
	18	Weisse XII, 880. .	. .	3	III–VII.	68 0 2.2	1.8	8.7	5.1	6.5	4.1	4.73	28.029	. .	27.717
	19	Weisse XIII, 1063 .	. .	3	IV–VI.	53 0 3.0	1.9	7.9	5.0	6.8	3.6	4.70	34.578	. .	34.264
	20	Polaris, S. P.. . .	. .	3	2, V, 4.	327 30 2.2	1.3	8.5	4.2	6.2	1.2	3.93	26.388	. .	26.075
	21	Nadir	. .	.	. .	200 0 0.0	0.6	5.2	4.2	2.3	1.4	2.28	30.251	. .	. .
18	22	κ Cancri.	. .	3	III–VIII.	47 44 62.0	58.5	65.2	58.9	66.8	63.2	62.43	36.093	−0.298	35.792
	23	B. A. C. 3255. . .	. .	3	III–VII.	30 0 3.2	0.1	6.7	0.8	7.8	4.1	3.78	35.933	. .	35.630
	24	Lalande 19022 . .	. .	3	III–VII.	15 35 4.0	2.3	7.1	0.4	7.3	4.1	4.20	30.270	. .	29.963
	25	Anon. $9^h 42^m 50^s$. .	7.0	3	III–VII.	33 45 2.6	2.8	7.7	2.2	8.2	4.0	4.58	32.870	. .	32.567
	26	π Leonis	. .	3	III–VII.	50 15 5.8	3.0	9.8	4.0	10.3	7.2	6.68	33.578	. .	33.279
	27	Weisse X, 94. . .	9.0	3	III–VII.	46 35 5.8	4.4	10.0	4.7	9.8	6.7	6.90	33.295	. .	32.995
	28	α Antliæ	. .	3	III–VII.	89 15 4.2	5.4	9.8	5.0	8.6	6.0	6.50	28.492	. .	28.200
	29	Weisse X, 520 . .	7.0	3	III–VII.	70 25 4.0	5.1	9.3	5.4	9.1	6.3	6.53	30.641	. .	30.345
	30	Weisse X, 703 . .	7.8	3	V–IX.	51 50 3.5	3.7	7.9	4.7	8.2	5.2	5.53	27.543	. .	27.244
	31	Radcliffe 2582 . .	7.5	3	IV–VI.	0 39 60.0	59.5	64.9	60.5	64.8	60.0	61.62	25.912	. .	25.609
	32	Weisse X, 1025 . .	. .	3	IV, V, VII.	45 30 2.6	2.4	9.4	3.9	7.5	4.0	4.97	27.607	. .	27.308
	33	B. A. C. 3911. . .	. .	3	III–VII.	50 35 2.7	1.9	7.2	2.8	6.7	3.6	4.15	31.445	. .	31.145
	34	Mars, S.	. .	2	I, IX.	52 40 4.1	4.0	10.4	6.9	9.9	6.5	6.97	34.336	. .	34.033
	35	Mars, N.	. .	3	III–VII.	“ “ “	“	“	“	“	“	“	35.009	. .	34.710
	36	Groombridge 1830 .	. .	2	VI, VIII.	20 15 1.1	1.2	7.8	1.9	5.8	1.1	3.15	30.480	. .	30.171
	37	Lalande 22585 . . .	. .	3	III–VII.	68 35 5.0	6.8	11.9	8.0	10.6	7.8	8.35	29.979	. .	29.683
	38	Nadir	. .	.	. .	200 0 1.8	2.2	6.9	4.1	4.7	3.9	3.93	30.285	. .	. .
20	39	Anonymous . . .	7.0	3	III–VII.	92 24 60.0	57.2	61.4	56.1	62.3	61.8	59.80	31.748	−0.342	31.412
	40	B. A. C. 3190. . .	6.0	3	V–IX.	“ “ “	“	“	“	“	“	“	31.222	. .	30.903
	41	ξ^1 Antliæ, (1st *) . .	7.5	2	I, IX.	90 10 4.7	2.4	6.7	0.9	7.6	5.8	4.68	28.891	. .	28.579
	42	ξ^1 Antliæ, (2d *) . .	7.5	3	III–VII.	“ “ “	“	“	“	“	“	“	29.148	. .	28.812
	43	Anon. $9^h 32^m 37^s$. .	8.0	3	V–IX.	95 14 62.7	60.5	65.9	59.3	66.4	64.9	63.28	37.404	. .	37.079
	44	Anon. $9^h 46^m 15^s$. .	8.2	3	III–VII.	96 25 3.2	2.2	8.0	0.9	9.5	6.0	4.97	30.070	. .	29.735
	45	Anon. $10^h 7^m 1^s$ . .	9.0	2	III, V.	46 4 62.2	55.8	64.9	56.2	66.8	64.1	61.67	31.025	. .	30.680
	46	Weisse X, 76. . .	9.5	2	VII, IX.	“ “ “	“	“	“	“	“	“	32.775	. .	32.429
	47	O. Arg. S. 10594. .	8.0	3	III–VII.	88 30 6.0	2.2	8.8	1.9	11.0	8.4	6.38	31.703	. .	31.366
	48	Weisse X, 425 . .	8.0	2	VII, IX.	48 50 6.3	1.8	8.2	2.2	11.4	9.8	6.62	34.257	. .	33.912
	49	Lacaille 4412. . .	. .	3	III–VII.	98 49 60.7	58.1	63.7	56.2	65.4	61.9	61.00	29.525	. .	29.191
	50	Anon. $10^h 43^m 32^s$.	7.8	3	III–VII.	88 9 64.0	60.1	65.9	59.1	67.2	65.6	63.65	29.936	. .	29.599
	51	Anon. $10^h 52^m 51^s$.	8.0	3	III–VII.	81 25 5.2	0.4	7.5	0.9	8.1	6.1	4.70	28.713	. .	28.375
	52	Weisse (2) X, 1174 .	8.5	3	VI–VIII.	14 39 62.7	58.1	66.1	57.1	67.7	64.4	62.68	25.118	. .	24.762
	53	O. Arg. S. 11311. .	8.3	3	III–VII.	88 35 6.2	2.9	9.7	2.4	10.6	9.1	6.82	28.710	. .	28.373
	54	B. A. C. 3920. . .	. .	2	I, III.	64 34 64.5	59.3	65.8	59.0	66.6	64.9	63.35	24.308	. .	23.967
	55	Mars, S.	. .	1	VII.	52 34 61.8	56.9	65.0	57.5	66.6	65.1	62.15	27.548	. .	27.206
	56	Mars, N.	. .	1	IX.	“ “ “	“	“	“	“	“	“	28.210	. .	27.866
	57	Lacaille 4849. . .	. .	2	VII, IX.	93 45 5.2	2.2	7.7	2.0	9.5	7.5	5.68	32.397	. .	32.072
	58	O. Arg. S. 11944. .	9.5	2	VII, IX.	86 10 5.8	3.7	11.0	4.3	11.6	9.1	7.58	35.158	. .	34.834
	59	Lacaille 5117. . .	7.5	3	III–VII.	96 35 4.9	3.2	10.7	2.1	10.3	7.8	6.50	32.328	. .	31.993
	60	Lacaille 5192. . .	6.5	3	III–VII.	85 40 5.7	1.4	9.1	3.1	9.9	7.2	6.07	24.862	. .	24.525
	61	Weisse XII, 526. .	9.0	3	V–IX.	44 25 4.8	0.4	7.9	0.3	9.1	7.8	5.05	33.561	. .	33.216
	62	Lacaille 5284. . .	7.0	3	III–VII.	90 30 6.0	1.4	8.9	0.4	7.9	6.6	5.20	33.606	. .	33.270
	63	Lacaille 5347. . .	. .	3	III–VII.	101 50 5.7	3.4	8.4	2.9	9.5	7.2	6.18	34.179	. .	33.846
	64	Anon. $12^h 58^m 40^s$.	7.5	3	III–VII.	93 15 3.9	0.2	7.2	0.8	6.8	5.1	4.00	28.714	. .	28.379
	65	O. Arg. S. 12733. .	8.0	3	III–VII.	88 20 6.9	2.3	8.6	2.1	9.4	8.2	6.25	28.103	−0.342	27.766

Number.	Barometer.	THERM'S.		Instrumental corrections.	Apparent Zenith Distance.	Refraction.	Observed Declination.	Reduction to 1870.0.	Observer.	REMARKS.
		At.	Ex.							
	in.	°	°	′ ″	° ′ ″	′ ″	° ′ ″	″		
1	29.664	49.5	44.2	− 23.0	S. 75 29 41.2	+ 3 41.6	− 36 39 43.5	+ 21.7	F.	
2	. .	. .	. .	− 1 33.6	75 28 30.6	3 41.3	− 36 38 32.6	21.7	F.	
3	. .	. .	. .	+ 1 26.0	75 41 29.5	3 44.7	− 36 51 34.9	19.7	F.	
4	. .	. .	. .	+ 3 9.8	73 33 13.1	3 15.0	− 34 42 48.8	18.7	F.	
5	. .	. .	. .	. .	. . . .	. .	. . . .	. .	F.	
6	29.808	57.8	52.9	− 19.9	24 49 44.9	25.4	+ 14 3 28.9	21.4	Y.	
7	. .	. .	. .	− 1 30.1	S. 2 3 32.4	2.1	+ 36 50 4.8	16.0	Y.	
8	. .	. .	. .	− 1 21.8	N. 35 16 16.6	40.8	+ 74 10 36.6	8.2	Y.	
9	29.808	57.1	50.9	+ 30.4	S. 35 20 35.2	41.0	+ 3 32 23.1	24.6	Y.	
10	. .	. .	. .	− 2 19.6	32 42 43.4	30.5	+ 6 10 36.7	. .	Y.	Correction for defective illumination of south limb = 0″.09.
11	. .	. .	. .	− 2 42.2	32 42 20.8	30.4				
12	. .	. .	. .	+ 1 48.0	74 1 51.1	3 19.7	− 35 11 31.5	30.5	Y.	
13	. .	. .	. .	− 7.4	0 14 58.8	0.2	+ 38 38 40.2	18.2	Y.	
14	29.806	56.2	48.7	+ 12.1	48 35 18.3	1 5.7	− 9 42 44.8	27.5	Y.	
15	. .	. .	. .	+ 1 3.3	S. 48 26 11.6	1 5.5	− 9 33 37.8	27.3	Y.	
16	. .	. .	. .	+ 3 7.0	N. 4 21 46.4	4.4	+ 43 15 30.1	17.0	Y.	
17	29.808	55.1	47.2	+ 1 41.5	S. 46 36 46.6	1 1.5	− 7 44 7.8	26.6	Y.	
18	. .	. .	. .	+ 1 11.5	48 1 16.2	1 4.7	− 9 8 41.7	26.1	Y.	
19	. .	. .	. .	− 2 13.5	S. 32 57 51.2	37.8	+ 5 55 10.3	+ 24.8	Y.	
20	. .	. .	. .	+ 2 2.9	N. 52 27 53.2	1 15.9	+ 88 37 11.7	− 14.2	Y.	
21	. .	. .	. .	. .	. . . .	. .	. . . .	. .	Y.	
22	30.012	62.5	57.0	− 3 1.4	S. 27 42 1.1	30.2	+ 11 11 8.0	+ 16.9	Y.	
23	. .	. .	. .	− 2 56.3	S. 9 57 7.5	10.1	+ 28 56 21.7	12.4	Y.	
24	30.024	61.0	55.7	+ 1.2	N. 4 24 54.6	4.4	+ 43 18 38.4	8.3	Y.	
25	. .	. .	. .	− 1 20.4	S. 13 43 44.2	14.1	+ 25 9 40.9	14.7	Y.	
26.	. .	. .	. .	− 1 42.7	30 13 24.0	33.6	+ 8 39 41.6	22.0	Y.	
27	. .	. .	. .	− 1 33.8	26 33 33.1	28.9	+ 12 19 37.3	20.1	Y.	
28	30.016	59.8	54.4	+ 56.4	69 16 2.9	2 31.4	− 30 24 55.0	31.2	Y.	
29	. .	. .	. .	− 10.8	50 24 55.7	1 9.8	− 11 32 26.2	27.5	Y.	
30	. .	. .	. .	+ 1 26.3	S. 31 51 31.8	36.7	+ 7 1 30.8	23.0	Y.	
31	. .	. .	. .	+ 2 17.5	N. 19 17 40.9	20.2	+ 58 11 40.4	9.5	Y.	
32	. .	. .	. .	+ 1 24.3	S. 25 31 29.2	27.6	+ 13 21 42.4	21.8	Y.	
33	. .	. .	. .	− 35.8	30 34 28.3	34.2	+ 8 18 36.8	23.8	Y.	
34	. .	. .	. .	− 2 6.3	32 38 0.7	30.5	+ 6 15 18.7	. .	Y.	Correction for defective illumination of south limb = 0″.10.
35	30.010	58.5	53.7	− 2 27.5	32 37 39.5	30.4				
36	30.006	58.0	53.7	− 5.3	0 14 57.8	0.2	+ 38 38 41.2	17.5	Y.	
37	. .	. .	. .	+ 9.9	48 35 18.3	1 5.5	− 9 42 44.6	27.5	Y.	
38	. .	. .	. .	. .	. . . .	. .	. . . .	. .	Y.	
39	. .	. .	. .	− 44.2	72 24 15.6	2 52.9	− 33 33 29.2	30.3	Y.	
40	. .	. .	. .	− 28.3	72 24 31.5	2 53.0	− 33 33 45.2	30.4	Y.	
41	. .	. .	. .	+ 44.5	70 10 49.2	2 32.7	− 31 19 42.6	30.3	Y.	
42	29.664	68.2	68.1	+ 37.2	70 10 41.9	2 32.7	− 31 19 35.3	30.3	Y.	
43	. .	. .	. .	− 3 41.7	75 11 21.6	3 26.7	− 36 21 9.0	31.5	Y.	
44	29.670	68.2	67.2	+ 8.3	76 25 13.3	3 45.8	− 37 35 19.8	32.1	Y.	
45	. .	. .	. .	− 21.3	26 54 40.4	28.3	+ 11 58 30.6	20.0	Y.	
46	. .	. .	. .	− 1 16.1	26 53 45.6	28.2	+ 11 59 25.4	20.0	Y.	Faint.
47	29.684	68.0	67.2	− 42.8	68 29 23.6	2 20.2	− 29 38 4.6	31.2	Y.	
48	. .	. .	. .	− 2 2.5	28 48 4.1	30.6	+ 10 5 4.5	21.5	Y.	
49	29.690	68.0	66.7	+ 25.3	78 50 26.3	4 34.4	− 40 1 21.4	32.9	Y.	
50	. .	. .	. .	+ 12.6	68 10 16.2	2 18.2	− 29 18 55.2	31.4	Y.	
51	. .	. .	. .	+ 50.9	S. 61 25 55.6	1 42.0	− 22 33 58.4	30.1	Y.	
52	. .	. .	. .	+ 2 44.0	N. 5 17 13.3	5.2	+ 44 10 57.7	13.3	Y.	
53	29.694	67.8	66.2	+ 50.9	S. 68 35 57.8	2 21.6	− 29 44 40.2	31.2	Y.	
54	. .	. .	. .	+ 3 8.9	44 38 12.3	55.0	− 5 45 28.1	26.9	Y.	
55	. .	. .	. .	+ 1 27.5	32 36 29.6	29.3	+ 6 16 50.7	. .	Y.	Correction for defective illumination of south limb = 0″.11.
56	29.694	67.8	66.4	+ 1 6.8	32 36 9.0	29.2				
57	. .	. .	. .	− 1 5.1	73 44 0.6	3 8.6	− 34 53 29.9	31.4	Y.	
58	. .	. .	. .	− 2 31.4	66 7 36.2	2 5.3	− 27 16 2.3	29.7	Y.	
59	29.710	67.7	65.0	− 1 2.4	76 34 4.1	3 49.6	− 37 44 14.5	29.9	Y.	
60	. .	. .	. .	+ 2 51.4	65 42 57.5	2 3.3	− 26 51 21.6	28.7	Y.	
61	. .	. .	. .	− 1 40.7	24 23 24.3	25.4	+ 14 29 49.5	23.3	Y.	
62	29.720	67.3	65.2	− 1 42.4	70 28 22.8	2 36.3	− 31 37 19.9	28.2	Y.	
63	. .	. .	. .	− 2 0.4	81 48 5.7	6 8.8	− 43 0 35.2	27.8	Y.	Faint.
64	. .	. .	. .	+ 50.8	73 15 54.8	3 3.8	− 34 25 19.3	27.2	Y.	
65	. .	. .	. .	+ 1 10.0	S. 68 21 16.2	+ 2 20.1	− 29 29 57.1	+ 26.6	Y.	

DATE.	Number.	OBJECT.	Magnitude.	No. of mic. readings.	Transit Wires.	MICROSCOPES.							MICROMETER.		
						A.	B.	C.	D.	E.	F.	Mean.	Observed.	Nadir cor.	Corr'd.
1871.						° ′ ″	″	″	″	″	″	″	r.	r.	r.
Apr. 20	1	O. Arg. S. 12811.	7.0	3	III–VII.	80 35 4.3	1.0	7.9	0.3	8.3	6.1	4.65	31.603	−0.342	31.265
	2	Nadir	. .	.	. .	199 59 61.5	57.9	64.1	59.0	64.2	66.0	62.12	30.271	. .	. .
21	3	Nadir	. .	.	. .	199 59 60.4	53.7	62.0	56.9	61.4	63.8	59.70	30.188	. .	. .
	4	Nadir	. .	.	. .	200 4 60.5	55.1	62.0	56.7	62.2	63.5	60.00	39.780	. .	. .
	5	Nadir	. .	.	. .	199 54 60.3	56.4	62.3	57.0	63.2	63.9	60.52	20.629	. .	. .
	6	Nadir	. .	.	. .	199 59 61.2	56.7	63.0	58.8	64.4	64.3	61.40	30.247	. .	. .
22	7	Nadir	. .	.	. .	199 59 60.8	59.7	66.7	65.1	62.8	62.3	62.90	30.294	−0.364	. .
	8	Nadir	. .	.	. .	199 55 1.9	2.2	8.0	7.8	4.1	4.0	4.67	20.766	. .	. .
	9	Nadir	. .	.	. .	200 5 0.9	2.3	7.9	6.5	3.7	3.1	4.07	39.906	. .	. .
	10	Nadir	. .	.	. .	200 0 0.3	0.1	6.8	5.1	2.8	2.1	2.87	30.293	. .	. .
	11	B. A. C. 4200.	. .	3	III–VII.	62 45 0.7	0.1	5.0	3.1	1.9	0.8	1.93	26.801	. .	26.438
	12	Weisse XII, 463.	7.5	3	V–IX.	55 55 1.2	1.2	7.1	5.4	4.4	1.7	3.50	30.880	. .	30.517
	13	O. Arg. S. 12342.	8.0	2	VII, IX.	83 10 5.0	5.2	10.9	9.0	6.7	4.0	6.80	32.504	. .	32.157
	14	Lacaille 5256.	8.0	3	V–IX.	" " "	"	"	"	"	"	"	32.832	. .	32.480
	15	Lacaille 5320.	. .	2	VII, IX.	100 25 3.9	3.1	9.5	6.1	4.7	3.3	5.10	33.113	. .	32.779
	16	Weisse XIII, 87.	8.5	3	III–VII.	69 45 0.9	1.3	8.8	6.1	4.2	2.9	4.03	31.029	. .	30.667
	17	O. Arg. S. 12802.	. .	3	III–VII.	85 35 3.2	2.9	11.8	9.0	6.8	3.7	6.23	29.647	. .	29.288
24	18	44 Leonis	6.5	2	II, V.	49 24 62.4	56.5	64.8	58.1	65.5	62.1	61.57	26.915	−0.243	26.669
	19	B. A. C. 3562.	. .	2	III, IX.	" " "	"	"	"	"	"	"	25.857	. .	25.609
	20	Anon. $10^h 41^m 6^s$.	. .	3	IV–VI.	94 29 64.0	56.0	64.9	60.2	64.5	60.0	61.60	29.281	. .	29.040
	21	Anon. $10^h 41^m 6^s$.	. .	3	IV–VI.	" " "	"	"	"	"	"	"	25.928	. .	25.687
	22	Weisse X, 1025	. .	3	IV–VI.	45 34 63.6	54.6	64.9	59.6	66.2	60.8	61.62	37.009	. .	36.765
	23	Lacaille 4714.	. .	3	III–VII.	87 44 63.6	57.9	65.4	60.8	65.1	60.8	62.27	30.706	. .	30.468
	24	Lacaille 4732.	7.0	3	IV–VI.	85 4 64.8	57.9	68.5	62.5	67.3	61.6	63.77	26.857	. .	26.616
	25	O. Arg. S. 11370.	. .	3	IV–VI.	" " "	"	"	"	"	"	"	37.136	. .	36.895
	26	Mars, S.	. .	2	II, VIII.	52 39 65.1	58.5	67.8	61.5	67.0	63.8	63.95	36.114	. .	35.868
	27	Mars, N.	. .	3	III–VII.	" " "	"	"	"	"	"	"	36.606	. .	36.362
	28	Lacaille 4825.	. .	3	IV–VI.	98 24 63.0	58.5	65.6	60.8	65.4	61.5	62.47	31.145	. .	30.904
	29	Weisse XI, 673	8.0	3	III–VII.	64 44 64.4	56.0	65.7	59.0	65.1	60.6	61.80	24.223	. .	23.981
	30	Groombridge 1830	. .	3	IV–VI.	20 14 65.5	59.2	70.1	61.9	68.2	62.1	64.50	30.435	. .	30.190
	31	Weisse (2) XI, 1086.	. .	3	IV–VI.	15 10 6.2	0.4	8.1	1.0	8.2	2.4	4.38	34.285	. .	34.039
	32	Anon. $12^h 6^m 58^s$.	. .	3	III–VII.	91 54 61.4	56.6	63.6	59.1	62.2	58.7	60.27	29.512	. .	29.275
	33	Lacaille 5126.	. .	3	VI–VIII.	95 34 60.9	55.7	65.6	55.8	63.6	55.8	59.57	27.271	. .	27.042
	34	O. Arg. S. 12254.	. .	3	III–VII.	81 39 60.9	52.4	64.1	57.1	62.3	57.6	59.07	34.311	. .	34.072
	35	γ^2 Virginis	. .	2	VIII, IX.	59 35 1.2	55.1	5.5	57.9	3.4	0.9	0.67	25.548	. .	25.308
	36	Lacaille 5320.	. .	3	III–VII.	100 24 61.4	54.0	63.0	58.0	61.1	56.5	59.00	32.683	. .	32.449
	37	*k* Virginis	. .	3	IV–VI.	62 0 4.0	56.7	7.5	0.2	5.1	0.4	2.32	30.758	. .	30.515
	38	Nadir	. .	.	. .	200 0 3.8	56.9	6.0	1.8	1.1	3.1	2.12	30.311	. .	. .
29	39	Anon. $9^h 50^m 47^s$.	. .	3	IV–VI.	99 0 1.7	59.4	4.8	59.1	2.7	0.2	1.32	26.674	−0.330	26.346
	40	Anon. $10^h 6^m 39^s$.	. .	2	V, IX.	96 20 3.4	2.0	9.1	3.2	7.6	4.7	5.00	27.134	. .	26.824
	41	Anon. $10^h 8^m 40^s$.	. .	1	IX.	97 30 6.6	5.9	12.0	7.0	10.0	7.0	8.08	26.690	. .	26.402
	42	Moon, N.	. .	3	III–VII.	44 35 4.5	1.7	8.7	3.0	7.1	5.9	5.15	25.710	. .	25.378
	43	Lacaille 4450.	. .	3	IV, V, IX.	99 5 3.2	1.8	7.2	2.0	4.7	2.2	3.52	26.939	. .	26.625
	44	Anon. $10^h 47^m 56^s$	8.0	1	IX.	92 40 2.3	0.2	5.2	2.9	3.8	1.9	2.72	29.262	. .	28.968
	45	Weisse XI, 137	. .	2	V, VII.	61 50 3.1	0.4	6.8	2.3	6.2	4.0	3.80	32.121	. .	31.792
	46	Mars, N.	. .	2	I, IX.	52 45 1.9	0.0	6.2	1.7	5.2	2.9	2.98	32.107	. .	31.772
	47	Mars, S.	. .	3	III–VII.	" " "	"	"	"	"	"	"	31.402	. .	31.071
	48	Anon. $11^h 30^m 46^s$	8.0	2	VII, IX.	93 40 2.1	0.2	6.1	3.6	5.5	2.9	3.40	24.781	. .	24.475
	49	Anon. $11^h 41^m 32^s$	9.5	3	III–VII.	66 15 2.3	59.2	6.8	2.6	4.7	2.9	3.08	25.523	. .	25.194
	50	Anon. $11^h 49^m 12^s$	9.5	3	IV–VI.	22 45 1.7	0.2	5.8	1.2	4.1	2.9	2.65	32.004	. .	31.672
	51	Weisse XI, 963	9.0	2	III, VII.	54 50 5.0	2.3	7.9	6.0	6.7	4.9	5.47	33.483	. .	33.152
	52	Groombridge 1860	8.0	3	I, V, 5.	334 40 1.3	0.2	7.2	1.8	5.3	2.1	2.98	28.206	. .	27.875
	53	Lacaille 5117.	. .	3	IV–VI.	96 35 5.0	5.7	11.2	7.2	8.1	6.1	7.22	32.495	. .	32.167
	54	Anon. $12^h 26^m 17^s$	7.8	3	III–VII.	89 45 3.3	3.2	8.7	5.2	6.1	4.7	5.20	26.268	. .	25.944
	55	B. A. C. 4262.	5.0	3	III–VII.	98 5 4.1	2.9	8.8	4.8	6.2	3.6	5.07	28.540	. .	28.218
	56	Lacaille 5281.	8.0	3	III–VII.	102 50 5.1	4.9	10.1	7.3	7.8	5.0	6.70	35.265	. .	34.944
	57	Anon. $12^h 47^m 22^s$	8.5	1	IX.	97 35 2.7	2.7	7.6	4.9	4.8	2.7	4.23	28.172	. .	27.884
	58	O. Arg. S. 12620.	8.5	3	III–VII.	84 50 2.0	0.9	8.1	6.1	4.5	3.1	4.12	28.110	. .	27.785
	59	Anon. $13^h 9^m 46^s$.	5.0	3	III–VII.	89 40 3.9	3.9	8.1	6.0	5.2	3.9	5.17	29.413	. .	29.089
	60	O. Arg. S. 13908.	7.5	3	III–VII.	81 50 4.0	3.9	9.6	7.1	5.7	4.2	5.75	28.843	. .	28.627
	61	Lacaille 5635.	6.8	2	IV, VI.	85 45 4.2	3.2	9.8	8.1	7.1	4.1	6.08	26.834	. .	26.616
	62	Nadir	. .	.	. .	200 0 0.8	0.1	6.1	4.4	3.2	2.9	2.92	30.282	. .	. .
May 1	63	Mars, S.	. .	1	VIII.	52 45 1.2	55.0	2.8	58.6	3.8	0.2	0.27	21.760	−0.220	21.539
	64	Mars, N.	. .	1	IX.	" " "	"	"	"	"	"	"	22.156	. .	21.934
	65	Weisse (2) XI, 1086.	. .	3	V–VII.	15 4 60.4	54.3	3.2	57.1	61.6	58.5	59.18	24.437	−0.220	24.212

Number.	Barometer.	THERM'S.		Instrumental corrections.	Apparent Zenith Distance.	Refraction.	Observed Declination.	Reduction to 1870.0.	Observer.	REMARKS.
		At.	Ex.							
	in.	°	°	′ ″	° ′ ″	′ ″	° ′ ″	″		
1	29.724	67.2	64.7	− 39.6	S. 60 34 25.1	+ 1 39.0	− 21 42 24.8	+ 26.0	Y.	
2	. .	. .	. .	. .	. . . .	. .	. . . .	. .	Y.	
3	. .	. .	. .	. .	. . . .	. .	. . . . .	. .	Y.	
4	. .	. .	. .	. .	. . . .	. .	. . . . .	. .	Y.	
5	. .	. .	. .	. .	. . . .	. .	. . . . .	. .	Y.	
6	. .	. .	. .	. .	. . . .	. .	. . . . .	. .	Y.	
7	. .	. .	. .	. .	. . . .	. .	. . . . .	. .	Y.	
8	. .	. .	. .	. .	. . . .	. .	. . . . .	. .	Y.	
9	. .	. .	. .	. .	. . . .	. .	. . . . .	. .	Y.	
10	. .	. .	. .	. .	. . . .	. .	. . . . .	. .	Y.	
11	30.028	57.7	49.7	+ 1 51.5	42 46 53.5	54.0	− 3 54 8.2	26.3	Y.	
12	. .	. .	. .	− 16.2	35 54 47.3	42.2	+ 2 58 9.7	25.1	Y.	
13	. .	. .	. .	− 1 7.5	63 8 59.3	1 54.8	− 24 17 14.8	28.4	Y.	
14	. .	. .	. .	− 1 17.7	63 8 49.1	1 54.8	− 24 17 4.7	28.3	Y.	
15	30.036	56.8	49.0	− 1 27.0	80 23 38.1	5 32.5	− 41 35 31.3	28.5	Y.	
16	. .	. .	. .	− 20.8	49 44 43.2	1 9.0	− 10 52 12.9	25.8	Y.	
17	. .	. .	. .	+ 22.3	65 35 28.5	2 8.2	− 26 43 57.5	26.4	Y.	
18	. .	. .	. .	+ 1 44.3	29 26 45.9	32.7	+ 9 26 20.6	21.2	F.	
19	30.300	61.5	57.5	+ 2 17.5	29 27 19.1	32.7	+ 9 25 47.4	21.2	F.	
20	. .	. .	. .	+ 30.1	74 30 31.7	3 26.4	− 35 40 18.8	32.8	F.	
21	. .	. .	. .	+ 2 15.1	74 32 16.7	3 26.8	− 35 42 4.2	32.8	F.	
22	. .	. .	. .	− 3 31.8	25 31 29.8	27.8	+ 13 21 41.7	21.5	F.	
23	. .	. .	. .	− 14.7	67 44 47.6	2 21.3	− 28 53 29.6	31.6	F.	
24	. .	. .	. .	+ 1 46.0	65 6 49.8	2 4.9	− 26 15 15.4	31.1	F.	
25	. .	. .	. .	− 3 35.9	65 1 27.9	2 4.3	− 26 9 52.9	31.1	F.	
26	. .	. .	. .	− 3 3.8	32 37 0.2	31.0	+ 6 16 15.8	. .	F.	Correction for defective illumination of south limb = 0″.12.
27	30.310	60.5	55.3	− 3 19.2	32 36 44.7	30.9				
28	. .	. .	. .	− 28.2	78 24 34.2	4 36.6	− 39 35 31.6	32.6	F.	
29	. .	. .	. .	+ 3 8.5	44 48 10.3	57.8	− 5 55 28.8	27.0	F.	
30	. .	. .	. .	− 6.0	S. 0 14 58.5	0.2	+ 38 38 40.5	16.5	F.	
31	. .	. .	. .	− 2 6.5	N. 4 52 2.1	5.0	+ 43 45 46.3	15.7	F.	
32	. .	. .	. .	+ 22.7	S. 71 55 23.0	2 57.0	− 33 4 40.7	30.7	F.	
33	30.294	59.0	53.5	+ 1 32.6	75 36 32.2	3 43.7	− 36 46 36.7	30.6	F.	
34	. .	. .	. .	− 2 7.5	61 37 51.6	1 48.0	− 22 46 0.3	28.8	F.	
35	. .	. .	. .	+ 2 26.9	39 37 27.6	48.3	− 0 44 36.7	25.6	F.	
36	. .	. .	. .	− 1 16.7	80 23 42.3	5 32.2	− 41 35 35.2	28.9	F.	
37	30.286	59.0	53.4	− 16.1	41 59 46.2	52.5	− 3 6 59.5	25.6	F.	
38	. .	. .	. .	. .	. . . .	. .	. . . . .	. .	F.	
39	29.790	64.8	59.4	+ 1 54.4	79 1 55.7	4 44.2	− 40 13 0.7	33.4	Y.	
40	. .	. .	. .	+ 1 39.4	76 21 44.4	3 51.7	− 37 31 56.9	33.3	Y.	Faint.
41	. .	. .	. .	+ 1 52.7	77 32 0.7	+ 4 11.0	− 38 42 32.5	33.6	Y.	
42	29.796	63.8	58.0	+ 2 24.7	24 37 29.9	− 7 36.1	+ 14 23 45.4	. .	Y.	
43	. .	. .	. .	+ 1 45.7	79 6 49.2	+ 4 47.2	− 40 17 57.2	34.2	Y.	
44	. .	. .	. .	+ 32.3	72 40 35.0	3 0.6	− 33 49 56.4	33.1	Y.	
45	29.800	62.8	56.2	− 56.1	41 49 7.7	51.1	− 2 56 19.5	26.3	Y.	
46	. .	. .	. .	− 55.5	32 44 7.5	30.6	+ 6 8 50.1	. .	Y.	Unsteady. Corr. for def. ill. of S. limb = 0″.13.
47	. .	. .	. .	− 33.5	32 44 29.4	30.8				Unsteady.
48	29.794	62.0	55.1	+ 2 53.0	73 42 56.4	3 13.4	− 34 52 30.5	32.8	Y.	
49	. .	. .	. .	+ 2 30.4	46 17 33.5	59.8	− 7 24 54.1	27.4	Y.	
50	. .	. .	. .	− 52.3	2 44 10.3	2.7	+ 36 9 26.3	16.4	Y.	
51	. .	. .	. .	− 1 38.7	S. 34 48 26.8	39.8	+ 4 4 32.7	24.7	Y.	
52	29.794	61.0	55.1	+ 1 6.5	N. 45 18 50.5	57.8	+ 84 13 27.6	7.6	Y.	
53	. .	. .	. .	− 1 7.8	S. 76 33 59.4	3 55.3	− 37 44 15.4	31.6	Y.	
54	. .	. .	. .	+ 2 7.0	69 47 12.2	2 34.5	− 30 56 7.4	30.4	Y	
55	29.794	60.3	53.4	+ 55.8	78 6 0.9	4 25.8	− 39 16 47.4	30.8	Y.	
56	. .	. .	. .	− 2 34.8	82 47 31.9	7 6.8	− 44 0 59.4	30.6	Y.	
57	. .	. .	. .	+ 1 6.2	77 36 10.5	4 15.5	− 38 46 46.8	29.9	Y.	
58	. .	. .	. .	+ 1 9.3	64 51 13.5	2 2.0	− 25 59 36.2	28.3	Y.	
59	29.794	59.2	52.3	+ 28.5	69 40 33.7	2 34.2	− 30 49 28.6	27.9	Y.	
60	. .	. .	. .	+ 43.0	61 50 48.8	1 47.3	− 22 58 56.8	26.5	Y.	
61	29.796	58.7	51.1	+ 1 46.0	65 46 52.0	2 7.6	− 26 55 20.4	26.1	Y.	
62	. .	. .	. .	. .	. . . .	. .	. . . . .	. .	Y.	
63	. .	. .	. .	+ 4 25.0	32 49 25.2	30.7	+ 6 3 49.7	. .	F.	Correction for defective illumination of south limb = 0″.14.
64	. .	. .	. .	+ 4 12.6	S. 32 49 12.9	30.6				
65	. .	. .	. .	+ 3 1.2	N. 4 51 59.6	+ 4.8	+ 43 45 43.7	+ 14.3	F.	

DATE.	Number.	OBJECT.	Magnitude.	No. of mic. readings.	Transit Wires.	MICROSCOPES.							MICROMETER.		
						A.	B.	C.	D.	E.	F.	Mean.	Observed.	Nadir cor.	Corr'd.
1871.						° ′ ″	″	″	″	″	″	″	r.	r.	r.
May 1	1	Moon, N.	. .	3	III–VII.	55 15 1.3	54.7	3.9	0.3	3.8	59.5	0.58	27.097	—0.220	26.876
	2	Nadir	. .	.	. .	199 59 60.8	52.6	62.9	57.6	59.5	60.9	59.05	30.190	. .	. .
5	3	Lacaille 4669.	. .	3	IV–VI.	96 24 60.0	54.2	63.0	58.8	62.8	57.9	59.90	33.315	—0.242	33.075
	4	Lacaille 4732.	7.0	2	VIII, IX.	85 5 0.6	53.4	4.3	0.0	2.7	59.2	0.03	26.625	. .	26.404
	5	O. Arg. S. 11370.	8.5	3	VI–VIII.	" " "	"	"	"	"	"	"	36.797	. .	36.566
	6	B. A. C. 3926	. .	3	IV–VI.	89 14 60.0	54.9	61.0	58.2	60.7	57.2	58.67	32.223	. .	31.983
	7	Lacaille 4849.	. .	3	IV–VI.	93 45 1.3	55.8	3.2	58.6	2.5	58.9	0.05	32.202	. .	31.962
	8	Weisse XI, 673	. .	1	IX.	64 50 3.2	55.2	4.6	0.8	4.1	59.6	1.25	33.770	. .	33.536
	9	B. A. C. 4010.	. .	3	V–VII.	20 15 3.8	57.4	7.9	1.5	5.2	2.3	3.02	30.395	. .	30.150
	10	Weisse XI, 966	. .	3	IV–VI.	54 50 4.1	55.9	4.5	0.1	5.0	1.0	1.77	33.112	. .	32.870
	11	Σ Cat. Gen. 1510, (1st *)	7.5	2	VI, VII.	69 30 4.9	0.0	8.2	4.4	6.0	3.1	4.43	24.418	. .	24.179
	12	Σ Cat. Gen. 1510, (2d *)	8.5	2	VIII, IX.	" " "	"	"	"	"	"	"	25.565	. .	25.332
	13	Nadir	. .	.	. .	200 0 2.9	55.9	4.9	1.5	1.5	2.0	1.45	30.287	. .	. .
10	14	Anon. $11^h 41^m 32^s$	9.5	3	III–VII.	66 15 1.6	55.8	3.8	0.6	3.0	59.2	0.67	25.093	—0.288	24.806
	15	Anon. $12^h 14^m 42^s$	7.5	3	III–VII.	87 49 58.6	52.0	61.3	56.3	58.7	54.0	56.82	26.458	. .	26.175
	16	Lacaille 5232.	. .	3	IV–VI.	87 50 1.9	56.6	4.5	1.9	2.7	58.1	0.95	33.700	. .	33.414
	17	Anon. $13^h 39^m 13^s$	8.5	3	VII–IX.	43 15 3.4	59.7	6.2	3.5	4.5	0.0	2.88	24.959	. .	24.664
	18	Lacaille 5743.	. .	3	IV–VI.	92 50 3.4	59.5	6.9	6.0	3.8	8.3	4.65	33.688	. .	33.402
	19	Anon. $13^h 51^m 42^s$	8.0	3	IV–VI.	95 40 3.5	0.0	7.5	6.1	5.0	59.1	3.53	37.521	. .	37.235
	20	Anon. $14^h 16^m 16^s$	8.0	3	IV–VI.	85 35 3.1	59.1	7.5	6.6	5.3	0.0	3.60	26.209	. .	25.923
	21	Nadir	. .	.	. .	200 0 2.4	55.8	6.0	3.8	1.6	0.0	1.60	30.339	. .	. .
	22	Moon, N.	. .	3	III–VII.	78 12 31.5 78 12 30.7	33.4 32.4	37.8 38.0	38.0 34.0	36.5 35.9	32.8 31.2	34.35	25.518	. .	25.233
11	23	O. Arg. S. 11394.	9.0	3	III–VII.	82 0 1.9	58.7	3.3	3.3	3.1	1.6	1.98	33.415	—0.350	33.069
	24	Weisse (2) XI, 937	7.5	3	III–VII.	22 50 4.1	3.7	8.0	4.4	8.1	6.3	5.77	30.667	. .	30.320
	25	Anon. $12^h 14^m 42^s$	7.5	3	VII, IX.	87 50 4.9	3.4	7.5	6.4	7.0	5.2	5.73	26.919	. .	26.583
	26	Lacaille 5192.	7.0	3	III–VII.	85 45 0.6	59.0	4.8	3.1	3.9	1.0	2.07	34.400	. .	34.055
	27	Lacaille 5244.	8.0	2	VII, IX.	86 5 3.4	3.8	6.9	6.9	7.4	4.9	5.55	33.138	. .	32.806
	28	B. A. C. 4297.	6.5	3	III–VII.	85 45 3.6	1.4	6.0	5.8	6.0	4.1	4.48	30.272	. .	29.927
	29	O. Arg. S. 12538.	. .	3	III–VII.	80 20 2.4	4.0	6.7	6.1	7.9	5.8	5.48	29.704	. .	29.358
	30	Anon. $13^h 9^m 47^s$	5.0	3	V–IX.	89 40 1.9	1.1	4.1	3.4	3.7	2.2	2.73	29.321	. .	28.985
	31	Weisse (2) XIII, 419	8.5	3	III–VII.	31 0 3.2	1.7	6.1	5.5	6.8	5.8	4.85	29.652	. .	29.297
	32	B. A. C. 4560	7.0	3	V–IX.	71 0 4.4	4.8	8.8	8.2	9.8	8.5	7.42	30.178	. .	29.834
	33	Anon. $13^h 43^m 18^s$	8.5	3	III–VII.	40 20 1.1	1.2	4.8	3.5	4.3	3.8	3.12	26.587	. .	26.234
	34	Anon. $13^h 52^m 44^s$	. .	3	IV–VI.	35 24 56.9	58.5	61.8	60.2	61.4	59.2	59.67	33.998	. .	33.647
	35	Nadir	. .	.	. .	200 0 0.0	0.0	4.1	4.8	3.1	3.0	2.50	30.290	. .	. .
13	36	Weisse XI, 137	9.5	3	III–VII.	61 49 60.7	55.6	59.2	55.0	62.2	62.0	59.12	31.954	—0.368	31.587
	37	Mars, S.	. .	2	I, IX.	53 40 3.5	57.8	2.2	58.1	5.4	5.4	2.07	28.792	. .	28.420
	38	Mars, N.	. .	3	III–VII.	" " "	"	"	"	"	"	"	29.369	. .	29.000
	39	Weisse XI, 558	9.0	3	III–VII.	47 50 5.2	59.4	4.5	0.9	8.7	7.9	4.43	29.354	. .	28.984
	40	Anon. $11^h 41^m 31^s$	10.0	2	V, IX.	66 15 5.8	0.8	6.4	1.7	9.2	8.7	5.43	25.765	. .	25.396
	41	Rumker 3911	8.0	3	III–VII.	52 30 6.2	2.7	7.8	4.2	10.2	9.8	6.82	30.913	. .	30.544
	42	Weisse XII, 345.	9.3	3	III–VII.	45 50 4.2	59.8	5.7	0.9	8.4	4.5	3.92	31.347	. .	30.977
	43	Lacaille 5238.	. .	3	III–VII.	102 10 4.6	2.8	6.2	3.9	7.9	6.2	5.27	28.721	. .	28.362
	44	Lacaille 5291.	7.5	3	III–VII.	92 55 0.6	58.1	1.6	59.2	3.1	1.9	0.75	28.407	. .	28.045
	45	Weisse XII, 880.	7.5	3	III–VII.	68 0 6.2	3.7	8.0	5.3	9.8	9.7	7.12	28.046	. .	27.680
	46	Anon. $12^h 58^m 40^s$.	8.0	3	V–IX.	93 15 2.8	1.2	3.9	1.2	4.7	4.0	2.97	28.683	. .	28.331
	47	Weisse (2) XIII, 241	9.5	3	III–VII.	23 5 1.7	59.8	3.0	59.0	5.2	3.8	2.08	31.262	. .	30.887
	48	O. Arg. S. 12920.	8.0	3	III–VII.	89 15 4.5	3.4	7.0	3.9	7.3	6.8	5.48	31.159	. .	30.797
	49	Lacaille 5655.	7.0	2	VII, IX.	88 20 4.3	1.9	5.7	2.9	6.7	6.1	4.60	24.267	. .	23.919
	50	Anon. $13^h 42^m 11^s$	8.0	3	IV–VI.	94 45 5.2	4.2	7.2	5.9	9.8	7.7	6.67	24.506	. .	24.140
	51	Anon. $13^h 51^m 38^s$	8.3	3	V–IX.	95 45 1.9	0.7	5.6	2.1	6.4	4.0	3.45	24.631	. .	24.281
	52	Anon. $14^h 16^m 15^s$	. .	3	III–VII.	85 35 2.7	59.8	5.2	3.7	6.8	4.8	3.83	26.253	. .	25.890
	53	Nadir	. .	.	. .	200 0 1.4	58.4	3.0	2.8	3.9	5.7	2.53	30.311	. .	. .
15	54	Weisse XI, 421	. .	3	III–VII.	65 44 61.1	51.4	59.3	54.4	62.1	62.4	58.45	26.167	—0.220	25.948
	55	Anon. $11^h 40^m 51^s$	9.2	1	V.	45 39 62.7	52.2	59.3	55.0	63.3	62.5	59.17	38.872	. .	38.652
	56	Anon. $11^h 42^m 22^s$	. .	3	IV–VI.	" " "	"	"	"	"	"	"	30.502	. .	30.281
	57	Anon. $11^h 45^m 38^s$	9.5	1	IX.	64 29 62.0	51.0	58.6	54.1	60.6	59.1	57.57	36.336	. .	36.124
	58	35 Virginis	. .	3	IV–VI.	54 34 63.2	53.4	61.6	56.9	63.4	60.5	59.83	27.573	. .	27.353
	59	Groombridge 1947	. .	3	V–VII.	349 30 4.6	55.9	7.8	0.0	7.0	3.9	3.20	38.684	. .	38.448
	60	B. A. C. 4496.	. .	3	IV–VI.	59 0 2.7	54.0	2.8	55.8	5.0	4.2	0.75	25.842	. .	25.622
	61	Lacaille 5580.	. .	3	IV–VI.	86 49 61.3	53.2	61.0	57.1	61.8	59.8	59.03	23.989	. .	23.771
	62	Anon. $13^h 32^m 17^s$	. .	2	VI, VII.	341 59 61.6	51.8	62.5	56.0	62.0	60.0	58.98	36.192	. .	35.934
	63	85 Virginis	. .	2	VIII, IX.	73 59 61.2	51.5	61.5	58.0	62.2	60.4	59.13	31.078	. .	30.871
	64	O. Arg. S. 13177.	. .	2	VI, VII.	86 29 57.8	49.5	57.9	55.1	58.8	57.2	56.05	26.935	—0.220	26.722

Number.	Barometer.	THERM'S.		Instrumental corrections.	Apparent Zenith Distance.	Refraction.	Observed Declination.	Reduction to 1870.0.	Observer.	REMARKS.
		At.	Ex.							
	in.	°	°	′ ″	° ′ ″	′ ″	° ′ ″	″		
1	29.884	63.0	58.8	+ 1 37.8	S. 35 16 38.4	−17 10.5	+ 3 54 11.3	. .	F.	
2	. .	. .	. .	. .	. . . .	. .	. . . .	. .	F.	
3	. .	. .	. .	− 1 36.3	76 23 23.6	+ 3 48.9	− 37 33 33.3	+ 34.0	F.	
4	. .	. .	. .	+ 1 52.6	65 6 52.6	2 1.3	− 26 15 14.7	31.8	F.	
5	. .	. .	. .	− 3 25.6	65 1 34.4	2 0.8	− 26 9 56.0	31.8	F.	
6	29.700	63.5	59.5	− 1 2.1	69 13 56.6	2 28.0	− 30 22 45.3	32.8	F.	
7	. .	. .	. .	− 1 1.4	73 43 58.6	3 11.3	− 34 53 30.7	32.2	F.	
8	. .	. .	. .	− 1 50.7	44 48 10.5	56.2	− 5 55 27.4	26.8	F.	
9	29.700	63.0	59.1	− 4.7	0 14 58.3	0.2	+ 38 38 40.7	14.5	F.	
10	. .	. .	. .	− 1 29.9	34 48 31.9	39.4	+ 4 4 28.0	24.2	F.	Very faint; cloudy.
11	. .	. .	. .	+ 3 2.3	49 33 6.7	1 6.6	− 10 40 34.0	26.0	F.	4 seconds apart.
12	29.680	61.0	57.1	+ 2 26.2	49 32 30.6	1 6.5	− 10 39 57.9	26.0	F.	
13	. .	. .	. .	. .	. . . .	. .	. . . .	. .	F.	
14	. .	. .	. .	+ 2 42.7	46 17 43.3	1 0.6	− 7 25 4.7	27.3	F.	
15	29.988	57.0	51.7	+ 1 59.8	67 51 56.6	2 21.7	− 29 0 39.1	31.7	F.	
16	. .	. .	. .	− 1 46.9	67 48 14.0	2 21.5	− 28 56 56.3	30.9	F.	
17	. .	. .	. .	+ 2 47.1	23 17 50.0	25.1	+ 15 35 24.2	20.5	F.	
18	. .	. .	. .	− 1 46.5	72 48 18.1	3 6.5	− 33 57 45.4	26.7	F.	
19	30.000	54.5	47.9	− 3 46.6	75 36 17.0	3 44.1	− 36 46 21.8	26.5	F.	
20	. .	. .	. .	+ 2 7.7	65 37 11.3	+ 2 8.4	− 26 45 40.5	23.7	F.	
21	. .	. .	. .	. .	. . . .	. .	. . . .	. .	F.	
22	30.072	50.0	46.5	+ 2 29.3	58 15 3.6	−31 38.8	− 18 49 45.5	. .	F.	
23	30.032	60.6	56.4	− 1 36.1	61 58 25.9	+ 1 47.7	− 23 6 34.4	31.5	Y.	
24	30.036	60.2	55.3	− 10.0	2 49 55.7	2.9	+ 36 3 40.6	14.5	Y.	
25	. .	. .	. .	+ 1 47.0	67 51 52.7	2 21.3	− 29 0 34.8	31.7	Y.	
26	30.032	59.4	53.2	− 2 7.0	65 42 55.1	2 7.7	− 26 51 23.5	31.0	Y.	
27	. .	. .	. .	− 1 27.9	66 3 37.7	2 9.9	− 27 12 8.3	30.7	Y.	
28	. .	. .	. .	+ 2.3	65 45 6.8	2 8.2	− 26 53 35.7	30.3	Y.	
29	30.034	58.5	51.8	+ 20.1	60 20 25.6	1 41.7	− 21 28 28.0	29.0	Y.	
30	. .	. .	. .	+ 31.8	69 40 34.5	2 35.5	− 30 49 30.7	29.3	Y.	
31	. .	. .	. .	+ 22.0	11 0 26.8	11.3	+ 27 53 1.1	18.0	Y.	
32	30.022	57.5	51.5	+ 5.2	51 0 12.6	1 11.7	− 12 7 45.0	25.2	Y.	
33	. .	. .	. .	+ 1 57.9	20 22 1.1	21.6	+ 18 31 16.6	19.8	Y.	
34	. .	. .	. .	− 1 54.2	15 23 5.5	16.0	+ 23 30 17.8	18.8	Y.	
35	. .	. .	. .	. .	. . . .	. .	. . . .	. .	Y.	
36	29.827	66.4	64.0	− 49.7	41 49 9.4	50.3	− 2 56 20.5	25.6	Y.	
37	. .	. .	. .	+ 49.5	33 40 51.5	32.1	+ 5 12 24.8	. .	Y.	Correction for defective illumination of south limb = 0″.15.
38	. .	. .	. .	+ 31.3	33 40 33.4	31.9				
39	. .	. .	. .	+ 31.8	27 50 36.2	29.9	+ 11 2 33.1	21.5	Y.	
40	29.832	65.4	61.4	+ 2 24.2	46 17 29.6	59.2	− 7 24 49.5	27.1	Y.	Very faint.
41	29.850	64.2	60.0	− 17.0	32 29 49.8	36.2	+ 6 23 13.3	23.2	Y.	
42	. .	. .	. .	− 30.6	25 49 33.3	27.5	+ 13 3 38.4	21.3	Y.	
43	29.868	63.7	59.1	+ 51.3	82 10 56.6	6 31.9	− 43 23 49.2	33.3	Y.	
44	. .	. .	. .	+ 1 1.2	72 56 2.0	3 3.3	− 34 5 26.0	31.5	Y.	
45	. .	. .	. .	+ 1 12.7	48 1 19.8	1 3.2	− 9 8 43.8	26.4	Y.	
46	29.876	63.0	59.2	+ 52.2	73 15 55.2	3 7.0	− 34 25 23.0	30.7	Y.	
47	. .	. .	. .	− 27.8	3 4 34.3	3.1	+ 35 49 1.9	15.9	Y.	
48	. .	. .	. .	− 25.0	69 14 40.5	2 29.3	− 30 23 30.5	28.4	Y.	
49	. .	. .	. .	+ 3 10.4	68 23 15.0	2 23.0	− 29 31 58.8	27.5	Y.	
50	29.900	62.2	58.1	+ 3 3.5	74 48 10.2	3 27.0	− 35 57 57.9	27.7	Y.	
51	. .	. .	. .	+ 2 59.4	75 48 2.8	3 42.0	− 36 58 5.6	26.9	Y.	
52	29.920	61.5	57.0	+ 2 8.7	65 37 12.5	2 5.7	− 26 45 39.0	24.0	Y.	
53	. .	. .	. .	. .	. . . .	. .	. . . .	. .	Y.	
54	. .	. .	. .	+ 2 6.9	45 47 5.3	57.9	− 6 54 24.0	27.1	F.	
55	29.890	68.0	64.4	− 4 30.9	25 35 28.2	27.0	+ 13 17 44.0	20.6	F.	
56	. .	. .	. .	− 8.8	25 39 50.4	27.7	+ 13 13 21.2	20.7	F.	
57	. .	. .	. .	− 3 11.8	44 26 45.8	55.3	− 5 34 1.8	26.5	F.	Extremely faint.
58	. .	. .	. .	+ 1 22.9	S. 34 36 22.7	39.0	+ 4 16 37.5	23.3	F.	
59	. .	. .	. .	− 4 24.5	N. 30 34 21.3	33.4	+ 69 28 34.0	8.3	F.	
60	. .	. .	. .	+ 2 17.1	S. 39 2 17.8	45.9	− 0 9 24.5	23.4	F.	
61	. .	. .	. .	+ 3 15.1	S. 66 53 14.1	2 11.8	− 28 1 46.7	25.1	F.	
62	29.894	64.0	62.1	− 3 5.8	N. 38 3 6.8	44.3	+ 76 57 30.4	8.6	F.	
63	. .	. .	. .	− 27.3	S. 53 59 31.8	1 17.8	− 15 7 10.4	25.4	F.	
64	. .	. .	. .	+ 1 42.7	S. 66 31 38.7	+ 2 9.8	− 27 40 9.2	+ 26.8	F.	

DATE.	Number.	OBJECT.	Magnitude.	No. of mic. readings.	Transit Wires.	MICROSCOPES.							MICROMETER.		
						A.	B.	C.	D.	E.	F.	Mean.	Observed.	Nadir cor.	Corr'd.
1871.						° ′ ″	″	″	″	″	″	″	r.	r.	r.
May 15	1	O. Arg. S. 13182. .	. .	2	VIII, IX.	86 29 57.8	49.5	57.9	55.1	58.8	57.2	56.05	32.823	—0.220	32.626
	2	O. Arg. S. 13394. .	. .	3	IV–VI.	85 34 61.8	50.8	60.6	58.2	62.0	59.1	58.75	29.243	. .	29.025
	3	Nadir	. .	.	. .	199 59 60.6	51.5	60.0	57.0	60.2	60.9	58.37	30.168	. .	. .
16	4	Lacaille 5239. . .	7.5	3	III–VII.	85 49 60.0	55.8	61.4	57.0	62.2	62.2	59.77	26.252	—0.350	25.907
	5	Anon. 12^h 53^m 25^s .	8.3	3	IV–VI.	349 30 0.6	55.7	4.8	57.1	4.1	2.5	0.80	30.765	. .	30.407
	6	Weisse (2) XIII, 265.	8.2	3	III–VII.	15 5 6.8	2.6	8.0	1.1	8.2	8.9	5.93	28.405	. .	28.046
	7	Lamont 4065 . . .	9.0	2	VI, VIII.	60 29 60.0	55.8	61.6	55.0	62.4	64.0	59.80	31.372	. .	31.024
	8	Lamont 4068 . . .	9.0	1	IX.	" " "	"	"	"	"	"	"	32.784	. .	32.438
	9	B. A. C. 4560. . .	8.0	3	V–IX.	71 0 7.0	4.3	7.7	5.0	10.4	12.1	7.75	30.084	. .	29.741
	10	B. A. C. 4593. . .	. .	3	V–IX.	64 55 5.0	0.1	6.5	2.1	8.0	8.0	4.95	27.934	. .	27.589
	11	Weisse XIV, 1091 .	9.0	3	IV–VIII.	69 35 4.3	2.0	6.8	3.4	7.6	8.5	5.43	31.820	. .	31.472
	12	Weisse XV, 99 . .	7.0	3	III–VII.	59 45 3.8	59.2	4.1	0.2	6.2	7.8	3.55	32.557	. .	32.207
	13	Nadir	. .	.	. .	200 0 6.2	1.3	6.8	4.1	6.7	9.7	5.80	30.398	. .	. .
17	14	Lacaille 4735. . .	7.5	3	IV–VI.	92 25 2.5	55.9	1.6	58.6	0.8	1.3	0.12	29.065	—0.228	28.839
	15	Weisse XI, 390 . .	. .	3	VII–IX.	55 0 3.8	54.6	3.5	0.0	4.5	3.7	1.68	34.143	. .	33.915
	16	Weisse XI, 495 . .	. .	3	IV–VI.	50 50 2.6	54.5	2.2	57.8	4.6	4.2	0.98	26.371	. .	26.143
	17	Anon. 11^h 41^m 0^s .	9.2	3	VII–IX.	43 40 2.4	53.9	0.5	57.9	3.0	3.2	0.15	38.913	. .	38.679
	18	Lacaille 5102. . .	. .	3	IV–VI.	95 55 2.9	56.0	2.8	59.2	3.4	3.0	1.22	30.012	. .	29.786
	19	Weisse XII, 311. .	. .	3	III–VII.	44 10 4.3	55.0	2.0	58.0	3.6	3.0	0.98	34.769	. .	34.538
	20	O. Arg. S. 12332. .	. .	3	V–VII.	85 0 5.2	56.1	6.0	1.5	5.6	4.0	3.07	32.101	. .	31.877
	21	O. Arg. S. 12996. .	. .	1	VII.	340 55 3.8	53.9	6.0	1.0	5.3	3.0	2.17	33.195	. .	32.901
	22	Lacaille 5582. . .	. .	3	IV–VI.	84 45 1.7	55.4	4.3	0.0	2.2	1.0	0.77	26.117	. .	25.890
	23	Lacaille 5646. . .	. .	3	VII–IX.	84 40 1.4	55.1	3.0	59.5	2.8	1.3	0.52	21.742	. .	21.531
	24	Rumker 4501 . .	. .	2	VI, VII.	45 29 60.6	52.8	62.2	57.8	62.0	57.9	58.88	29.395	. .	29.167
	25	Nadir	. .	.	. .	199 59 61.3	52.2	60.2	58.2	60.2	60.4	58.75	30.188	. .	. .
18	26	B. A. C. 3909. . .	6.0	3	III–VII.	59 0 1.2	59.2	3.4	0.6	3.4	4.7	2.08	27.954	—0.345	27.609
	27	Weisse XI, 558 . .	9.0	3	V–IX.	47 50 4.4	59.4	4.2	3.4	5.9	6.2	3.92	29.310	. .	28.963
	28	Groombridge 1830 .	6.5	3	III–VII.	20 15 8.1	5.1	9.8	7.7	10.8	8.1	8.27	30.788	. .	30.435
	29	Groombridge 1860 .	. .	3	I, V, 5.	334 40 3.0	58.7	6.0	1.1	5.2	3.1	2.85	28.269	. .	27.923
	30	Lacaille 5109. . .	7.0	3	III–VII.	100 40 3.8	58.4	5.2	3.0	2.6	3.3	2.72	32.371	. .	32.035
	31	Weisse XII, 463. .	7.7	3	III–VII.	55 55 4.1	0.0	6.7	4.7	5.5	5.1	4.35	30.930	. .	30.584
	32	Anon. 12^h 36^m 30^s .	8.0	2	VII, IX.	99 25 0.4	58.2	2.1	59.8	0.4	0.3	0.20	28.867	. .	28.551
	33	Anon. 12^h 47^m 42^s .	9.5	3	III–VII.	97 40 2.4	1.0	4.9	3.4	4.2	2.6	3.08	34.497	. .	34.160
	34	Lacaille 5379. . .	. .	1	IX.	82 40 3.6	0.9	5.9	4.2	4.2	3.2	3.67	27.701	. .	27.380
	35	Weisse (2) XIII, 241.	9.5	3	IV–VI.	23 5 1.1	59.2	4.7	0.9	4.1	2.1	2.02	31.346	. .	30.999
	36	Anon. 13^h 27^m 41^s .	9.2	3	III–VII.	85 30 5.1	2.3	8.4	7.5	6.8	6.1	6.03	31.676	. .	31.336
	37	Anon. 13^h 40^m 42^s .	7.5	3	III–VII.	96 25 4.3	5.3	9.3	8.1	8.0	6.7	6.95	26.951	. .	26.613
	38	Brisbane 4727 . .	7.0	2	VII–IX.	95 40 1.8	2.2	6.6	4.9	4.8	3.9	4.03	29.302	. .	28.983
	39	Anon. 14^h 15^m 22^s .	. .	2	VII, IX.	94 15 3.7	3.4	7.0	6.9	6.6	4.2	5.30	32.896	. .	32.576
	40	Nadir	. .	.	. .	200 0 2.3	59.8	4.8	5.9	2.8	4.9	3.42	30.315	. .	. .
	41	W. (2) XIV, 1130, (1st*)	. .	2	IV, VII.	18 15 1.9	0.0	5.9	3.0	4.1	1.9	2.80	34.688	. .	34.331
	42	W. (2) XIV, 1130, (2d*)	. .	1	V.	" " "	"	"	"	"	"	"	35.152	. .	34.807
	43	Lacaille 6239. . .	7.5	3	V–IX.	96 50 5.7	6.8	10.2	10.0	9.2	7.2	8.18	27.046	. .	26.720
	44	Anon. 15^h 15^m 22^s .	7.0	3	III–VII.	90 40 5.4	5.2	8.8	7.7	6.6	4.4	6.35	26.728	. .	26.389
	45	Anon. 15^h 22^m 29^s .	8.0	3	III–VII.	" " "	"	"	"	"	"	"	26.100	. .	25.761
19	46	O. Arg. S. 12116. .	. .	3	III–VII.	82 20 4.2	56.5	2.2	59.0	4.8	1.7	1.40	24.035	—0.228	23.811
	47	Weisse XII, 463. .	. .	3	III–VII.	55 55 3.7	53.9	2.9	0.0	6.0	3.1	1.60	30.707	. .	30.478
	48	Groombridge 1947 .	. .	3	VII–IX.	349 25 2.9	54.4	5.1	59.3	3.5	0.1	0.88	28.973	. .	28.660
	49	Lacaille 5680. . .	. .	3	III–VII.	95 20 3.5	56.3	4.0	0.8	4.3	59.7	1.43	31.823	. .	31.602
	50	O. Arg. S. 13215. .	7.0	3	V–VII.	84 55 2.2	54.2	2.5	0.4	4.1	1.4	0.80	28.423	. .	28.199
	51	Lacaille 5932. . .	. .	3	IV–VI.	91 14 61.2	53.5	60.8	56.9	60.8	57.9	58.52	31.779	. .	31.553
	52	Nadir	. .	.	. .	199 59 60.3	50.0	60.1	56.8	58.9	59.5	57.60	30.151	. .	. .
20	53	Lacaille 4867. . .	7.0	3	I–V.	87 55 3.8	58.2	1.2	58.8	2.8	6.9	1.95	35.106	—0.349	34.767
	54	Anon. 11^h 37^m 34^s .	7.5	3	V–IX.	" " "	"	"	"	"	"	"	22.371	. .	22.036
	55	Groombridge 1860 .	8.0	3	I, V, 5.	334 40 6.7	58.4	7.4	59.1	8.4	8.0	4.67	28.422	. .	28.072
	56	Anon. 12^h 12^m 1^s .	9.0	3	III–VII.	84 45 5.2	57.6	4.8	1.4	6.1	7.8	3.82	34.577	. .	34.233
	57	O. Arg. S. 12258. .	8.0	3	III–VII.	84 50 3.4	55.4	3.6	58.4	4.8	5.4	1.83	26.797	. .	26.453
	58	Anon. 12^h 37^m 18^s .	8.0	3	III–VII.	95 20 3.8	58.1	4.4	59.6	5.2	5.1	2.70	26.537	. .	26.195
	59	Weisse XII, 764. .	9.0	3	III–VII.	58 0 4.3	57.7	3.8	0.1	6.7	8.8	3.57	36.130	. .	35.781
	60	Lacaille 5374. . .	7.0	3	III–VII.	87 50 5.1	58.1	3.9	0.1	4.6	6.0	2.97	30.958	. .	30.614
	61	Weisse (2) XIII, 265.	7.7	3	III–VII.	15 5 8.5	2.8	7.9	3.0	8.7	9.4	6.72	28.445	. .	28.087
	62	Lamont 4068 . . .	8.5	3	III–VII.	60 30 5.2	0.0	6.0	0.2	6.6	9.0	4.50	33.015	. .	32.666
	63	Anon. 13^h 32^m 10^s .	8.5	2	V, IX.	89 5 3.8	0.1	4.2	0.0	4.7	7.0	3.30	30.222	. .	29.889
	64	Anon. 13^h 40^m 42^s .	8.3	4	III–IX.	96 25 4.1	0.2	5.2	0.3	6.1	5.9	3.63	26.625	—0.349	26.290

Number.	Barometer.	THERM'S.		Instrumental corrections.	Apparent Zenith Distance.	Refraction.	Observed Declination.	Reduction to 1870.0.	Observer.	REMARKS:
		At.	Ex.							
	in.	°	°	′ ″	° ′ ″	′ ″	° ′ ″	″		
1	. .	. .	. .	− 1 22.2	S. 66 28 33.8	+ 2 9.5	− 27 37 4.1	+ 26.8	F.	
2	29.900	64.0	61.4	+ 30.5	65 35 29.3	2 4.4	− 26 43 54.4	25.4	F.	
3	. .	. .	. .	. .	. . . .	. .	. . . .	. .	F.	
4	29.770	69.2	66.3	+ 2 8.2	S. 65 52 7.9	2 4.1	− 27 0 32.8	30.8	Y.	
5	29.770	69.1	65.5	− 12.8	N. 30 30 12.0	33.0	+ 69 24 24.2	8.0	Y.	
6	. .	. .	. .	+ 1 1.2	N. 4 53 52.9	4.8	+ 43 47 36.9	13.5	Y.	
7	. .	. .	. .	− 32.1	S. 40 29 27.7	47.9	− 1 36 36.4	23.6	Y.	
8	29.776	68.5	65.0	− 1 16.3	40 28 43.5	47.8	− 1 35 52.0	23.5	Y.	Faint.
9	. .	. .	. .	+ 8.1	51 0 15.9	1 9.4	− 12 7 46.0	25.1	Y.	
10	. .	. .	. .	+ 1 15.5	44 56 20.4	56.1	− 6 3 37.3	23.7	Y.	
11	29.784	67.4	63.0	− 46.1	49 34 19.3	1 6.0	− 10 41 46.1	19.3	Y.	Faint.
12	. .	. .	. .	− 1 9.1	39 43 54.5	46.8	− 0 51 2.0	18.0	Y.	
13	. .	. .	. .	. .	. . . .	. .	. . . .	. .	Y.	
14	. .	. .	. .	+ 36.3	72 25 36.5	2 55.7	− 33 34 52.9	34.0	F.	
15	. .	. .	. .	− 2 2.6	34 57 59.1	39.4	+ 3 55 0.8	23.3	F.	
16	. .	. .	. .	+ 2 0.8	30 52 1.8	33.7	+ 8 1 3.8	22.0	F.	
17	29.900	68.5	64.8	− 4 31.8	23 35 28.4	24.6	+ 15 17 46.3	19.8	F.	Very faint.
18	. .	. .	. .	+ 6.7	75 55 7.9	3 40.8	− 37 5 9.5	33.6	F.	
19	. .	. .	. .	− 2 22.1	24 7 38.9	25.3	+ 14 45 35.0	20.3	F.	
20	. .	. .	. .	− 58.8	S. 64 59 4.3	2 0.5	− 26 7 25.6	30.7	F.	
21	. .	. .	. .	− 1 30.8	N. 39 6 28.7	46.0	+ 78 0 53.9	6.1	F.	
22	. .	. .	. .	+ 2 8.7	S. 64 47 9.5	2 0.2	− 25 55 30.4	27.9	F.	
23	29.920	65.0	60.0	+ 4 25.2	64 44 25.7	2 0.0	− 25 52 46.5	27.4	F.	
24	. .	. .	. .	+ 26.1	25 30 25.0	27.2	+ 13 22 47.1	19.7	F.	
25	. .	. .	. .	. .	. . . .	. .	. . . .	. .	F.	
26	30.152	65.2	60.5	+ 1 14.9	39 1 17.0	46.4	− 0 8 24.1	24.5	Y.	
27	. .	. .	59.9	+ 32.5	27 50 36.4	30.4	+ 11 2 32.5	21.0	Y.	
28	. .	. .	. .	− 13.6	S. 0 14 54.6	0.2	+ 38 38 44.4	12.5	Y.	
29	30.170	64.0	57.4	+ 1 5.0	N. 45 18 52.1	58.3	+ 84 13 29.7	3.9	Y.	
30	. .	. .	. .	− 1 3.7	S. 80 38 59.7	5 36.8	− 41 50 57.3	34.5	Y.	
31	. .	. .	. .	− 18.3	35 54 46.1	41.9	+ 2 58 11.3	23.6	Y.	
32	. .	. .	. .	+ 45.4	79 25 45.6	5 0.5	− 40 37 6.8	33.3	Y.	
33	30.186	63.2	55.5	− 2 10.3	77 37 52.8	4 18.1	− 38 48 31.6	32.4	Y.	
34	. .	. .	. .	+ 1 22.0	62 41 25.7	1 51.8	− 23 49 38.3	29.3	Y.	
35	30.180	62.8	54.8	− 31.3	3 4 30.7	3.1	+ 35 49 5.4	14.8	Y.	Very faint.
36	. .	. .	. .	− 41.8	65 29 24.2	2 6.6	− 26 37 51.5	28.0	Y.	
37	30.180	62.0	54.5	+ 1 46.1	76 26 53.0	3 56.2	− 37 37 10.0	28.5	Y.	
38	. .	. .	. .	+ 31.8	75 40 35.9	3 43.0	− 36 50 39.6	27.3	Y.	
39	30.178	61.3	54.0	− 1 20.7	S. 74 13 44.6	3 22.8	− 35 23 28.2	25.2	Y.	
40	. .	. .	. .	. .	. . . .	. .	. . . .	. .	Y.	
41	. .	. .	. .	− 2 15.6	N. 1 47 12.8	1.8	+ 40 40 53.9	13.9	Y.	
42	30.180	60.8	53.4	− 2 30.5	N. 1 47 27.7	1.8	+ 40 41 8.8	13.9	Y.	
43	. .	. .	. .	+ 1 42.7	S. 76 51 50.9	4 4.4	− 38 2 16.0	20.5	Y.	
44	30.176	60.3	53.0	+ 1 53.1	70 41 59.4	2 44.7	− 31 51 4.9	18.6	Y.	
45	. .	. .	. .	+ 2 12.8	70 42 19.1	2 44.9	− 31 51 24.7	17.8	Y.	
46	30.142	65.0	62.4	+ 3 13.8	62 23 15.2	1 48.7	− 23 31 24.6	30.8	F.	
47	. .	. .	. .	− 15.0	S. 35 54 46.6	41.3	+ 2 58 11.3	23.5	F.	
48	. .	. .	. .	+ 42.0	N. 30 34 17.2	33.7	+ 69 28 30.1	7.4	F.	
49	. .	. .	. .	− 50.2	S. 75 19 11.3	3 34.3	− 36 29 6.3	28.5	F.	
50	. .	. .	. .	+ 56.4	64 55 57.2	2 1.4	− 26 4 19.4	26.7	F.	
51	. .	. .	. .	− 48.6	71 14 9.9	2 46.4	− 32 23 17.0	24.8	F.	
52	. .	. .	. .	. .	. . . .	. .	. . . .	. .	F.	
53	. .	. .	. .	− 2 29.3	67 52 32.7	2 16.8	− 29 1 10.3	33.0	Y.	
54	30.102	69.8	71.2	+ 4 9.4	S. 67 59 11.3	2 17.6	− 29 7 49.7	33.0	Y.	
55	. .	. .	. .	+ 1 0.4	N. 45 18 55.0	56.8	+ 84 13 31.0	3.6	Y.	
56	30.102	69.8	69.5	− 2 12.6	S. 64 42 51.3	1 58.4	− 25 51 10.4	31.5	Y.	
57	. .	. .	. .	+ 1 51.1	64 51 52.9	1 59.5	− 26 0 13.1	31.1	Y.	
58	. .	. .	. .	+ 1 59.2	75 22 1.8	3 32.4	− 36 31 55.0	32.8	Y.	
59	30.102	69.6	67.2	− 3 1.0	37 57 2.5	44.0	+ 0 55 52.7	23.8	Y.	
60	. .	. .	. .	− 19.2	S. 67 49 43.8	2 17.8	− 28 58 22.3	30.4	Y.	
61	. .	. .	. .	+ 59.9	N. 4 53 53.4	4.8	+ 43 47 37.5	12.7	Y.	
62	. .	. .	. .	− 1 23.5	S. 40 28 41.0	48.3	− 1 35 50.1	23.3	Y.	
63	30.104	69.0	64.8	+ 3.5	69 5 6.8	2 27.2	− 30 13 54.7	30.0	Y.	
64	. .	. .	. .	+ 1 56.2	S. 76 26 59.8	+ 3 50.8	− 37 37 11.3	+ 31.3	Y.	

DATE.	Number.	OBJECT.	Magnitude.	No. of mic. readings.	Transit Wires.	MICROSCOPES.							MICROMETER.		
						A.	B.	C.	D.	E.	F.	Mean.	Observed.	Nadir cor.	Corr'd.
						° ′ ″	″	″	″	″	″	″	r.	r.	r.
1871. May 20	1	Weisse XIII, 893 .	9.0	3	III–VII.	70 55 4.2	58.7	3.8	0.3	6.5	6.8	3.38	26.162	—0.349	25.815
	2	Anon. $13^h 59^m 40^s$.	9.3	1	IX.	73 45 6.8	0.4	7.5	4.2	8.9	8.4	6.03	26.589	. .	26.256
	3	Weisse XIV, 254 .	9.0	3	III–VII.	63 30 4.9	57.5	3.4	59.4	4.8	5.9	2.65	29.413	. .	29.065
	4	Nadir	. .	.	. .	200 0 4.8	59.2	4.8	2.1	5.2	9.4	4.25	30.344	. .	. .
	5	B. A. C. 4923, (1st *).	8.0	1	IX.	79 45 4.3	1.3	6.2	2.0	7.2	7.1	4.68	36.340	. .	36.013
	6	B. A. C. 4923, (2d *).	5.0	3	III–VII.	“ “ “	“	“	“	“	“	“	36.200	. .	35.855
	7	Weisse XIV, 1091 .	9.0	3	III–VII.	69 35 4.4	1.4	6.2	3.1	7.6	6.8	4.92	31.854	. .	31.507
	8	Weisse XV, 99 . .	7.0	3	III–VII.	59 45 6.4	2.8	8.1	3.2	9.1	10.1	6.62	32.671	. .	32.322
	9	Lacaille 6351. . .	6.0	5	I–IX.	87 45 6.8	3.4	7.7	4.0	8.9	9.0	6.63	32.380	. .	32.045
23	10	O. Arg. S. 12134. .	9.0	3	III–VII.	82 25 5.8	1.2	4.8	2.2	4.3	6.0	4.05	32.939	—0.359	32.594
	11	Lalande 23219 . .	8.5	1	IX.	63 45 8.4	2.8	7.2	5.2	6.9	9.8	6.72	23.344	. .	22.992
	12	Anon. $12^h 32^m 17^s$.	. .	2	VII, IX.	45 20 4.4	59.3	5.3	0.9	4.5	5.4	3.30	32.280	. .	31.915
	13	O. Arg. S. 12444. .	9.3	3	III–VII.	84 0 5.0	0.4	6.9	3.7	6.0	6.7	4.78	28.080	. .	27.726
	14	Lacaille 5379. . .	7.3	3	III–VII.	82 40 6.5	1.8	8.4	5.4	7.1	7.8	6.17	27.770	. .	27.415
	15	Weisse (2) XIII, 241	9.5	3	IV–VI.	23 5 3.8	59.4	5.2	0.5	4.4	5.1	3.07	31.497	. .	31.136
	16	Anon. $13^h 35^m 31^s$.	9.3	3	III–VII.	96 30 0.8	58.3	3.2	59.8	2.2	2.9	1.20	28.746	. .	28.394
	17	Lalande 25494 . .	7.2	2	V, VIII.	37 0 6.0	1.7	8.8	3.9	7.3	7.1	5.80	31.384	. .	31.020
	18	Anon. $13^h 44^m 51^s$.	8.5	2	VII, IX.	“ “ “	“	“	“	“	“	“	31.915	. .	31.545
	19	Weisse XIII, 931 .	9.3	2	IV, VI.	56 45 9.4	3.4	9.4	5.7	8.7	10.8	7.90	35.819	. .	35.459
	20	Weisse XIII, 942 .	9.2	2	VII, IX.	“ “ “	“	“	“	“	“	“	35.789	. .	35.431
	21	O. Arg. S. 13438. .	. .	3	V–IX.	84 35 5.1	3.4	8.8	6.3	6.7	6.7	6.17	28.904	. .	28.557
	22	Weisse XIV, 254 .	. .	3	III–VII.	63 30 6.3	0.8	7.1	5.8	5.5	7.8	5.50	29.458	. .	29.100
	23	Nadir	. .	5	. .	200 0 4.9	1.4	7.2	6.1	5.4	8.9	5.65	30.402	. .	. .
	24	Anonymous . . .	9.0	2	VII, IX.	95 40 0.9	58.8	5.7	2.5	2.0	2.4	2.05	27.518	. .	27.185
	25	B. A. C. 4923, (1st *)	5.0	1	V.	79 45 3.7	1.1	5.7	1.8	4.2	3.9	3.40	36.211	. .	35.852
	26	B. A. C. 4923, (2d *)	8.5	2	VII, IX.	“ “ “	“	“	“	“	“	“	36.255	. .	35.910
	27	O. Arg. S. 14279. .	8.0	3	III–VII.	80 30 8.6	6.1	12.1	8.2	9.1	8.7	8.80	34.428	. .	34.073
	28	Lacaille 6351. . .	. .	3	V–IX.	87 45 3.8	0.4	5.8	4.1	3.9	4.5	3.75	32.363	. .	32.023
	29	Anon. $15^h 16^m 41^s$.	8.5	2	VII, IX.	95 50 7.6	5.7	10.7	8.9	7.3	8.4	8.10	25.932	. .	25.599
	30	ν^1 Bootis.	5.5	3	III–VII.	17 40 8.8	5.3	13.2	9.4	10.3	9.1	9.35	35.948	. .	35.581
24	31	Anon. $12^h 47^m 35^s$.	9.0	3	IV–VI.	97 40 4.7	58.4	5.1	2.8	6.9	4.0	3.65	34.185	—0.229	33.958
	32	Lacaille 5502. . .	7.0	3	IV–VI.	97 0 1.6	55.1	3.0	59.0	2.7	1.0	0.40	29.515	. .	29.288
	33	Weisse XIII, 630 .	. .	3	IV–VI.	71 9 61.2	53.0	61.8	58.4	63.0	61.4	59.80	29.619	. .	29.391
	34	Weisse XIII, 654 .	. .	3	IV–VI.	“ “ “	“	“	“	“	“	“	27.220	. .	26.992
	35	Weisse XIII, 694 .	. .	3	IV–VI.	66 20 2.6	52.4	3.5	57.9	3.0	0.6	0.00	39.248	. .	39.020
	36	Weisse XIII, 708 .	. .	3	VI–VIII.	“ “ “	“	“	“	“	“	“	19.745	. .	19.520
	37	Anon. $13^h 54^m 0^s$.	. .	3	IV–VI.	97 40 2.4	55.4	3.7	59.2	2.7	0.4	0.63	33.479	. .	33.252
	38	Weisse (2) XIV, 1139	. .	2	IV, VI.	18 9 61.5	53.2	64.0	57.6	62.0	59.3	59.60	26.420	. .	26.179
	39	Weisse (2) XIV, 1146	. .	2	VIII, IX.	“ “ “	“	“	“	“	“		31.730	. .	31.470
	40	Nadir	. .	.	. .	199 59 61.6	52.2	61.6	58.3	59.2	61.3	59.03	30.198	. .	. .
26	41	O. Arg. S. 14246. .	. .	3	IV–VI.	80 19 62.1	54.3	58.9	56.5	62.8	63.4	59.67	22.901	—0.193	22.709
	42	Nadir	. .	.	. .	199 59 63.2	48.4	59.9	53.9	58.6	64.5	58.08	30.132	. .	. .
	43	O. Arg. S. 14648. .	. .	3	IV–VI.	83 30 4.0	53.1	0.6	58.0	2.9	4.3	0.48	25.920	. .	25.728
	44	B. A. C. 5266. . .	. .	3	III–VII.	85 9 60.8	54.2	61.3	55.9	63.0	62.1	59.55	23.393	. .	23.205
29	45	Moon N.	. .	3	III–VII.	58 19 60.3	50.1	57.3	54.1	61.4	63.5	57.78	33.569	—0.187	33.382
	46	Weisse XIII, 104 .	. .	3	III–VII.	46 50 11.4	57.1	7.0	1.0	10.2	11.0	6.28	26.322	. .	26.133
	47	Anon. $13^h 32^m 10^s$.	8.0	3	IV–VI.	89 4 62.2	52.5	60.0	54.6	60.1	63.6	58.83	29.848	. .	29.663
	48	O. Arg. S. 13167. .	. .	4	I, III, VII, IX.	86 19 62.2	51.0	61.2	57.0	61.0	61.8	59.03	21.824	. .	21.657
	49	O. Arg. S. 13169. .	. .	2	II, VIII.	“ “ “	“	“	“	“	“	“	22.075	. .	21.903
	50	Σ Cat. Gen. 1570, (1st *)	. .	3	III–VII.	32 24 62.2	51.1	60.2	55.0	61.8	63.0	58.88	26.693	. .	26.501
	51	O. Arg. S. 13438. .	. .	3	III–VII.	84 34 62.5	52.0	62.1	57.4	62.1	63.1	59.87	28.420	. .	28.238
	52	Anon. $14^h 16^m 24^s$.	8.5	3	IV–VI.	86 19 63.1	52.0	61.7	57.6	61.3	62.4	59.68	19.731	. .	19.546
	53	Weisse XIV, 293 .	. .	3	VI–VIII.	73 25 4.0	53.8	2.2	57.8	3.6	4.0	0.90	35.609	. .	35.425
	54	Nadir	. .	.	. .	200 0 4.6	51.6	1.7	57.8	1.6	4.3	0.27	30.196	. .	. .
	55	Lalande 28391 . .	8.5	3	IV–VI.	31 45 4.9	52.3	3.4	57.6	4.4	5.0	1.27	30.605	. .	30.416
	56	Anon. $15^h 37^m 14^s$.	. .	3	III–VII.	74 50 4.0	54.3	4.6	58.9	3.4	4.1	1.55	26.623	. .	26.439
	57	B. A. C. 5266. . .	. .	3	IV–VI.	85 10 4.1	54.4	4.2	59.0	3.1	4.1	1.48	23.476	. .	23.290
	58	Anon. $15^h 59^m 57^s$.	. .	4	II, III, VII, VIII.	97 35 5.1	54.9	5.5	59.0	3.8	3.3	1.93	30.262	. .	30.092
	59	Lacaille 6695. . .	. .	3	IV–VI.	“ “ “	“	“	“	“	“	“	31.730	. .	31.545
30	60	Moon, N.. . . .	. .	3	III–VII.	64 20 3.9	56.1	3.2	57.9	2.1	5.0	1.37	30.267	—0.311	29.957
	61	Nadir	. .	.	. .	200 0 5.2	57.0	5.2	0.2	4.1	9.0	3.45	30.284	. .	. .
June 3	62	Lacaille 5291. . .	. .	3	III–VII.	92 55 4.5	56.2	1.8	57.6	1.8	5.6	1.25	28.110	. .	27.805
	63	Anon. $12^h 51^m 18^s$.	7.0	3	III–VII.	73 10 9.3	2.1	7.9	4.3	9.8	12.2	7.60	31.047	. .	30.738
	64	Lacaille 5457. . .	6.0	3	III–VII.	94 30 5.7	58.1	5.7	0.2	7.3	9.1	4.35	26.978	. .	26.674
	65	Lacaille 5621. . .	8.5	3	III–VII.	91 20 6.3	0.1	5.0	59.9	5.6	8.2	4.18	33.703	—0.311	33.398

Number.	Barometer.	THERM'S.		Instrumental corrections.	Apparent Zenith Distance.	Refraction.	Observed Declination.	Reduction to 1870.0.	Observer.	REMARKS.
		At.	Ex.							
	in.	°	°	′ ″	° ′ ″	′ ″	° ′ ″	″		
1	. .	. .	. .	+ 2 11.1	S. 50 57 14.4	+ 1 9.9	− 12 4 45.1	+ 25.2	Y.	
2	. .	. .	. .	+ 1 57.2	53 47 3.3	1 7.4	− 14 54 31.4	24.1	Y.	
3	30.104	68.2	63.5	+ 29.3	43 30 31.9	54.0	− 4 37 46.6	21.5	Y.	
4	. .	. .	. .	. .	. . . .	. .	. . . .	. .	Y.	
5	. .	. .	. .	− 3 8.3	59 41 56.4	1 37.2	− 20 49 54.3	20.8	Y.	
6	30.096	67.8	62.7	− 3 3.3	59 42 1.3	1 37.2	− 20 49 59.2	20.8	Y.	
7	. .	. .	. .	− 47.2	49 34 17.7	1 6.8	− 10 41 45.3	19.2	Y.	
8	. .	. .	. .	− 1 12.7	39 43 53.9	47.4	− 0 51 2.0	17.7	Y.	
9	30.094	67.3	62.0	− 1 4.0	67 44 2.6	2 18.3	− 28 52 41.7	18.8	Y.	
10	. .	. .	. .	− 1 21.2	62 23 42.8	1 48.2	− 23 31 51.7	31.0	Y.	
11	30.078	70.8	63.7	+ 3 39.4	43 48 46.2	54.4	− 4 56 1.4	25.8	Y.	
12	. .	. .	. .	− 1 0.0	25 19 3.3	26.9	+ 13 34 9.0	20.6	Y.	
13	30.080	70.2	62.7	+ 1 11.2	64 1 16.0	1 56.2	− 25 9 33.0	30.6	Y.	
14	. .	. .	. .	+ 1 20.9	62 41 27.1	1 50.0	− 23 49 37.9	29.6	Y.	
15	30.096	69.0	61.3	− 35.6	3 4 27.5	3.1	+ 35 49 8.7	14.0	Y.	
16	30.105	68.7	60.5	+ 50.3	76 30 51.5	3 53.8	− 37 41 6.0	29.7	Y.	
17	. .	. .	. .	− 31.9	16 59 33.9	17.5	+ 21 53 47.9	17.2	Y.	
18	. .	. .	. .	− 48.4	16 59 17.4	17.5	+ 21 54 4.3	17.2	Y.	
19	. .	. .	. .	− 2 50.9	36 42 17.0	42.6	+ 2 10 39.7	21.1	Y.	
20	. .	. .	. .	− 2 50.1	36 42 17.8	42.6	+ 2 10 38.8	21.1	Y.	
21	30.106	67.8	60.0	+ 45.2	64 35 51.4	2 0.0	− 25 44 12.1	25.6	Y.	
22	. .	. .	. .	+ 28.2	43 30 33.7	54.3	− 4 37 48.8	21.4	Y.	
23	. .	. .	. .	. .	. . . .	. .	. . . .	. .	Y.	
24	30.126	66.8	59.4	+ 1 28.2	75 41 30.2	3 41.0	− 36 51 32.0	23.2	Y.	
25	. .	. .	. .	− 3 3.2	59 42 0.2	1 37.9	− 20 49 58.8	21.0	Y.	
26	. .	. .	. .	− 3 5.1	59 41 58.3	1 37.9	− 20 49 57.0	21.0	Y.	
27	. .	. .	. .	− 2 7.5	60 28 1.3	1 41.1	− 21 36 3.1	20.1	Y.	
28	. .	. .	. .	− 1 3.3	67 44 0.4	2 19.5	− 28 52 40.7	19.1	Y.	
29	30.134	65.5	58.3	+ 2 17.8	S. 75 52 25.9	3 44.5	− 37 2 31.1	19.2	Y.	
30	. .	. .	. .	− 2 54.8	N. 2 22 45.4	2.4	+ 41 16 27.1	12.2	Y.	
31	30.290	69.5	65.8	− 2 3.9	S. 77 37 59.7	4 13.6	− 38 48 34.1	33.2	F.	
32	. .	. .	. .	+ 22.7	77 0 23.1	4 1.9	− 38 10 45.8	31.4	F.	
33	. .	. .	. .	+ 19.1	51 10 18.9	1 10.8	− 12 17 50.4	25.1	F.	
34	. .	. .	. .	+ 1 34.2	51 11 34.0	1 10.9	− 12 19 5.6	25.0	F.	
35	. .	. .	. .	− 4 42.5	46 15 17.5	59.6	− 7 22 37.9	23.8	F.	
36	. .	. .	. .	+ 5 28.2	46 25 28.2	1 0.0	− 7 32 48.9	23.8	F.	
37	. .	. .	. .	− 1 41.8	S. 77 38 18.8	4 14.6	− 38 48 54.1	28.4	F.	
38	. .	. .	. .	+ 1 59.7	N. 1 48 0.7	1.8	+ 40 41 41.8	12.5	F.	
39	30.306	66.0	62.6	− 46.0	N. 1 50 46.4	1.8	+ 40 44 27.5	12.5	F.	
40	. .	. .	. .	. .	. . . .	. .	. . . .	. .	F.	
41	30.106	76.0	73.5	+ 3 48.3	S. 60 23 48.0	1 37.8	− 21 31 46.6	20.4	F.	
42	. .	. .	. .	. .	. . . .	. .	. . . .	. .	F.	
43	. .	. .	. .	+ 2 13.8	63 32 14.3	1 51.6	− 24 40 26.6	17.9	F.	
44	30.120	76.0	73.3	+ 3 32.8	65 13 32.3	+ 2 0.3	− 26 21 53.4	15.5	F.	
45	30.090	80.0	77.6	− 1 45.9	38 18 11.9	−19 33.2	+ 0 55 0.6	. .	F.	
46	. .	. .	. .	+ 2 1.1	26 52 7.4	+ 28.0	+ 12 1 3.8	19.6	F.	
47	. .	. .	. .	+ 10.6	69 5 9.4	2 23.7	− 30 13 53.8	29.1	F.	
48	. .	. .	. .	+ 4 21.2	66 24 20.3	2 6.2	− 27 33 47.3	27.9	F.	
49	. .	. .	. .	+ 4 13.6	66 24 12.6	2 6.2	− 27 32 39.6	27.9	F.	
50	30.094	79.0	75.6	+ 1 49.6	12 26 48.4	12.3	+ 26 26 38.6	15.0	F.	
51	. .	. .	. .	+ 55.2	64 35 55.1	1 56.4	− 25 44 12.2	26.0	F.	
52	. .	. .	. .	+ 5 27.3	66 25 27.0	2 6.6	− 27 33 54.4	25.1	F.	
53	. .	. .	. .	− 2 49.9	53 22 11.0	1 14.7	− 14 29 46.4	22.9	F.	
54	. .	. .	. .	. .	. . . .	. .	. . . .	. .	F.	
55	. .	. .	. .	− 13.0	11 44 48.2	11.6	+ 27 8 39.4	12.3	F.	
56	. .	. .	. .	+ 1 51.5	54 51 53.0	1 19.1	− 15 59 32.9	16.2	F.	
57	30.100	76.0	73.2	+ 3 30.1	65 13 31.6	2 0.2	− 26 21 52.6	15.7	F.	
58	. .	. .	. .	− 2.8	77 34 59.1	4 7.4	− 38 45 27.3	14.6	F.	
59	. .	. .	. .	− 48.4	77 34 13.6	+ 4 7.1	− 38 44 41.4	14.5	F.	
60	30.078	80.2	76.0	+ 1.3	44 20 2.7	−24 25.6	− 5 1 57.8	. .	Y.	
61	. .	. .	. .	. .	. . . .	. .	. . . .	. .	Y.	
62	30.048	80.2	77.8	+ 1 8.7	72 56 10.0	+ 2 57.6	− 34 5 28.3	33.0	Y.	
63	. .	. .	. .	− 23.1	53 9 44.5	1 13.6	− 14 17 18.9	27.4	Y.	
64	. . .	. .	77.0	+ 1 44.2	74 31 48.5	3 16.8	− 35 41 26.0	32.1	Y.	
65	30.058	79.2	76.4	− 1 46.4	S. 71 18 17.8	+ 2 42.0	− 32 27 20.5	+ 29.9	Y.	

DATE.	Number.	OBJECT.	Magnitude.	No. of mic. readings.	Transit Wires.	MICROSCOPES.							MICROMETER.		
						A.	B.	C.	D.	E.	F.	Mean.	Observed.	Nadir cor.	Corr'd.
1871.						° ′ ″	″	″	″	″	″	″	r.	r.	r.
June 3	1	Anon. $13^{h}\ 39^{m}\ 7^{s}$.	. .	2	VII, IX.	43 20 8.2	0.8	7.2	1.8	9.2	10.8	6.33	34.886	—0.311	34.568
	2	Weisse (2) XIII, 997	9.0	2	VII, IX.	22 35 10.9	4.6	10.6	4.8	12.8	14.6	9.72	31.729	. .	31.397
	3	Anon. $13^{h}\ 58^{m}\ 17^{s}$.	9.0	3	III–VII.	91 55 8.8	1.9	7.7	3.8	8.8	10.9	6.98	29.322	. .	29.017
	4	Nadir	. .	.	. .	200 0 5.5	56.8	3.9	59.7	4.8	9.9	3.43	30.280	. .	. .
	5	Lamont 4482. . .	8.0	3	III–VII.	58 45 6.7	59.2	5.2	1.3	8.2	11.3	5.32	36.160	. .	35.849
	6	O. Arg. S. 14289. .	7.0	3	III–VII.	84 50 2.4	55.8	3.6	58.1	4.2	5.7	1.63	26.841	. .	26.537
	7	O. Arg. S. 14513. .	. .	3	III–VII.	81 5 9.2	3.1	7.9	4.0	8.8	10.7	7.28	25.121	. .	24.814
	8	Weisse (2) XV, 1035	7.0	3	III–VII.	30 5 10.2	3.1	10.0	5.4	12.1	13.2	9.00	37.414	. .	37.098
	9	Lacaille 6695, (1st *)	7.0	2	I, IX.	97 35 5.5	0.1	6.2	0.9	5.8	6.8	4.22	31.752	. .	31.480
	10	Lacaille 6695, (2d *)	7.2	3	III–VII.	" " "	"	"	"	"	"	"	30.362	. .	30.059
	11	Weisse XVI, 439 .	7.5	3	III–VII.	54 25 9.9	3.3	7.6	4.1	9.3	10.9	7.52	35.556	. .	35.244
	12	O. Arg. S. 15734. .	9.0	3	III–VII.	74 10 9.3	2.6	9.9	5.8	10.2	11.2	8.17	35.117	. .	34.809
	13	Weisse XVI, 873 .	. .	3	III–VII.	58 40 5.9	0.8	5.8	1.9	7.4	10.5	5.38	33.685	. .	33.374
	14	Anon. $17^{h}\ 8^{m}\ 46^{s}$.	. .	3	III–VII.	94 15 3.6	56.8	2.8	58.5	3.4	4.3	1.57	31.193	. .	30.889
	15	Anon. $17^{h}\ 8^{m}\ 52^{s}$.	. .	2	I, IX.	" " "	"	"	"	"	"	"	32.509	. .	32.233
	16	Weisse XVII, 322 .	. .	2	VII, IX.	56 40 oblit.	55.7	1.8	58.6	3.9	6.9	2.00	28.430	. .	28.120
	17	Anon. $17^{h}\ 28^{m}\ 11^{s}$.	8.5	2	III, VII.	96 10 9.5	4.6	9.7	6.1	10.8	11.6	8.72	28.328	. .	28.028
	18	O. Arg. N. 17415 .	8.2	3	IV–VI.	350 30 4.2	56.8	7.8	59.0	6.2	5.9	3.32	35.978	. .	35.660
	19	Moon N.	. .	2	I, II.	82 30 4.8	0.2	5.2	1.9	5.2	6.1	3.90	21.750	. .	21.339
	20	Moon S.	. .	2	VIII, IX.	83 10 5.8	0.2	6.2	3.0	5.6	7.1	4.65	33.632	. .	33.454
8	21	O. Arg. S. 14289. .	8.5	3	V–IX.	84 55 8.0	2.8	9.2	7.2	8.9	10.9	7.83	36.736	—0.306	36.447
	22	Rumker 5072 . .	8.0	3	III–VII.	20 15 5.9	0.1	7.6	3.3	6.9	7.1	5.15	31.165	. .	30.851
	23	Nadir	. .	.	. .	200 0 2.0	56.4	2.4	59.8	1.5	5.0	1.18	30.202	. .	. .
	24	Weisse XVI, 873 .	8.5	3	III–VII.	58 40 5.8	2.2	7.1	4.2	7.2	10.7	6.20	33.740	. .	33.434
	25	O. Arg. S. 16291. .	8.5	3	III–VII.	79 10 10.2	5.9	11.8	7.9	10.3	11.0	9.52	29.145	. .	28.843
	26	Anon. $17^{h}\ 8^{m}\ 46^{s}$.	7.7	2	I, IX.	94 15 6.2	2.2	8.2	4.8	7.0	6.5	5.82	31.316	. .	31.045
	27	Anon. $17^{h}\ 8^{m}\ 52^{s}$.	8.0	3	III–VII.	" " "	"	"	"	"	"	"	32.682	. .	32.383
	28	Weisse XVII, 322 .	8.0	3	III–VII.	56 40 4.5	56.2	3.6	0.9	2.8	5.1	2.18	28.399	. .	28.093
	29	Anon. $17^{h}\ 28^{m}\ 11^{s}$.	8.0	3	III–VII.	96 10 5.8	2.2	7.0	4.9	5.5	7.1	5.42	28.301	. .	28.002
	30	O. Arg. S. 17415. .	8.0	3	IV–VI.	350 30 7.8	2.0	11.8	6.8	8.4	8.4	7.53	36.161	. .	35.848
	31	Lacaille 7490. . .	6.5	3	V–IX.	99 5 6.2	3.3	8.8	4.2	6.1	6.8	5.90	28.829	. .	28.543
	32	Anon. $17^{h}\ 56^{m}\ 22^{s}$.	7.5	3	III–VII.	83 5 7.0	3.7	9.1	7.1	6.8	7.9	6.93	34.618	. .	34.316
	33	18 Sagittarii	6.0	3	III–VII.	89 50 5.8	1.9	8.2	5.1	5.3	6.2	5.42	29.039	. .	28.739
	34	Moon N.	. .	3	IV–VI.	71 20 8.4	2.9	9.8	8.8	6.9	9.2	7.67	32.857	. .	32.552
	35	Nadir	. .	.	. .	200 0 5.8	0.8	7.6	6.2	4.5	7.9	5.47	30.340	. .	. .
9	36	Lacaille 5649, (1st *)	. .	3	III–VII.	92 10 6.9	55.1	4.7	1.0	3.0	3.6	2.38	29.045	—0.207	28.844
	37	Lacaille 5649, (2d *)	. .	2	IV, VI.	" " "	"	"	"	"	"	"	28.950	. .	28.746
	38	O. Arg. S. 13167. .	. .	3	VI–VIII.	86 20 6.3	54.0	5.2	59.4	4.0	4.0	2.15	22.027	. .	21.830
	39	Brisbane 4727 . .	. .	3	IV–VI.	95 40 5.3	54.1	3.8	57.5	1.6	3.0	0.88	28.720	. .	28.515
	40	Anon. $14^{h}\ 18^{m}\ 11^{s}$.	9.0	3	VI–VIII.	85 0 4.9	53.4	3.4	0.0	2.8	3.9	1.40	28.875	. .	28.678
	41	Lamont 4482. . .	. .	3	IV–VI.	58 45 3.6	51.8	1.0	58.6	1.8	4.4	0.20	35.901	. .	35.694
	42	Lalande 27298 . .	. .	3	IV–VI.	4 45 4.1	53.1	3.2	57.1	2.8	2.0	0.38	34.728	. .	34.517
	43	O. Arg. S. 14289. .	7.5	3	III–VII.	84 55 4.2	51.5	4.6	58.4	1.9	2.8	0.57	36.313	. .	36.111
	44	Dorpat 1914 . . .	. .	1	IX.	63 50 3.5	52.6	1.8	57.5	0.1	2.9	1.40	25.625	. .	25.425
	45	O. Arg. S. 14548. .	7.0	3	III–VII.	86 19 62.5	51.6	62.1	58.5	61.2	60.2	59.35	24.935	. .	24.733
	46	Lacaille 6473. . .	. .	3	IV–VI.	89 39 61.5	50.7	60.1	55.0	62.6	58.9	58.13	32.630	. .	32.425
	47	Anon. $15^{h}\ 33^{m}\ 17^{s}$.	9.5	3	VI–VIII.	74 24 61.4	51.1	61.2	56.9	59.3	59.1	58.17	26.429	. .	26.228
	48	Nadir	. .	.	. .	199 59 61.7	50.1	60.5	56.2	57.5	60.4	57.73	30.135	. .	. .
	49	Weisse XVI, 780 .	. .	3	IV–VI.	57 34 60.9	52.2	60.5	57.6	60.5	62.0	58.95	32.837	. .	32.630
12	50	Weisse (2) XIII, 900	. .	3	V–VII.	17 59 61.0	54.6	61.0	57.7	63.0	60.6	59.65	29.823	—0.199	29.620
	51	Weisse (2) XIII, 994	. .	3	VI–VIII.	34 55 2.9	56.0	2.2	58.8	2.3	0.9	0.52	30.130	. .	29.926
	52	Anon. $13^{h}\ 54^{m}\ 39^{s}$.	9.0	1	IX.	343 30 3.5	55.1	4.8	59.0	5.0	1.8	1.53	24.710	. .	24.330
	53	Anon. $13^{h}\ 55^{m}\ 27^{s}$.	. .	1	VI.	" " "	"	"	"	"	"	"	22.115	. .	21.898
	54	Lacaille 5922. . .	. .	1	IX.	87 55 4.5	55.1	3.8	1.5	3.2	2.0	1.68	26.780	. .	26.611
	55	Lacaille 5926. . .	. .	2	VIII, IX.	" " "	"	"	"	"	"	"	33.318	. .	33.143
	56	Lalande 27298 . .	. .	3	IV–VI.	4 45 2.8	54.9	5.0	0.6	3.0	1.0	1.22	34.715	. .	34.512
	57	O. Arg. S. 14279. .	. .	3	IV–VI.	80 30 4.0	55.4	3.7	1.1	3.4	0.8	1.40	33.978	. .	33.780
	58	Schwerd 919 . . .	. .	3	IV½, V, V½.	338 40 2.9	52.1	6.9	0.0	2.0	59.6	0.58	25.852	. .	25.649
	59	Anon. $15^{h}\ 48^{m}\ 9^{s}$.	9.2	3	III–VII.	75 45 0.5	54.9	4.7	1.6	3.7	59.6	0.83	30.672	. .	30.476
	60	Anon. $16^{h}\ 3^{m}\ 1^{s}$ . .	9.0	3	IV–VI.	80 9 58.3	52.9	60.0	56.9	59.0	56.0	57.18	29.198	. .	29.000
	61	Anon. $16^{h}\ 3^{m}\ 52^{s}$.	9.0	2	VII, IX.	" " "	"	"	"	"	"	"	35.980	. .	35.795
	62	Nadir	. .	.	. .	200 0 2.9	52.6	3.2	1.0	0.1	2.1	0.32	30.209	. .	. .
13	63	Lacaille 5843. . .	. .	3	III–VII.	90 25 2.5	56.4	1.8	57.8	1.8	2.9	0.53	30.710	—0.338	30.378
	64	Groombridge 2210 .	. .	3	I, V, 5.	332 25 2.2	56.0	6.0	59.0	5.8	5.3	2.38	29.359	. .	29.019
	65	Weisse (2) XV, 1035	. .	2	VII, IX.	30 5 4.4	57.2	3.4	59.4	5.7	6.4	2.75	37.372	. .	37.019
	66	Nadir	. .	.	. .	200 0 5.5	58.2	4.8	1.6	4.8	7.9	3.80	30.315	—0.338	. .

Number.	Barometer.	THERM'S.		Instrumental corrections.	Apparent Zenith Distance.	Refraction.	Observed Declination.	Reduction to 1870.0.	Observer.	REMARKS.
		At.	Ex.							
	in.	°	°	′ ″	° ′ ″	′ ″	° ′ ″	″		
1	. .	. .	. .	− 2 23.0	S. 23 17 43.3	+ 23.9	+ 15 35 32.1	+ 17.2	Y.	
2	. .	. .	. .	− 43.8	2 34 26.0	2.5	+ 36 19 10.8	11.8	Y.	
3	30.056	79.0	75.8	+ 30.8	71 55 37.8	2 48.0	− 33 4 46.5	28.2	Y.	
4	. .	. .	. .	. .	. . . .	. .	. . . .	. .	Y.	
5	30.054	78.2	74.8	− 3 3.2	38 42 2.2	44.5	+ 0 10 52.6	18.3	Y.	
6	. .	. .	. .	+ 1 48.4	64 51 50.1	1 57.8	− 26 0 8.6	21.0	Y.	
7	. .	. .	74.2	+ 2 42.4	61 7 49.7	1 40.5	− 22 15 50.9	18.9	Y.	
8	30.044	77.2	73.8	− 3 42.3	10 1 26.7	9.8	+ 28 52 2.7	10.4	Y.	
9	. .	. .	. .	− 46.3	77 34 17.9	4 6.4	− 38 44 45.0	15.1	Y.	
10	. .	. .	. .	− 1.8	77 35 2.4	4 6.6	− 38 45 29.8	15.1	Y.	
11	. .	. .	. .	− 2 44.2	34 22 23.3	38.0	+ 4 30 38.0	10.1	Y.	
12	30.042	77.0	73.2	− 2 30.6	54 7 37.6	1 16.7	− 15 15 15.0	10.8	Y.	
13	. .	. .	. .	− 1 45.7	38 38 19.7	44.5	+ 0 14 35.0	8.4	Y.	
14	30.032	76.5	72.5	− 27.8	74 14 33.7	3 14.6	− 35 24 9.1	5.4	Y.	
15	. .	. .	. .	− 1 9.9	74 13 51.6	3 14.4	− 35 23 26.8	5.4	Y.	
16	. .	. .	. .	+ 58.9	36 41 0.9	41.5	+ 2 11 56.9	5.5	Y.	From mean of C, D, E, and F subtract 0″.80.
17	. .	. .	. .	+ 1 1.8	S. 76 11 10.5	3 42.4	− 37 21 13.6	2.5	Y.	
18	. .	. .	. .	− 2 57.2	N. 29 32 53.9	+ 31.6	+ 68 27 4.8	5.5	Y.	
19	. .	. .	. .	+ 4 31.2	S. 62 34 35.1	−52 25.3	− 23 5 14.1	. .	Y.	Correction for defective illumination = 0″.00.
20	30.022	76.0	71.5	− 1 48.2	63 8 16.5	−52 39.5				
21	29.990	76.0	71.0	− 3 21.9	64 51 46.0	+ 1 58.3	− 26 0 5.0	21.4	Y.	
22	. .	. .	. .	− 26.7	0 14 38.5	0.2	+ 38 39 0.5	8.8	Y.	
23	. .	. .	. .	. .	. . . .	. .	. . . .	. .	Y.	
24	29.994	74.6	69.6	− 1 47.5	38 38 18.7	44.7	+ 0 14 35.9	8.0	Y.	
25	. .	. .	. .	+ 36.2	59 10 45.7	1 33.5	− 20 18 40.0	7.5	Y.	
26	. .	. .	. .	− 32.7	74 14 33.1	3 15.6	− 35 24 9.4	6.0	Y.	
27	29.996	74.3	69.2	− 1 14.6	74 13 51.2	3 15.5	− 35 23 27.4	6.0	Y.	
28	. .	. .	. .	+ 59.7	36 41 1.9	41.7	+ 2 11 55.6	5.1	Y.	
29	. .	. .	. .	+ 1 2.6	S. 76 11 8.0	3 43.4	− 37 21 12.2	3.1	Y.	
30	30.000	74.0	69.2	− 3 3.1	N. 29 32 55.6	31.8	+ 68 27 6.6	4.0	Y.	
31	. .	. .	. .	+ 45.6	S. 79 5 51.5	4 42.0	− 40 16 54.3	0.0	Y.	
32	. .	. .	. .	− 2 15.2	63 2 51.8	1 49.7	− 24 11 2.2	0.2	Y.	
33	30.002	73.8	68.8	+ 39.5	69 50 44.9	+ 2 31.3	− 30 59 37.0	3.0	Y.	
34	30.048	71.0	67.0	− 1 19.9	51 18 47.8	−27 39.0	− 11 57 29.5	. .	Y.	
35	. .	. .	. .	. .	. . . .	. .	. . . .	. .	Y.	
36	. .	. .	. .	+ 36.2	72 10 38.6	+ 2 52.1	− 33 19 51.4	30.4	F.	
37	. .	. .	. .	+ 39.2	72 10 41.6	2 52.1	− 33 19 54.5	30.4	F.	
38	30.104	76.0	71.4	+ 4 15.8	66 24 18.0	2 7.4	− 27 32 46.1	28.5	F.	
39	. .	. .	. .	+ 46.5	75 40 47.4	3 35.5	− 36 50 43.6	29.8	F.	
40	30.116	75.0	70.0	+ 41.4	65 0 42.8	1 59.8	− 26 9 3.4	25.4	F.	
41	. .	. .	. .	− 2 58.3	S. 38 42 1.9	45.0	+ 0 10 52.4	17.6	F.	
42	. .	. .	. .	− 2 21.4	N. 15 17 21.1	15.4	+ 54 11 15.7	6.7	F.	
43	. .	. .	. .	− 3 11.4	S. 64 51 49.2	1 59.2	− 26 0 9.1	21.4	F.	
44	. .	. .	. .	+ 2 23.2	43 52 24.6	54.0	− 4 59 39.4	17.2	F.	
45	. .	. .	. .	+ 2 44.9	66 22 44.3	2 7.8	− 27 31 12.9	19.8	F.	
46	. .	. .	. .	− 1 15.9	69 38 42.2	2 30.4	− 30 47 33.3	18.7	F.	
47	30.128	72.5	68.2	+ 1 58.1	54 26 56.3	1 18.6	− 15 34 35.6	16.5	F.	Very faint.
48	. .	. .	. .	. .	. . . .	. .	. . . .	. .	F.	
49	30.136	72.0	66.8	− 1 22.3	S. 37 33 36.6	43.5	+ 1 19 19.2	8.4	F.	
50	. .	. .	. .	+ 11.9	N. 1 59 48.4	2.0	+ 40 53 29.6	9.3	F.	
51	. .	. .	. .	+ 0.3	S. 14 55 0.8	14.9	+ 23 58 23.5	13.6	F.	
52	29.744	71.0	65.4	+ 2 57.6	N. 36 27 0.9	41.3	+ 75 21 21.5	3.4	F.	
53	. .	. .	. .	+ 4 13.7	N. 36 25 44.8	41.3	+ 75 20 5.3	3.4	F.	Very faint.
54	. .	. .	. .	+ 1 46.1	S. 67 56 47.8	2 17.3	− 29 5 25.9	26.1	F.	
55	29.754	70.5	64.6	− 1 38.4	S. 67 53 23.3	2 17.1	− 29 2 1.1	26.0	F.	
56	. .	. .	. .	− 2 21.3	N. 15 17 20.1	15.3	+ 54 11 14.6	5.9	F.	
57	. .	. .	. .	− 1 58.4	S. 60 28 3.0	1 38.7	− 21 36 2.5	20.7	F.	
58	. .	. .	. .	+ 2 16.2	N. 41 17 43.2	49.3	+ 80 12 11.7	3.1	F.	
59	29.774	68.5	63.4	− 14.9	S. 55 44 45.9	1 22.3	− 16 52 29.0	16.4	F.	
60	. .	. .	. .	+ 31.3	60 10 28.5	1 37.8	− 21 18 27.1	15.8	F.	
61	29.776	68.0	62.8	− 3 1.5	60 6 55.7	1 37.7	− 21 14 54.2	15.6	F.	
62	. .	. .	. .	. .	. . . .	. .	. . . .	. .	F.	
63	29.764	75.0	74.0	− 11.8	S. 70 24 48.7	2 33.4	− 31 33 42.9	27.9	Y.	
64	29.780	74.8	73.0	+ 30.7	N. 47 34 26.9	1 0.4	+ 86 29 6.5	2.6	Y.	
65	29.780	74.2	72.3	− 3 39.8	S. 10 1 22.9	+ 9.8	+ 28 52 6.5	+ 8.3	Y.	
66	. .	. .	. .	. .	. . . .	. .	. . . .	. .	Y.	

DATE.	Number.	OBJECT.	Magnitude.	No. of mic. readings.	Transit Wires.	MICROSCOPES.							MICROMETER.		
						A.	B.	C.	D.	E.	F.	Mean.	Observed.	Nadir cor.	Corr'd.
						° ′ ″	″	″	″	″	″	″	r.	r.	r.
1871. June 14	1	60 Hydræ	6.0	3	IV–VI.	86 25 6.4	55.5	6.1	2.0	5.8	7.0	3.80	31.251	—0.183	31.069
	2	ν^1 Libræ	6.0	2	VIII, IX.	74 40 6.0	57.0	4.6	1.0	6.5	4.9	3.33	34.737	. .	34.567
	3	Nadir	. .	.	. .	199 59 60.3	46.9	57.0	54.5	58.1	60.4	56.20	30.062	. .	. .
15	4	B. A. C. 4595	6.0	3	III–VII.	19 45 2.9	56.8	2.8	58.8	4.6	3.8	1.62	31.404	—0.345	31.056
	5	Weisse (2) XIII, 910	8.5	3	V–IX.	24 30 4.8	57.6	5.2	0.0	5.1	5.0	2.95	29.791	. .	29.426
	6	Anon. $13^h\ 58^m\ 14^s$	9.0	1	IX.	92 0 9.4	4.7	10.8	6.1	8.8	9.4	8.20	30.223	. .	29.913
	7	Nadir	. .	.	. .	200 0 1.8	56.1	2.9	58.8	0.8	5.4	0.97	30.234	. .	. .
	8	Groombridge 2210	7.7	3	I, V, 5.	332 25 7.8	1.4	11.2	4.3	8.7	9.5	7.15	29.396	. .	29.049
	9	Rumker 5048	9.5	3	V–IX.	17 10 4.9	1.5	8.2	3.2	6.3	6.9	5.17	28.886	. .	28.524
	10	Schwerd 919	9.5	3	IV–VI.	338 40 4.4	58.8	8.8	1.2	5.9	5.0	4.02	26.206	. .	25.845
	11	Weisse (2) XV, 1035	8.0	3	V–IX.	30 0 9.6	4.8	11.3	7.8	10.9	11.7	9.35	27.915	. .	27.551
	12	Cor. Borealis, (var.)	9.5	2	VI, IX.	32 35 3.8	59.7	5.9	1.2	5.2	6.1	3.65	28.419	. .	28.063
	13	Weisse XVI, 439	7.7	3	III–VII.	54 25 6.5	2.5	8.3	5.1	7.8	7.5	6.28	35.617	. .	35.271
	14	B. A. C. 5584	. .	2	I, IX.	99 40 4.7	0.8	5.4	1.7	2.9	4.0	3.25	29.246	. .	28.943
	15	B. A. C. 5583	. .	3	III–VII.	" " "	"	"	"	"	"	"	28.645	. .	28.308
	16	Weisse XVI, 1046	9.0	3	IV–VI.	68 0 7.8	4.1	11.7	7.9	9.2	11.5	8.70	35.622	. .	35.277
16	17	Anon. $14^h\ 40^m\ 52^s$	. .	3	V–VII.	95 55 5.1	58.2	5.6	2.0	5.1	4.9	3.48	28.969	—0.188	28.786
	18	O. Arg. N. 14971	. .	3	IV–VI.	9 15 4.9	55.0	5.2	0.0	5.1	2.5	2.12	31.515	. .	31.324
	19	O. Arg. N. 14975	. .	2	VII, VIII.	" " "	"	"	"	"	"	"	25.748	. .	25.537
	20	Dorpat 1914, (1st *)	9.5	2	III, VII.	63 50 4.4	55.2	3.1	59.4	4.0	2.8	1.48	26.625	. .	26.439
	21	Dorpat 1914, (2d *)	8.3	2	IV, VI.	" " "	"	"	"	"	"	"	25.702	. .	25.514
	22	Anon. $15^h\ 15^m\ 52^s$	. .	3	III–VII.	17 15 4.7	55.8	4.9	0.0	4.1	1.4	1.82	25.530	. .	25.333
	23	Schwerd 919	. .	3	IV–VI.	338 40 5.5	54.2	8.8	0.3	5.1	1.2	2.52	25.979	. .	25.775
	24	Anon. $16^h\ 4^m\ 39^s$	7.5	3	III–VII.	76 44 63.0	53.1	63.1	59.5	62.0	58.1	59.80	28.307	. .	28.122
	25	O. Arg. S. 15734	9.0	3	IV–VI.	74 10 3.1	53.4	3.7	0.0	2.2	0.5	0.48	34.851	. .	34.663
	26	Anon. $16^h\ 44^m\ 34^s$	. .	3	IV–VI.	64 44 63.3	51.7	63.2	58.1	62.1	59.8	59.70	20.725	. .	20.537
	27	Weisse XVI, 854	7.0	2	VIII, IX.	64 25 3.7	55.5	4.9	59.9	2.5	0.5	1.17	26.660	. .	26.478
	28	Weisse XVI, 1048	. .	3	IV–VI.	68 0 3.1	53.8	3.8	59.8	3.2	0.8	0.75	34.745	. .	34.557
	29	Nadir	. .	.	. .	200 0 2.9	52.6	3.6	59.9	0.3	2.1	0.23	30.194	. .	. .
19	30	*k* Centauri, (1st *)	6.0	1	VIII.	91 9 55.9	44.4	54.3	47.8	55.8	55.0	52.20	25.470	—0.197	25.302
	31	*k* Centauri, (2d *)	7.0	1	IX.	" " "	"	"	"	"	"	"	25.380	. .	25.226
	32	Σ Cat. Gen. 1570, (1st *)	. .	3	III–VII.	32 24 61.9	49.7	58.9	52.4	61.5	59.4	57.30	26.756	. .	26.554
	33	Weisse (2) XIV, 1162	. .	2	III, V.	14 59 63.5	52.3	62.9	54.2	63.1	61.3	59.55	31.035	. .	30.830
	34	O. Arg. N. 14996	. .	2	VIII, IX.	359 0 4.6	51.9	5.0	58.2	6.1	1.5	1.22	30.574	. .	30.317
	35	O. Arg. S. 14230	. .	3	V–VII.	84 5 5.5	53.3	3.4	57.7	3.8	3.4	1.18	22.583	. .	22.384
	36	Anon. $15^h\ 23^m\ 45^s$	. .	3	IV–VI.	91 0 6.9	59.5	4.5	58.2	5.3	4.5	3.15	26.328	. .	26.133
	37	ν Scorpii, (1st *)	. .	3	IV–VI.	77 59 61.9	51.8	61.2	55.5	62.5	62.5	59.23	32.133	. .	31.937
	38	Lacaille 7091	. .	3	III–VII.	98 44 61.5	52.2	59.8	55.3	60.9	60.3	58.33	33.909	. .	33.720
	39	Nadir	. .	.	. .	199 59 61.3	49.0	61.0	55.9	60.3	61.1	58.10	30.136	. .	. .
21	40	O. Arg. S. 14294	9.0	2	VIII, IX.	80 34 60.8	52.3	61.1	55.6	59.2	59.1	58.02	26.752	. .	26.572
	41	O. Arg. S. 14297	8.5	1	V.	" " "	"	"	"	"	"	"	29.510	. .	29.313
	42	Rumker 5048	. .	3	IV–VI.	17 14 61.8	53.6	63.3	57.0	61.8	60.3	59.63	38.086	. .	37.887
	43	Anon. $16^h\ 3^m\ 1^s$	. .	2	V, VI.	80 9 60.2	53.0	60.8	56.0	59.6	59.2	58.13	29.080	. .	28.883
	44	Nadir	. .	.	. .	200 0 3.8	54.0	4.8	0.5	2.2	4.2	1.58	30.247	. .	. .
	45	B. A. C. 5919	6.5	3	III–VII.	56 5 4.7	55.6	4.0	0.0	3.2	3.5	1.83	33.100	. .	32.902
23	46	O. Arg. S. 15303	9.0	3	III–VII.	75 45 6.8	56.1	4.8	59.4	7.1	5.7	3.32	34.469	. .	34.275
	47	Groombridge 2319	8.0	3	VI–VIII.	348 15 6.8	54.8	8.8	57.6	6.0	5.1	3.18	25.162	. .	24.922
	48	Nadir	. .	.	. .	199 59 61.1	47.4	58.8	53.0	58.2	62.0	56.75	30.093	. .	. .
	49	Lacaille 7091	. .	3	III–VII.	98 44 63.1	52.2	60.3	54.5	61.7	60.3	58.68	33.821	. .	33.632
	50	Anon. $17^h\ 13^m\ 46^s$	. .	1	V.	94 10 3.6	51.9	3.0	55.8	3.3	2.8	0.07	21.330	. .	21.133
	51	Anon. $17^h\ 13^m\ 52^s$	. .	1	V.	" " "	"	"	"	"	"	"	22.605	. .	22.408
27	52	Moon N.	. .	3	IV–VI.	67 35 3.0	55.2	4.2	57.7	4.0	7.1	1.87	29.354	—0.329	29.025
	53	Nadir	. .	.	. .	199 59 59.3	51.0	58.9	53.1	58.5	62.9	57.28	30.100	. .	. .
	54	Weisse (2) XIV, 1154	8.8	3	IV–VI.	15 0 5.8	57.0	5.0	57.2	5.1	7.2	2.88	34.787	. .	34.455
	55	Weisse (2) XIV, 1183	9.0	2	VII, IX.	" " "	"	"	"	"	"	"	25.825	. .	25.468
	56	Weisse XV, 1144	9.2	3	III–VII.	70 5 5.7	58.5	6.2	59.2	6.3	8.9	4.13	27.745	. .	27.418
	57	Anon. $16^h\ 3^m\ 35^s$	7.0	2	III, V.	85 40 6.6	59.8	6.9	2.1	7.2	8.1	5.12	29.676	. .	29.350
	58	Anon. $16^h\ 3^m\ 36^s$	7.7	2	VII, IX.	" " "	"	"	"	"	"	"	37.837	. .	37.526
	59	Anon. $16^h\ 47^m\ 30^s$	8.0	2	VII, IX.	95 50 3.8	58.6	6.1	59.9	4.8	6.7	3.32	32.916	. .	32.613
	60	Lacaille 7091	. .	3	III–VII.	98 45 5.8	0.5	6.4	0.7	6.8	7.1	4.55	34.125	. .	33.804
	61	Dorpat 2147	9.5	3	III–VII.	65 10 8.7	1.4	10.1	3.0	9.8	10.1	7.18	30.064	. .	29.736
	62	B. A. C. 5919	6.0	3	III–VII.	56 5 9.9	2.2	10.3	6.8	11.2	12.8	8.87	33.399	. .	33.070
	63	κ Scorpii	4.5	3	III–VII.	97 50 10.0	4.8	11.6	6.1	11.8	12.2	9.42	36.047	. .	35.726
	64	Anon. $17^h\ 47^m\ 47^s$	. .	3	V–IX.	99 10 2.2	59.2	4.1	58.7	4.1	3.1	1.90	29.114	. .	28.805
	65	B. A. C. 6256	. .	3	III–VII.	90 30 5.2	59.6	6.4	0.2	5.2	6.2	3.80	35.494	—0.329	35.171

Number.	Barometer.	THERM'S.		Instrumental corrections.	Apparent Zenith Distance.	Refraction.	Observed Declination.	Reduction to 1870.0.	Observer.	REMARKS.
		At.	Ex.							
	in.	°	°	′ ″	° ′ ″	′ ″	° ′ ″	″		
1	. .	. .	. .	− 33.5	S. 66 24 30.3	+ 2 7.0	− 27 32 58.1	+ 22.5	F.	
2	29.954	75.0	70.4	− 2 23.0	S. 54 37 40.3	1 18.4	− 15 45 19.5	19.6	F.	
3	. .	. .	. .	. .	. . . .	. .	. . . .	. .	F.	Cloudy; sky overcast.
4	. .	. .	. .	− 33.1	N. 0 15 31.4	0.2	+ 39 9 10.9	9.2	Y.	
5	29.998	75.0	69.3	+ 18.0	S. 4 30 20.9	4.4	+ 34 23 13.9	10.0	Y.	
6	. .	. .	. .	+ 2.7	S. 72 0 10.9	2 50.5	− 33 9 22.2	28.8	Y.	
7	. .	. .	. .	. .	. . . .	. .	. . . .	. .	Y.	
8	30.016	73.0	66.0	+ 29.8	N. 47 34 23.1	1 1.6	+ 86 29 4.0	2.2	Y.	
9	. .	. .	. .	+ 46.2	2 49 8.6	2.8	+ 41 42 50.6	6.6	Y.	
10	30.024	72.0	65.0	+ 2 10.1	N. 41 17 45.9	49.6	+ 80 12 14.7	2.3	Y.	
11	. .	. .	. .	+ 1 16.7	S. 10 1 26.0	10.0	+ 28 52 3.2	7.8	Y.	
12	. .	. .	. .	+ 1 0.7	12 36 4.3	12.6	+ 26 17 22.3	7.6	Y.	
13	30.040	71.3	65.7	− 2 45.1	34 22 21.2	38.6	+ 4 30 39.4	8.6	Y.	
14	. .	. .	. .	+ 33.1	79 40 36.3	4 59.9	− 40 51 57.0	11.7	Y.	
15	. .	. .	. .	+ 53.0	79 40 56.2	5 0.2	− 40 52 17.1	11.7	Y.	
16	30.040	71.0	65.0	− 2 45.2	47 57 23.4	1 2.7	− 9 4 46.9	6.8	Y.	
17	. .	. .	. .	+ 38.0	S. 75 55 41.5	3 40.7	− 37 5 42.9	25.8	F.	
18	. .	. .	. .	− 41.5	N. 10 45 39.4	10.7	+ 49 39 29.3	5.6	F.	
19	. .	. .	. .	+ 2 19.8	N. 10 42 38.1	10.7	+ 49 36 28.0	5.6	F.	
20	. .	. .	. .	+ 1 51.5	S. 43 51 53.0	54.1	− 4 59 7.9	16.7	F.	
21	. .	. .	. .	+ 2 20.5	S. 43 52 22.0	54.1	− 4 59 36.8	16.7	F.	
22	. .	. .	. .	+ 2 26.2	N. 2 42 32.0	2.7	+ 41 36 14.0	6.4	F.	
23	. .	. .	. .	+ 2 12.3	N. 41 17 45.2	49.5	+ 80 12 13.9	2.0	F.	
24	. .	. .	. .	+ 58.8	S. 56 45 58.6	1 25.9	− 17 53 45.2	13.3	F.	
25	30.080	71.0	67.1	− 2 26.0	54 7 34.4	1 17.9	− 15 15 13.1	10.5	F.	
26	. .	. .	. .	+ 4 56.3	44 49 56.0	56.1	− 5 57 12.9	12.5	F.	
27	. .	. .	. .	+ 1 50.3	44 26 51.4	55.4	− 5 34 7.6	7.6	F.	
28	30.080	70.0	66.0	− 2 22.7	47 57 38.1	1 2.6	− 9 5 1.4	6.7	F.	
29	. .	. .	. .	. .	. . . .	. .	. . . .	. .	F.	
30	. .	. .	. .	+ 2 27.1	71 12 19.3	2 38.3	− 32 21 18.4	29.8	F.	
31	. .	. .	. .	+ 2 29.5	71 12 21.7	2 38.3	− 32 21 20.7	29.8	F.	
32	29.498	76.0	75.5	+ 1 47.9	S. 12 26 45.2	12.0	+ 26 26 42.0	11.9	F.	
33	. .	. .	. .	− 26.0	N. 5 0 26.4	4.8	+ 43 54 10.5	6.1	F.	
34	. .	. .	. .	− 9.9	N. 21 0 8.7	21.0	+ 59 54 9.0	3.5	F.	
35	29.562	75.5	73.5	+ 3 58.5	S. 64 8 59.7	1 52.5	− 25 17 12.9	21.9	F.	
36	. .	. .	. .	+ 2 1.1	71 2 4.2	2 38.4	− 32 11 3.4	20.5	F.	
37	. .	. .	. .	− 1 0.7	57 58 58.6	1 27.9	− 19 6 47.2	13.6	F.	
38	29.778	75.0	71.8	− 1 56.5	78 43 1.7	4 29.5	− 39 53 52.0	9.2	F.	
39	. .	. .	. .	. .	. . . .	. .	. . . .	. .	F.	
40	. .	. .	. .	+ 1 47.3	60 36 45.4	1 39.5	− 21 44 45.6	20.8	F.	
41	30.096	74.0	70.0	+ 21.5	S. 60 35 19.5	1 39.2	− 21 43 19.5	20.9	F.	
42	. .	. .	. .	− 4 7.0	N. 2 49 7.3	2.8	+ 41 42 49.4	5.5	F.	
43	. .	. .	. .	+ 35.0	S. 60 10 33.1	1 38.4	− 21 18 32.3	14.2	F.	
44	. .	. .	. .	. .	. . . .	. .	. . . .	. .	F.	
45	30.112	70.5	65.2	− 1 30.9	36 3 31.0	41.3	+ 2 49 27.0	2.7	F.	
46	. .	. .	. .	− 2 13.9	S. 55 42 49.4	1 20.7	− 16 50 30.9	13.6	F.	
47	29.940	79.0	76.0	+ 2 39.0	N. 31 42 17.8	34.1	+ 70 36 31.2	0.6	F.	
48	. .	. .	. .	. .	. . . .	. .	. . . .	. .	F.	
49	. .	. .	. .	− 1 53.7	S. 78 43 5.0	4 28.3	− 39 53 54.0	8.0	F.	
50	29.946	77.0	75.3	+ 4 37.7	74 14 37.7	3 13.1	− 35 24 11.6	4.4	F.	
51	. .	. .	. .	+ 3 57.8	74 13 57.8	+ 3 12.9	− 35 23 31.5	4.4	F.	
52	29.814	78.7	78.2	+ 30.5	S. 47 35 32.4	−26 30.0	− 8 15 23.1	. .	Y.	
53	. .	. .	. .	. .	. . . .	. .	. . . .	. .	Y.	
54	. .	. .	. .	− 2 19.5	N. 5 2 16.6	+ 4.8	+ 43 56 0.7	4.6	Y.	
55	29.830	78.2	76.8	+ 2 21.9	N. 4 57 35.2	4.8	+ 43 51 19.2	4.6	Y.	
56	. .	. .	. .	+ 1 20.8	S. 50 6 25.0	1 5.6	− 11 13 51.4	18.0	Y.	
57	. .	. .	. .	+ 20.3	65 40 25.5	2 1.2	− 26 48 47.4	15.2	Y.	
58	29.826	77.8	74.8	− 3 55.7	65 36 9.4	2 0.8	− 26 44 31.0	15.2	Y.	
59	. .	. .	. .	− 1 21.8	75 48 41.5	3 34.2	− 36 58 36.4	10.9	Y.	
60	29.816	77.0	74.2	− 1 59.1	78 43 5.4	4 28.6	− 39 53 54.7	10.2	Y.	
61	. .	. .	. .	+ 8.3	45 10 15.5	55.4	− 6 17 31.6	4.0	Y.	Faint.
62	. .	. .	. .	− 1 36.1	36 3 32.8	40.2	+ 2 49 26.3	1.9	Y.	
63	29.800	76.8	74.0	− 2 59.3	77 47 10.1	4 8.5	− 38 57 39.4	4.2	Y.	
64	. .	. .	. .	+ 37.4	79 10 39.3	4 39.8	− 40 21 39.8	+ 2.0	Y.	Faint.
65	29.800	76.2	73.0	− 2 41.9	S. 70 27 21.9	+ 2 34.2	− 31 36 16.8	− 3.0	Y.	Faint.

DATE.	Number.	OBJECT.	Magnitude.	No. of mic. readings.	Transit Wires.	MICROSCOPES.							MICROMETER.		
						A.	B.	C.	D.	E.	F.	Mean.	Observed.	Nadir cor.	Corr'd.
1871.						° ′ ″	″	″	″	″	″	″	r.	r.	r.
June 28	1	Moon N.	. .	3	III–VII.	73 4 61.8	52.2	60.0	54.5	61.2	61.8	58.58	28.068	−0.203	27.867
	2	O. Arg. S. 15303.	. .	3	IV–VI.	75 45 2.5	52.3	3.5	56.9	3.5	2.5	0.20	34.359	. .	34.157
	3	Nadir	. .	.	. .	199 59 63.1	50.4	62.0	56.0	61.8	63.8	59.52	30.188	. .	. .
	4	O. Arg. S. 16213	. .	3	IV–VI.	79 4 62.5	51.5	62.5	55.1	63.2	63.0	59.63	26.943	. .	26.741
29	5	Weisse XVI, 1144	9.0	3	III, VII, IX.	70 5 4.9	59.0	6.8	3.0	4.3	7.1	4.18	27.897	−0.343	27.560
	6	Nadir	. .	.	. .	200 0 5.4	0.8	7.7	4.0	4.9	8.1	5.15	30.360	. .	. .
	7	Moon N.	. .	3	IV–VI.	77 50 6.1	4.4	10.8	7.9	9.2	9.9	8.05	27.717	. .	27.375
	8	Lacaille 7091.	7.5	3	III–VII.	98 45 4.8	3.3	8.6	4.9	6.8	5.9	5.72	34.356	. .	34.021
	9	Weisse XVI, 1048	9.5	1	IX.	68 0 1.3	58.2	6.1	3.1	3.3	4.1	2.68	35.078	. .	34.731
	10	Anon. 17^h 8^m 46^s	8.0	2	I, IX.	94 15 6.4	3.9	10.2	6.2	8.2	7.0	6.98	31.358	. .	31.050
	11	Anon. 17^h 8^m 52^s	8.5	3	III–VII.	" " "	"	"	"	"	"	"	32.769	. .	32.433
	12	Lacaille 7259.	7.3	3	V–IX.	93 30 8.2	5.9	11.1	9.1	9.5	8.9	8.78	29.598	. .	29.271
	13	B. A. C. 6027.	7.3	3	III–VII.	81 45 6.5	4.1	11.2	6.9	7.2	7.3	7.20	31.405	. .	31.066
	14	ν Ophiuchi	5.0	3	III–VII.	68 40 2.8	0.7	8.2	5.4	4.2	4.8	4.35	34.542	. .	34.201
	15	O. Arg. S. 17610.	8.5	3	III–VII.	84 20 3.9	2.7	9.9	5.2	5.7	5.2	5.43	29.325	. .	28.987
	16	B. A. C. 6256.	8.3	3	III–VII.	90 30 5.9	4.1	10.8	7.3	7.1	6.6	6.93	35.918	. .	35.581
	17	B. A. C. 6400.	6.5	3	III–VII.	81 55 3.8	1.2	7.7	4.8	4.7	4.0	4.37	37.481	. .	37.142
	18	Lacaille 7901.	7.5	3	IV–VI.	95 20 7.3	5.8	12.7	8.9	9.1	7.1	8.48	37.400	. .	37.059
July 2	19	Moon S.	. .	3	IV–VI.	83 40 5.8	1.7	7.8	3.7	7.4	7.9	5.72	25.735	−0.336	25.400
	20	Nadir	. .	.	. .	200 0 2.8	57.8	5.2	1.0	4.5	7.1	3.07	30.289	. .	. .
4	21	Lacaille 7259.	7.5	3	III–VII.	93 30 2.4	55.9	2.8	57.9	2.5	4.7	1.03	29.216	−0.323	28.900
	22	Lacaille 7430.	7.7	3	V–IX.	93 10 6.6	2.2	8.1	3.9	6.8	8.9	6.08	37.876	. .	37.569
	23	Anon. 17^h 45^m 35^s	8.5	2	VII, IX.	95 10 3.8	0.2	7.3	1.2	6.2	6.7	4.23	29.040	. .	28.742
	24	Anon. 17^h 56^m 59^s	9.5	3	III–VII.	82 30 6.8	1.2	8.2	3.9	6.8	8.3	5.87	34.392	. .	34.073
	25	Nadir	. .	.	. .	200 0 0.8	55.7	4.0	59.2	1.7	5.1	1.08	30.215	. .	. .
5	26	O. Arg. S. 16213.	8.0	3	IV–VI.	79 5 6.3	57.1	5.2	58.8	4.8	6.3	3.08	27.019	−0.187	26.833
	27	O. Arg. S. 16291.	. .	2	VIII, IX.	79 10 5.6	56.6	4.8	58.0	4.5	5.5	2.50	28.750	. .	28.579
	28	Lacaille 7259.	7.2	3	IV–VI.	93 29 63.1	52.2	60.3	55.8	62.5	61.7	59.27	28.992	. .	28.807
	29	B. A. C. 5960.	. .	3	VI–VIII.	90 59 62.8	51.5	60.8	54.4	62.0	61.4	58.82	33.013	. .	32.838
	30	Anon. 17^h 39^m 14^s	. .	2	VIII, IX.	91 9 63.9	52.2	60.6	54.8	61.1	59.7	58.72	37.478	. .	37.318
	31	Anon. 17^h 45^m 36^s	6.0	3	IV–VI.	93 35 5.5	55.3	3.0	58.8	3.1	3.0	1.45	35.400	. .	35.215
	32	Anon. 17^h 56^m 22^s	. .	3	IV–VI.	83 5 4.5	54.9	4.8	54.4	7.8	4.0	1.73	34.315	. .	34.129
	33	73 Ophiuchi	. .	3	IV–VI.	54 55 4.9	52.2	5.3	58.6	6.4	5.3	2.12	31.232	. .	31.045
	34	B. A. C. 6309.	. .	3	IV–VI.	77 20 5.5	54.9	4.0	58.1	5.2	3.6	1.88	30.719	. .	30.533
	35	B. A. C. 6319.	. .	3	III–VII.	88 55 5.4	54.6	3.7	57.5	4.8	5.0	1.83	33.325	. .	33.144
	36	O. Arg. S. 18674.	7.0	3	IV–VI.	77 15 6.1	57.5	6.5	59.5	6.5	6.9	3.83	31.955	. .	31.769
	37	O. Arg. S. 18953.	7.0	3	IV–VI.	78 25 4.5	57.1	5.8	59.6	5.5	4.8	2.88	32.917	. .	32.731
	38	Lacaille 7998, (1st *)	8.0	3	III–VII.	92 50 4.9	54.3	3.6	58.3	4.0	3.9	1.50	30.068	. .	29.887
	39	Lacaille 7998, (2d *)	7.0	2	IV, VI.	" " "	"	"	"	"	"	"	30.218	. .	30.034
	40	B. A. C. 6604.	. .	3	III–VII.	83 20 4.8	56.6	5.0	59.5	4.1	4.1	2.35	33.666	. .	33.483
	41	Nadir	. .	.	. .	200 0 5.8	53.0	3.8	58.1	2.9	5.1	1.45	30.233	. .	. .
	42	Moon N.	. .	3	III–VII.	73 25 5.5	58.0	6.4	3.0	4.1	4.2	3.53	30.920	. .	30.735
6	43	κ Scorpii	. .	3	III–VII.	97 45 6.2	0.8	8.2	0.8	7.4	8.2	5.27	26.313	−0.330	25.991
	44	B. A. C. 6042, (1st *).	7.0	2	II, IX.	93 35 5.8	0.0	7.0	1.7	7.2	7.5	4.87	28.005	. .	27.702
	45	B. A. C. 6042, (2d *).	7.0	3	IV–VI.	" " "	"	"	"	"	"	"	29.014	. .	28.686
	46	B. A. C. 6043.	6.5	1	IX.	" " "	"	"	"	"	"	"	32.762	. .	32.469
	47	Anon. 17^h 50^m 18^s	8.0	2	VII, IX.	97 25 7.8	2.8	11.1	3.1	10.1	10.2	7.52	34.300	. .	33.997
	48	Anon. 17^h 56^m 59^s	9.3	2	III, VII.	82 30 9.0	2.4	10.1	3.5	9.7	10.1	7.47	34.576	. .	34.256
	49	μ^1 Sagittarii	. .	3	IV–VI.	80 0 7.2	1.2	8.9	2.3	8.9	10.1	6.43	35.431	. .	35.102
	50	Anon. 18^h 58^m 47^s	7.0	3	IV–VI.	82 20 7.1	1.1	8.4	2.1	7.9	8.6	5.87	33.010	. .	32.681
	51	Dorpat 2501	. .	3	III–VII.	63 50 10.4	2.9	11.2	5.9	10.8	13.2	9.07	27.909	. .	27.580
	52	Lacaille 8197.	. .	3	III–VII.	100 45 5.2	58.4	6.0	58.9	4.7	5.2	3.07	34.379	. .	34.058
	53	Anon. 20^h 6^m 38^s	. .	3	III–VII.	32 50 3.7	58.2	4.6	57.8	5.8	6.6	2.78	34.832	. .	34.497
	54	34 Vulpeculæ	. .	5	I–IX.	35 35 5.2	58.3	5.0	59.2	6.0	7.2	3.48	31.301	. .	30.960
	55	Nadir	. .	.	. .	200 0 5.2	57.6	6.0	0.9	5.7	9.0	4.07	30.317	. .	. .
8	56	B. A. C. 5357.	. .	3	V–IX.	98 35 4.4	58.4	5.9	59.1	5.2	5.8	3.13	27.617	−0.315	27.321
	57	ν Scorpii, (1st *)	. .	3	V–IX.	78 0 3.2	57.4	4.2	57.7	4.4	4.9	1.97	32.332	. .	32.026
	58	B. A. C. 6256.	. .	3	III–VII.	90 30 5.3	0.4	5.1	0.3	4.7	5.8	3.60	35.578	. .	35.269
	59	Nadir	. .	.	. .	200 0 0.8	56.1	4.2	59.8	3.1	5.4	1.57	30.221	−0.315	. .

Number.	Barometer.	THERM'S.		Instrumental corrections.	Apparent Zenith Distance.	Refraction.	Observed Declination.	Reduction to 1870.0.	Observer.	REMARKS.
		At.	Ex.							
	in.	°	°	′ ″	° ′ ″	′ ″	° ′ ″	″		
1	29.714	79.0	75.5	+ 1 6.8	S. 53 6 5.4	−30 20.3	− 13 42 5.8	. .	F.	
2	29.720	77.0	72.5	− 2 10.2	55 42 50.0	+ 1 20.7	− 16 50 31.5	+ 13.4	F.	
3	. .	. .	. .	. .	. . . .	. .	. . . .	. .	F.	
4	. .	. .	. .	+ 1 42.1	59 6 41.7	1 32.3	− 20 14 34.7	7.9	F.	
5	29.950	73.5	68.5	+ 1 16.4	50 6 20.6	+ 1 6.9	− 11 13 48.2	17.9	Y.	
6	. .	. .	. .	. .	. . . .	. .	. . . .	. .	Y.	
7	29.986	73.0	65.8	+ 1 22.2	57 51 30.2	−33 14.2	− 18 24 36.8	. .	Y.	
8	. .	. .	. .	− 2 5.9	78 42 59.8	+ 4 35.0	− 39 53 55.6	10.4	Y.	
9	29.990	70.8	64.7	− 2 28.2	47 57 34.5	1 2.6	− 9 4 57.9	6.0	Y.	
10	. .	. .	. .	− 32.9	74 14 34.1	3 17.5	− 35 24 12.4	7.7	Y.	
11	. .	. .	. .	− 1 16.2	74 13 50.8	3 17.4	− 35 23 28.9	7.8	Y.	
12	. .	. .	. .	+ 22.8	73 30 31.6	3 8.7	− 34 40 1.0	6.5	Y.	
13	29.990	69.8	63.4	− 33.4	61 44 33.8	1 45.0	− 22 52 39.6	+ 1.7	Y.	
14	. .	. .	. .	− 2 11.6	48 37 52.8	1 4.3	− 9 45 17.8	− 0.3	Y.	
15	. .	. .	. .	+ 31.7	64 20 37.2	1 57.6	− 25 28 55.5	0.3	Y.	
16	30.000	69.2	61.6	− 2 54.8	70 27 12.2	2 38.7	− 31 36 11.6	3.0	Y.	
17	. .	. .	. .	− 3 43.7	61 51 20.7	1 46.0	− 22 59 27.5	6.3	Y.	
18	30.004	68.8	60.9	− 3 41.1	75 16 27.4	+ 3 33.2	− 36 26 21.4	− 6.8	Y.	
19	30.056	74.8	71.2	+ 2 24.0	63 42 29.8	−69 1.7	− 23 39 48.8	. .	Y.	
20	. .	. .	. .	. .	. . . .	. .	. . . .	. .	Y.	
21	29.890	76.8	69.7	+ 34.4	73 30 35.5	+ 3 5.8	− 34 40 2.0	+ 7.1	Y.	
22	. .	. .	. .	− 3 57.0	73 6 9.0	3 1.2	− 34 15 31.0	3.5	Y.	
23	29.894	75.8	69.4	+ 39.4	75 10 43.6	3 27.3	− 36 20 31.7	2.8	Y.	
24	. .	. .	. .	− 2 7.5	62 27 58.3	1 46.6	− 23 36 5.7	0.0	Y.	
25	. .	. .	. .	. .	. . . .	. .	. . . .	. .	Y.	
26	. .	. .	. .	+ 1 39.2	59 6 42.2	1 32.6	− 20 14 35.6	8.1	F.	
27	30.036	78.0	74.0	+ 44.5	59 10 47.0	1 32.9	− 20 18 40.6	7.6	F.	
28	. .	. .	. .	+ 37.3	73 30 36.6	3 5.4	− 34 40 2.8	7.1	F.	
29	. .	. .	. .	− 1 28.9	70 58 29.9	2 39.8	− 32 7 30.5	4.6	F.	
30	. .	. .	. .	− 3 49.2	71 6 9.6	2 41.0	− 32 15 11.3	3.5	F.	
31	. .	. .	. .	− 2 43.3	73 32 18.1	3 5.3	− 34 41 44.2	2.8	F.	
32	. .	. .	. .	− 2 9.3	63 2 52.4	1 48.9	− 24 11 2.1	+ 0.2	F.	
33	30.040	76.5	72.9	− 32.7	34 54 29.4	38.9	+ 3 58 31.0	− 2.9	F.	
34	. .	. .	. .	− 16.7	57 19 45.2	1 26.6	− 18 27 32.6	4.2	F.	
35	. .	. .	. .	− 1 38.4	68 53 23.4	2 23.1	− 30 2 7.3	3.9	F.	
36	. .	. .	. .	− 55.4	57 14 8.4	1 26.4	− 18 21 55.6	6.1	F.	
37	. .	. .	. .	− 1 25.5	58 23 37.4	1 30.4	− 19 31 28.5	7.8	F.	
38	. .	. .	. .	+ 3.5	72 50 5.0	2 58.3	− 33 59 24.1	8.6	F.	
39	. .	. .	. .	− 1.1	72 50 0.4	2 58.3	− 33 59 19.5	8.6	F.	
40	30.030	75.0	71.9	− 1 49.1	63 18 13.3	+ 1 50.5	− 24 26 24.5	− 10.3	F.	
41	. .	. .	. .	. .	. . . .	. .	. . . .	. .	F.	
42	30.040	72.5	68.4	− 23.0	53 24 40.5	−29 28.1	− 14 1 33.2	. .	F.	
43	29.886	78.4	75.1	+ 2 5.5	77 47 10.8	+ 4 8.4	− 38 57 40.0	+ 5.2	Y.	
44	. .	. .	. .	+ 1 12.0	73 36 16.8	3 4.8	− 34 45 42.4	2.9	Y.	
45	. .	. .	. .	+ 41.2	73 35 46.0	3 4.7	− 34 45 11.5	2.9	Y.	
46	. .	. .	. .	− 1 17.3	73 33 47.6	3 4.3	− 34 43 12.6	2.9	Y.	
47	. .	. .	. .	− 2 5.2	77 23 2.4	4 0.6	− 38 33 23.7	2.5	Y.	
48	29.880	78.3	75.6	− 2 13.3	62 27 54.2	1 45.3	− 23 36 0.3	+ 0.1	Y.	
49	. .	. .	. .	− 2 39.8	59 57 26.6	1 35.0	− 21 5 22.4	− 1.4	Y.	
50	29.880	78.2	75.2	− 1 23.9	62 18 41.9	1 44.7	− 23 26 47.4	8.4	Y.	
51	. .	. .	. .	+ 1 15.8	43 51 24.8	53.0	− 4 58 38.6	10.2	Y.	Observedas one star.
52	. .	. .	. .	− 2 7.1	80 42 56.0	5 23.4	− 41 54 40.1	13.9	Y.	
53	29.874	78.2	75.6	− 2 20.8	12 47 42.0	12.5	+ 26 5 44.8	11.8	Y.	
54	29.874	78.2	75.8	− 30.1	15 34 33.4	15.4	+ 23 18 50.5	− 15.3	Y.	
55	. .	. .	. .	. .	. . . .	. .	. . . .	. .	Y.	
56	. .	. .	. .	+ 1 23.9	78 36 27.0	4 27.6	− 39 47 15.3	+ 18.9	Y.	
57	30.084	79.8	75.7	− 1 3.4	57 58 58.5	1 28.5	− 19 6 47.8	+ 13.7	Y.	
58	30.072	77.4	72.5	− 2 45.0	S. 70 27 18.6	+ 2 35.7	− 31 36 15.1	− 2.3	Y.	Faint.
59	. .	. .	. .	. .	. . . .	. .	. . . .	. .	Y.	

OBSERVATIONS

WITH

THE EQUATORIAL.

1871.

OBSERVATIONS

WITH

THE EQUATORIAL.

TERPSICHORE, (81)

Date.	Sidereal Time.	$\Delta \alpha$	$\Delta \delta$	$\Delta \rho$	α	$l. \Delta p$	δ	$l. \Delta p$	Star.	Observer.
1871.	h. m. s.	m. s.	′ ″	s. ″	h. m. s.		° ′ ″			
February 16	7 45 3.2	+ 1 1.02	+ 5 7.01	0.00+0.16	11 22 8.83	9.5770*n*	+ 8 40 28.4	0.6863	*a*	H.
18	8 18 26.0	+ 0 40.58	− 0 46.49	0.00−0.03	11 20 31.43	9.5211*n*	+ 8 47 20.5	0.6743	*b*	H.
20	8 56 52.9	− 1 48.96	− 0 19.37	0.00−0.00	11 18 51.08	9.4318*n*	+ 8 54 19.4	0.6620	*c*	H.
22	8 25 24.7	+ 0 3.28	− 2 29.36	0.00−0.06	11 17 10.02	9.5013*n*	+ 9 1 8.0	0.6691	*d*	H.

COMPARISON STARS.

Date.	Mean Time.	Star.	α 1871.	Reduction.	δ 1871.	Reduction.	Authority.	Comp.	C.−O.
1871.	h. m. s.		h. m. s.	s.	° ′ ″	″			s. ″
February 16	9 58 26	*a*	11 21 7.22	+ 0.59	+ 8 35 25.7	− 4.5	Cambridge Obs'y, 3 obs. .	14.5	+1.38 +15.7
18	10 23 51	*b*	11 19 50.23	+ 0.62	+ 8 48 11.6	− 4.6	Cambridge Obs'y, 3 obs. .	23.6	+1.46 +20.4
20	10 54 20	*c*	11 20 39.39	+ 0.65	+ 8 54 43.5	− 4.7	Cambridge Obs'y, 3 obs. .	23.8	+1.26 +19.5
22	10 15 5	*d*	11 17 6.06	+ 0.68	+ 9 3 42.2	− 4.8	Cambridge Obs'y, 4 obs. .	14.4	+1.69 +23.2

ELPIS, (59)

Date.	Sidereal Time.	$\Delta \alpha$	$\Delta \delta$	$\Delta \rho$	α	$l. \Delta p$	δ	$l. \Delta p$	Star.	Observer.
1871.	h. m. s.	m. s.	′ ″	s. ″	h. m. s.		° ′ ″			
February 20	8 21 40.2	− 0 45.44	+ 2 29.17	0.00+0.04	8 46 33.37	8.7054*n*	+ 10 49 45.6	0.6170	*a*	H.
21	8 1 17.4	− 1 26.30	+ 8 41.96	0.00+0.18	8 45 52.51	8.9566*n*	+ 10 55 58.5	0.6173	*a*	H.

COMPARISON STARS.

Date.	Mean Time.	Star.	α 1871.	Reduction.	δ 1871.	Reduction.	Authority.	Comp.	C.−O.
1871.	h. m. s.		h. m. s.	s.	° ′ ″	″			s. ″
February 20	10 19 13	*a*	8 47 18.16	+ 0.65	+ 10 47 20.6	− 4.2	Cambridge Obs'y, 2 obs. .	21.7	− 0.72 +0.5
21	9 54 58	*a*	8 47 18.16	+ 0.65	+ 10 47 20.6	− 4.2	Cambridge Obs'y, 2 obs. .	21.7	− 0.60 +1.5

HYGEIA, (10)

Date.	Sidereal Time.	$\Delta \alpha$	$\Delta \delta$	$\Delta \rho$	α	$l. \Delta p$	δ	$l. \Delta p$	Star.	Observer.
1871.	h. m. s.	m. s.	m. s.	s. ″	h. m. s.		° ′ ″			
February 22	7 26 44.1	− 1 21.73	− 4 52.79	0.00−0.14	10 9 30.34	9.4804*n*	+ 6 58 36.2	0.6859	*a*	H.
28	8 20 47.2	− 0 46.90	+ 2 59.58	0.00+0.10	10 4 54.46	9.3084*n*	+ 7 21 7.4	0.6859	*b*	H.

COMPARISON STARS.

Date.	Mean Time.	Star.	α 1871.	Reduction.	δ 1871.	Reduction.	Authority.	Comp.	C.−O.
1871.	h. m. s.		h. m. s.	s.	° ′ ″	″			s. ″
February 22	9 16 34	*a*	10 11 0.34	+ 0.73	+ 7 3 33.7	− 4.6	Rümker	21.7	+1.43 −7.5
28	9 46 53	*b*	10 5 40.61	+ 0.75	+ 7 18 12.5	− 4.8	Cambridge Obs'y, 3 obs. .	21.7	+1.30 −7.2

DORIS, ㊽

Date.	Sidereal Time.	$\Delta \alpha$	$\Delta \delta$	$\Delta \rho$	α	$l. \Delta p$	δ	$l. \Delta p$	Star.	Observer.
1871.	h. m. s.	m. s.	′ ″	s. ″	h. m. s.		° ′ ″			
March 15	9 17 36.9	+ 3 36.11	+ 2 35.80	0.00+0.06	10 41 30.08	9.2177*n*	+ 4 45 9.8	0.6968	*a*	H.
16	9 30 53.6	− 1 54.36	− 1 2.51	0.00−0.02	10 40 51.29	9.1459*n*	+ 4 51 17.0	0.6947	*b*	H.

COMPARISON STARS.

Date.	Mean Time.	Star.	α 1871.	Reduction.	δ 1871.	Reduction.	Authority.	Comp.	C.—O.
1871.	h. m. s.		h. m. s.	s.	° ′ ″	″			s. ″
March 15	9 44 35	*a*	10 37 53.17	+ 0.80	+ 4 42 39.2	− 5.3	Bessel	17.6	+0.48 −2.7
16	9 53 53	*b*	10 42 44.84	+ 0.81	+ 4 52 40.1	− 5.3	Cambridge Obs'y, 2 obs. .	12.4	−0.07 −2.6

FELICITAS, (109)

Date.	Sidereal Time.	$\Delta \alpha$	$\Delta \delta$	$\Delta \rho$	α	$l. \Delta p$	δ	$l. \Delta p$	Star.	Observer.
1871.	h. m. s.	m. s.	′ ″	s. ″	h. m. s.		° ′ ″			
March 21	9 49 54.5	− 2 5.75	+ 9 16.28	0.00+0.23	12 19 44.30	9.4469*n*	− 1 53 36.1	0.7563	*a*	H.
24	11 21 51.1	+ 2 29.59	+ 0 25.40	0.00+0.00	12 16 52.78	9.0395*n*	− 1 42 11.8	0.7576	*b*	H.
28	11 1 56.9	+ 0 22.52	+ 3 33.42	0.00+0.09	12 13 11.67	9.1484*n*	− 1 27 28.6	0.7554	*c*	H.

COMPARISON STARS.

Date.	Mean Time.	Star.	α 1871.	Reduction.	δ 1871.	Reduction.	Authority.	Comp.	C.—O.
1871.	h. m. s.		h. m. s.	s.	° ′ ″	″			s. ″
March 21	9 53 12	*a*	12 21 49.17	+ 0.88	− 2 2 46.9	− 5.7	Cambridge Obs'y, 3 obs. .	18.6	+11.39 −1 28.9
24	11 16 5	*b*	12 14 22.29	+ 0.90	− 1 42 31.4	− 5.8	Washington Obs'y, 1 obs. .	21.7	+11.43 −1 29.9
28	10 37 31	*c*	12 12 48.23	+ 0.92	− 1 30 56.2	− 5.9	Cambridge Obs'y, 3 obs. .	20.5	+11.63 −1 31.3

UNDINA, (92)

Date.	Sidereal Time.	$\Delta \alpha$	$\Delta \delta$	$\Delta \rho$	α	$l. \Delta p$	δ	$l. \Delta p$	Star.	Observer.
1871.	h. m. s.	m. s.	′ ″	s. ″	h. m. s.		° ′ ″			
March 21	10 35 22.5	+ 2 21.30	− 0 5.40	0.00−0.00	12 16 18.09	9.3036*n*	+ 13 0 38.7	0.5999	*a*	H.
24	10 11 45.1	− 0 52.40	+ 4 10.65	0.00+0.08	12 14 9.67	9.3811*n*	+ 13 15 25.3	0.6039	*b*	H.
25	10 30 30.5	+ 2 10.25	+ 4 59.07	0.00+0.10	12 12 26.06	9.3120*n*	+ 13 20 14.9	0.5960	*c*	H.

COMPARISON STARS.

Date.	Mean Time.	Star.	α 1871.	Reduction.	δ 1871.	Reduction.	Authority.	Comp.	C.—O.
1871.	h. m. s.		h. m. s.	s.	° ′ ″	″			s. ″
March 21	10 38 32	*a*	12 13 55.88	+ 0.91	+13 0 51.3	− 7.2	Argelander	18.6	+7.71 −39.7
24	10 3 11	*b*	12 15 1.14	+ 0.93	+13 11 20.1	− 5.5	Rümker	24.8	+7.61 −36.7
25	10 17 57	*c*	12 10 14.88	+ 0.93	+13 15 21.1	− 5.4	Bessel and Schjellerup .	12.4	+7.51 −37.3

COMET I, 1871.

Date.	Sidereal Time.	Δ α	Δ δ	Δ ρ	α	l. Δ p	δ	l. Δ p	Star.	Observer.
1871.	h. m. s.	m. s.	′ ″	s. ″	h. m. s.		° ′ ″			
April 20	11 2 46.5	+ 1 8.81	+ 0 19.9	0.00+0.00	3 26 19.40	9.7880	+ 46 50 32.9	0.7658	*a*	H.
20	11 8 39.8	− 1 38.06	+ 0 43.0	0.00+0.10	3 26 20.26	9.7827	+ 46 50 24.3	0.7747	*b*	H.
23	10 30 46.1	+ 1 21.86	+ 6 13.5	+0.02+0.40	3 37 53.91	9.8018	+ 45 2 56.3	0.7008	*c*	H.
23	10 30 46.1	− 1 8.78	+ 5 46.3	−0.02+0.40	3 37 54.05	9.8018	+ 45 2 53.5	0.7008	*d*	H.
24	10 33 0.9	+ 0 35.62	− 8 28.6	−0.04−0.80	3 41 39.64	9.7978	+ 44 25 43.6	0.7007	*e*	H.
29	11 35 20.3	+ 0 12.67	+ 2 56.5	+0.03+0.84	3 59 41.10	9.7471	+ 41 11 26.5	0.7782	*f*	H.
29	11 35 20.3	− 0 24.71	+ 1 59.1	+0.03+0.69	3 59 41.51	9.7471	+ 41 11 25.4	0.7782	*g*	H.
May 5	11 3 31.2	+ 0 30.46	+ 9 11.6	+0.06+1.00	4 17 25.23	9.7521	+ 37 7 35.4	0.7192	*h*	H.
7	11 22 50.9	+ 1 15.77	+ 0 58.7	0.00+0.10	4 25 17.56	9.7390	+ 35 40 1.2	0.7395	*i*	H.
10	11 36 9.7	+ 1 27.54	− 2 30.4	0.00−0.20	4 34 8.34	9.7252	+ 33 27 51.1	0.7501	*k*	H.

COMPARISON STARS.

Date.	Mean Time.	Star.	α 1871.	Reduction.	δ 1871.	Reduction.	Authority.	Comp.	C.—O.
1871.	h. m. s.		h. m. s.	s.	° ′ ″	″			s. ″
April 20	9 7 54	*a*	3 25 12.60	− 2.01	+ 46 50 14.3	− 1.3	Argelander	18.6	
20	9 13 47	*b*	3 28 0.33	− 2.01	+ 46 49 42.6	− 1.3	Equatorial comp. with Argelander	9.3	
23	8 24 12	*c*	3 36 33.96	− 1.93	+ 44 56 43.8	− 1.4	Argelander	15.5	
23	8 24 12	*d*	3 39 4.78	− 1.93	+ 44 57 8.1	− 1.3	Argelander	15.5	
24	8 22 30	*e*	3 41 5.97	− 1.91	+ 44 34 14.3	− 1.3	Bessel	20.5	
29	9 5 0	*f*	3 59 30.17	− 1.77	+ 41 8 30.7	− 1.5	Bessel	15.3	
29	9 5 0	*g*	4 0 7.96	− 1.77	+ 41 9 27.1	− 1.5	Bessel	15.4	
May 5	8 9 40	*h*	4 16 56.36	− 1.65	+ 36 58 24.8	− 1.8	Bessel	18.4	
7	8 21 5	*i*	4 24 3.40	− 1.61	+ 35 39 4.2	− 1.8	Argelander	15.5	
10	8 22 34	*k*	4 32 42.35	− 1.55	+ 33 30 23.6	− 1.9	Washington Observatory, 2 obs. .	15.5	

AMALTHEA, (113)

Date.	Sidereal Time.	Δ α	Δ δ	Δ ρ	α	l. Δ p	δ	l. Δ p	Star.	Observer.
1871.	h. m. s.	m. s.	′ ″	s. ″	h. m. s.		° ′ ″			
April 23	11 18 26.4	− 0 2.72	− 0 38.8	0.00−0.00	11 32 54.12	8.4706*n*	+ 11 1 52.1	0.6136	*a*	H.
24	12 3 41.0	− 0 14.47	− 0 57.3	0.00−0.02	11 32 42.37	8.7862	+ 11 1 33.6	0.6146	*a*	H.
June 9	14 13 5.3	− 0 30.15	+ 1 49.0	0.00+0.05	11 53 19.35	9.4239	+ 7 15 14.0	0.6784	*b*	H.
12	14 40 46.5	+ 1 21.07	− 10 14.4	−0.01−0.28	11 56 17.79	9.4836	+ 6 49 39.1	0.6875	*c*	H.
14	14 28 27.9	− 1 56.93	+ 0 25.8	0.00+0.00	11 58 21.27	9.4501	+ 6 32 20.8	0.6874	*d*	H.
15	14 24 3.4	− 0 53.91	− 8 23.6	0.00−0.22	11 59 24.28	9.4362	+ 6 23 31.3	0.6878	*d*	H.
16	14 40 54.6	− 1 14.04	+ 9 53.3	+0.01+0.28	12 0 29.07	9.4742	+ 6 14 27.5	0.6920	*f*	H.
19	14 33 21.1	+ 0 2.20	+ 4 27.4	0.00+0.11	12 3 46.73	9.4482	+ 5 47 13.1	0.6943	*g*	H.
July 7	16 7 26.4	+ 1 39.68	− 0 45.3	0.00−0.02	12 26 7.83	9.5782	+ 2 48 34.6	0.7266	*h*	H.
14	16 28 14.0	− 1 6.59	+ 3 4.8	0.00+0.16	12 35 49.85	9.5916	+ 1 34 13.4	0.7344	*i*	H.
15	16 28 52.9	+ 0 2.33	+ 1 22.4	0.00+0.07	12 37 15.04	9.5907	+ 1 23 27.6	0.7351	*k*	H.

COMPARISON STARS.

Date.	Mean Time.	Star.	α 1871.	Reduction.	δ 1871.	Reduction.	Authority.	Comp.	(A. N. 1846.)
1871.	h. m. s.		h. m. s.	s.	° ′ ″	″			s. ″
April 23	9 11 44	*a*	11 32 56.05	+ 0.79	+ 11 2 34.0	− 3.1	Bessel	30.5	
24	9 52 55	*a*	11 32 56.05	+ 0.79	+ 11 2 34.0	− 3.1	Bessel	24.5	
June 9	9 1 7	*b*	11 53 49.03	+ 0.47	+ 7 13 26.2	− 1.3	Bessel	21.5	− 0.07−3.6
12	9 16 55	*c*	11 54 56.28	+ 0.45	+ 6 59 54.4	− 0.7	Argelander	15.5	+ 0.39+2.6
14	8 56 47	*d*	12 0 17.74	+ 0.46	+ 6 31 55.7	− 0.7	Bessel and Lamont . .	8.3	− 0.21+2.8
15	8 48 27	*d*	12 0 17.74	+ 0.45	+ 6 31 55.7	− 0.6	Bessel and Lamont . .	15.5	− 0.18+3.7
16	9 1 20	*f*	11 59 14.59	+ 0.43	+ 6 4 34.6	− 0.7	Bessel and Schjellerup .	14.7	− 0.22+6.2
19	8 42 0	*g*	12 3 44.10	+ 0.43	+ 5 42 46.3	− 0.7	Bessel and Lamont . .	32.5	− 0.36+4.3
July 7	9 5 3	*h*	12 24 27.78	+ 0.37	+ 2 49 20.4	− 0.5	Bessel and Lamont . .	11.4	+ 0.89+8.1*
14	8 58 16	*i*	12 36 56.06	+ 0.38	+ 1 31 8.9	− 0.5	Bessel and Lamont . .	10.3	− 0.47+5.3
15	8 54 59	*k*	12 37 12.34	+ 0.37	+ 1 22 5.6	− 0.5	Argelander	23.7	− 0.40+3.4

* Uncertain ; perhaps not the planet.

THALIA, ㉓

Date.	Sidereal Time.	Δ *a*	Δ *δ*	Δ *ρ*	*a*	*l.* Δ *p*	*δ*	*l.* Δ *p*	Star.	Observer.
1871.	h. m. s.	m. s.	° ″	s. ″	h. m. s.		° ′ ″			
May 10	13 25 22.2	— 1 49.94	+ 0 48.3	0.00+0.05	14 57 16.63	9.2616*n*	— 10 40 59.5	0.8201	*a*	H.

COMPARISON STAR.

Date.	Mean Time.	Star.	*a* 1871.	Reduction.	*δ* 1871.	Reduction.	Authority.	Comp.	C.—O.
1871.	h. m. s.		h. m. s.	s.	° ′ ″	″			s. ″
May 10	10 11 29	*a*	14 59 5.26	+ 1.31	— 10 41 42.7	— 5.2	Bessel	21.7	—1.52 +9.7

SAPPHO, (80)

Date.	Sidereal Time.	Δ *a*	Δ *δ*	Δ *ρ*	*a*	*l.* Δ *p*	*δ*	*l.* Δ *p*	Star.	Observer.
1871.	h. m. s.	m. s.	′ ″	s. ″	h. m. s.		° ′ ″			
May 18	14 12 31.6	+ 0 53.62	— 8 2.7	— 0.02—0.5	16 27 37.03	9.4234*n*	— 15 23 17.1	0.8357	*a*	H.
19	14 14 36.1	— 0 4.60	— 1 20.2	0.00—0.1	16 26 38.85	9.4144*n*	— 15 16 34.2	0.8360	*a*	H.
20	14 10 34.2	— 1 3.02	+ 5 26.6	0.00+0.3	16 25 40.44	9.4230*n*	— 15 9 46.9	0.8347	*a*	H.

COMPARISON STARS.

Date.	Mean Time.	Star.	*a* 1871.	Reduction.	*δ* 1871.	Reduction.	Authority.	Comp.	C.—O.
1871.	h. m. s.		h. m. s.	s.	° ′ ″	″			s. ″
May 18	10 27 3	*a*	16 26 42.01	+ 1.42	— 15 15 10.7	— 3.2	Argelander	21.7	+0.15 —5.3
19	10 25 11	*a*	16 26 42.01	+ 1.44	— 15 15 10.7	— 3.2	Argelander	24.5	+0.30 —0.6
20	10 17 14	*a*	16 26 42.01	+ 1.45	— 15 15 10.7	— 3.1	Argelander	21.7	+0.19 —1.9

LEUCOTHEA, ㉟

Date.	Sidereal Time.	Δ *a*	Δ *δ*	Δ *ρ*	*a*	*l.* Δ *p*	*δ*	*l.* Δ *p*	Star.	Observer.
1871.	h. m. s.	m. s.	′ ″	s. ″	h. m. s.		° ′ ″			
May 18	15 25 18.5	+ 1 37.62	— 2 48.5	0.00—0.50	16 16 48.07	9.0923*n*	— 34 24 21.1	0.9222	*a*	H.
20	15 22 46.8	— 0 18.56	— 3 3.0	0.00—0.53	16 14 51.92	9.0980*n*	— 34 24 35.9	0.9221	*a*	H.

COMPARISON STARS.

Date.	Mean Time.	Star.	*a* 1871.	Reduction.	*δ* 1871.	Reduction.	Authority.	Comp.	C.—O.
1871.	h. m. s.		h. m. s.	s.	° ′ ″				s. ″
May 18	11 59 38	*a*	16 15 8.77	+ 1.68	— 34 21 29.7	— 2.4	Cambridge M. C. . . .	18.6	—10.78 +35.1
20	11 29 15	*a*	16 15 8.77	+ 1.71	— 34 21 29.7	— 2.7	Cambridge M. C. . . .	20.6	—10.89 +34.5

VICTORIA, ⑫

Date.	Sidereal Time.	Δ *a*	Δ *δ*	Δ *ρ*	*a*	*l.* Δ *p*	*δ*	*l.* Δ *p*	Star.	Observer.
1871.	h. m. s.	m. s.	° ″	s. ″	h. m. s.		° ′ ″			
May 19	15 14 35.3	+ 3 14.70	— 3 43.9	0.00—0.2	16 52 45.45	9.4918*n*	— 19 23 42.0	0.8438	*a*	H.
20	14 47 36.9	+ 2 29.83	+ 4 41.7	0.00+0.3	16 52 0.58	9.4007*n*	— 19 15 15.4	0.8553	*a*	H.

COMPARISON STARS.

Date.	Mean Time.	Star.	*a* 1871.	Reduction.	*δ* 1871.	Reduction.	Authority.	Comp.	C.—O.
1871.	h. m. s.		h. m. s.	s.	° ′ ″	″			s. ″
May 19	11 25 1	*a*	16 49 29.28	+ 1.47	— 19 19 55.2	— 2.7	Argelander, star is double	18.6	+12.78 —15.0
20	10 54 11	*a*	16 49 29.28	+ 1.47	— 19 19 55.2	— 2.2	Argelander.	15.5	+12.66 —16.2

PANDORA, (55)

Date.	Sidereal Time.	Δα	Δδ	Δρ	α	l. Δp	δ	l. Δp	Star.	Observer.
1871.	h. m. s.	m. s.	′ ″	s. ″	h. m. s.		° ′ ″			
June 19	16 25 25.2	+ 0 9.27	− 11 49.3	+0.12−3.6	18 15 48.10	9.4130*n*	− 34 38 23.2	0.9043	*a*	H.
23	16 32 37.3	+ 1 40.04	+ 0 47.5	0.00+0.06	18 11 36.98	9.3696*n*	− 34 43 2.0	0.9090	*b*	H.

COMPARISON STARS.

Date.	Mean Time.	Star.	α 1871.	Reduction.	δ 1871.	Reduction.	Authority.	Comp.	C.—O.
1871.	h. m. s.		h. m. s.	s.	° ′ ″	″			s. ″
June 19	10 33 46	*a*	18 15 36.58	+ 2.13	−34 26 32.0	+ 1.7	Yarnall, 2 obs. ε Sagittarii .	22.5	+1.16 −0.2
23	10 25 13	*b*	18 9 54.74	+ 2.20	−34 43 50.0	+ 0.5	Yarnall, 2 observations .	17.6	+0.74 −0.2

ARETHUSA, (95)

Date.	Sidereal Time.	Δα	Δδ	Δρ	α	l. Δp	δ	l. Δp	Star.	Observer.
1871.	h. m. s.	m. s.	′ ″	s. ″	h. m. s.		° ′ ″			
June 19	17 37 49.9	− 1 54.58	+ 7 59.0	0.00+0.4	18 39 37.64	9.0998*n*	− 13 12 53.8	0.8389	*a*	H.

COMPARISON STAR.

Date.	Mean Time.	Star.	α 1871.	Reduction.	δ 1871.	Reduction.	Authority.	Comp.	C.—O.
1871.	h. m. s.		h. m. s.	s.	° ′ ″	″			s. ″
June 19	11 45 58	*a*	18 41 30.44	+ 1.78	−13 20 55.0	+ 1.8	Bessel	15.5	−50.56 +30.0

AMPHITRITE, ㉙

Date.	Sidereal Time.	Δα	Δδ	Δρ	α	l. Δp	δ	l. Δp	Star.	Observer.
1871.	h. m. s.	m. s.	′ ″	s. ″	h. m. s.		° ′ ″			
June 21	16 58 3.6	− 0 23.72	− 7 44.6	0.00−1.21	17 8 18.81	8.38.82*n*	− 32 38 25.9	0.9228	*a*	H.

COMPARISON STAR.

Date.	Mean Time.	Star.	α 1871.	Reduction.	δ 1871.	Reduction.	Authority.	Comp.	C.—O.
1871.	h. m. s.		h. m. s.	s.	° ′ ″	″			s. ″
June 21	10 58 27	*a*	17 8 40.45	+ 2.08	−32 30 39.9	− 0.2	B. A. C., Piazzi and Taylor.	23.5	−0.86 −13.1

AGLAIA, ㊼

Date.	Sidereal Time.	$\Delta\alpha$	$\Delta\delta$	$\Delta\rho$	α	$l.\Delta p$	δ	$l.\Delta p$	Star.	Observer.
1871.	h. m. s.	m. s.	′ ″	s. ″	h. m. s.		° ′ ″			
June 23	17 6 41.9	+ 1 7.11	− 3 14.4	−0.01−0.7	18 20 23.67	9.2324*n*	− 31 39 32.3	0.9105	*a*	H.

COMPARISON STAR.

Date.	Mean Time.	Star.	α 1871.	Reduction.	δ 1871.	Reduction.	Authority.	Comp.	C.—O.
1871.	h. m. s.		h. m. s.	s.	° ′ ″	″			s. ″
June 23	10 59 12	*a*	18 19 14.44	+ 2.13	−31 36 18.8	+ 1.6	Wash. obs., R. A. uncertain	18.6	+1.41 +9.1

ALEXANDRA, (54)

Date.	Sidereal Time.	$\Delta\alpha$	$\Delta\delta$	$\Delta\rho$	α	$l.\Delta p$	δ	$l.\Delta p$	Star.	Observer.
1871.	h. m. s.	m. s.	′ ″	s. ″	h. m. s.		° ′ ″			
June 12	17 8 37.7	− 3 5.37	−13 13.6	0.00−4.9	16 51 23.08	8.6558	− 40 7 11.6	0.9374	*a*	H.

COMPARISON STAR.

Date.	Mean Time.	Star.	α 1871.	Reduction.	δ 1891.	Reduction.	Authority.	Comp.	C.—O.
1871.	h. m. s.		h. m. s.	s.	° ′ ″	″			s. ″
June 12	11 44 22	*a*	16 54 26.28	+ 2.17	−39 53 50.3	− 2.8	Washington obs., 3α 4δ .	14.5	−0.98 −0.8

MINERVA, (93)

Date.	Sidereal Time.	$\Delta\alpha$	$\Delta\delta$	$\Delta\rho$	α	$l.\Delta p$	δ	$l.\Delta p$	Star.	Observer.
1871.	h. m. s.	m. s.	′ ″	s. ″	h. m. s.		° ′ ″			
July 8	18 19 38.0	− 0 54.60	− 3 34.2	0.00−0.80	18 33 40.46	8.5531*n*	− 38 3 43.4	0.9343	*a*	H.
15	18 2 1.9	+ 0 23.95	+ 8 29.8	0.00+2.30	18 26 59.75	8.8016*n*	− 37 51 42.5	0.9331	*b*	H.
17	17 54 31.7	+ 0 0.24	+ 1 22.9	0.00+0.33	18 25 15.06	8.8899*n*	− 37 46 46.3	0.9323	*c*	H.

COMPARISON STARS.

Date.	Mean Time.	Star.	α 1871.	Reduction.	δ 1871.	Reduction.	Authority.	Comp.	C.—O.
1871.	h. m. s.		h. m. s.	s.	° ′ ″	″			s. ″
July 8	11 12 58	*a*	18 34 32.58	+ 2.48	− 38 0 9.7	+ 1.3	Yarnall	10.4	+23.55 −25.9
15	10 27 53	*b*	18 26 33.28	+ 2.52	− 38 0 14.7	+ 0.1	Washington observations .	23.5	+22.38 −31.9
17	10 12 32	*c*	18 25 12.28	+ 2.54	− 37 48 9.3	− 0.2	Washington observations .	18.4	+22.72 −25.1

LETO, (68)

Date.	Sidereal Time.	$\Delta\alpha$	$\Delta\delta$	$\Delta\rho$	α	$l.\Delta p$	δ	$l.\Delta p$	Star.	Observer.
1871.	h. m. s.	m. s.	′ ″	s. ″	h. m. s.		° ′ ″			
July 15	18 43 38.2	+ 3 34.22	− 0 0.7	0.00−0.00	19 28 53.39	9.0390*n*	− 34 28 10.7	0.9235	*a*	H.
17	19 9 14.9	+ 1 32.81	− 6 27.0	0.00−1.11	19 26 52.00	8.6302*n*	− 34 34 38.3	0.9270	*a*	H.

COMPARISON STARS.

Date.	Mean Time.	Star.	α 1871.	Reduction.	δ 1871.	Reduction.	Authority.	Comp.	C.—O.
1871.	h. m. s.		h. m. s.	s.	° ′ ″	″			s. ″
July 15	11 9 22	*a*	19 25 16.71	+ 2.46	− 34 28 14.4	+ 4.4	Yarnall	15.5	−6.36 −9.1
17	11 27 3	*a*	19 25 16.71	+ 2.48	− 34 28 14.4	+ 4.2	Yarnall	12.4	−6.68 −8.8

ANGELINA. (64)

Date.	Sidereal Time.	Δα	Δδ	Δρ	α	l. Δp	δ	l. Δp	Star.	Observer.
1871.	h. m. s.	m. s.	′ ″	s. ″	h. m. s.		° ′ ″			
July 15	19 19 13.9	− 0 13.21	+ 5 39.0	0.00+0.4	19 58 50.06	8.9283n	−21 10 27.1	0.8813	a	H.
17	19 56 46.9	− 2 5.16	+ 1 3.4	0.00+0.1	19 56 58.14	6.5632n	−21 15 2.9	0.8837	a	H.

COMPARISON STARS.

Date.	Mean Time.	Star.	α 1871.	Reduction.	δ 1871.	Reduction.	Authority.	Comp.	C.—O.
1871.	h. m. s.		h. m. s.	s.	° ′ ″	″			s. ″
July 15	11 44 52	a	19 59 1.10	+ 2.17	−21 16 12.9	+ 6.4	Argelander	16.5	
17	12 14 27	a	19 59 1.10	+ 2.20	−21 16 12.9	+ 6.5	Argelander	15.5	

COMET II, 1871.

Date.	Sidereal Time.	Δα	Δδ	Δρ	α	l. p	δ	l. Δp	Star.	Observer.
1871.	h. m. s.	m. s.	′ ″	s. s.	h. m. s.		° ′ ″			
July 20	17 49 24.6	+ 4 58.16	− 2 10.4	0.00−0.10	9 11 10.93	9.8815	+59 12 42.1	0.7762	a	H.
21	17 32 24.3	+ 3 14.82	+ 0 5.0	0.00+0.00	9 9 27.60	9.8633	+59 14 57.4	0.7985	a	H.

COMPARISON STAR.

Date.	Mean Time.	Star.	α 1871.	Reduction.	δ 1871.	Reduction.	Authority.	Comp.	C.—O.
1871.	h. m. s.		h. m. s.	s.	° ′ ″	″			s. ″
July 20	9 55 38	a	9 6 14.18	−1.41	+59 14 48.0	+ 4.6	Rümker	14.5	
21	9 34 45	a	9 6 14.18	−1.40	+59 14 48.0	+ 5.0	Rümker	14.5	

PROSERPINA, ㉖

Date.	Sidereal Time.	Δα	Δδ	Δρ	α	l. Δp	δ	l. Δp	Star.	Observer.
1871.	h. m. s.	m. s.	′ ″	s. ″	h. m. s.		° ′ ″			
July 21	20 4 11.2	− 4 12.97	− 6 27.7	0.00−0.5	20 37 46.07	8.8680n	− 24 31 32.8	0.8955	a	H.

COMPARISON STAR.

Date.	Mean Time.	Star.	α 1871.	Reduction.	δ 1871.	Reduction.	Authority.	Comp.	C.—O.
1871.	h. m. s.		h. m. s.	s.	° ′ ″	″			s. ″
July 21	12 6 7	a	20 41 56.80	+2.24	−24 25 13.2	+ 8.6	Argelander	15.5	+5.69 +12.3

EUROPA, (52)

Date.	Sidereal Time.	Δα	Δδ	Δρ	α	l. Δp	δ	l. Δp	Star.	Observer.
1871.	h. m. s.	m. s.	′ ″	s. ″	h. m. s.		° ′ ″			
July 21	19 21 24.8	+ 0 56.75	+ 0 4.0	0.00+0.00	20 42 14.82	9.2240n	−17 25 58.1	0.8332	a	H.

COMPARISON STAR.

Date.	Mean Time.	Star.	α 1871.	Reduction.	δ 1871.	Reduction.	Authority.	Comp.	C.—O.
1871.	h. m. s.		h. m. s.	s.	° ′ ″	″			s. ″
July 21	11 23 27	a	20 41 15.92	+2.15	−17 26 10.3	+ 8.2	Washington Obs., (6) . .	15.5	−0.21 +2.3

FORTUNA, ⑲

Date.	Sidereal Time.	Δ α	Δ δ	Δ ρ	α	l. Δ p	δ	l. Δ p		Observer.
1871.	h. m. s.	m. s.	′ ″	s. ″	h. m. s.		° ′ ″			
Sept. 2	19 19 7.5	+ 0 26.30	+ 0 56.0	0.00+0.0	21 13 27.47	9.3876*n*	− 13 30 39.9	0.8296	*a*	H.
4	19 34 22.9	− 0 14.98	− 3 33.3	0.00−0.2	21 12 4.44	9.2914*n*	− 13 38 46.3	0.8358	*b*	H.

COMPARISON STARS.

Date.	Mean Time.	Star.	α 1871.	Reduction.	δ 1871.	Reduction.	Authority.	Comp.	C.−O.
1871.	h. m. s.		h. m s.	s.	° ′ ″.	″			s. ″
Sept. 2	8 32 6	*a*	21 12 58.81	+ 2.36	− 13 31 48.3	+ 10.4	Bessel 1 obs., Wash. Obs'y 2 obs.	8.4	
4	8 39 27	*b*	21 12 17.07	+ 2.35	− 13 35 23.1	+ 10.3	Bessel 1 obs., Wash. Obs'y 2 obs.	16.5	

CASSANDRA, (114)

Date.	Sidereal Time.	α Δ	Δ δ	Δ ρ	α	l. Δ p	δ	l. p	Star.	Observer.
1871.	h. m. s.	m. s.	′ ″	s. ″	h. m. s.		° ′ ″			
Sept. 4	19 52 14 7	− 1 5.81	− 7 21.7	0.00−0.3	21 11 13.61	9.2038*n*	− 13 42 34.8	0.8394	*a*	H.
5	19 27 29.3	+ 0 25.23	+ 1 48.5	0.00+0.1	21 10 37.24	9.3137*n*	− 13 47 3.9	0.8389	*b*	H.
8	19 52 34.9	− 0 8.33	− 0 27.2	0.00−0.0	21 8 51.85	9.1899*n*	− 14 0 3.3	0.8414	*c*	H.
9	19 39 40.8	− 0 55.00	+ 1 34.9	0.00+0.1	21 8 19.38	9.2523*n*	− 14 4 13.2	0.8397	*d*	H.

COMPARISON STARS.

Date.	Mean Time.	Star.	α 1871.	Reduction.	δ 1871.	Reduction.	Authority.	Comp.	C.−O.
1871.	h. m. s.		h. m. s.	s.	° ′ ″	″			s. ″
Sept. 4	8 57 16	*a*	21 12 17.07	+ 2.35	− 13 35 23.1	+ 10.3	Bessel 1 obs., Washington 2 obs.	15.5	
5	8 28 39	*b*	21 10 9.66	+ 2.35	− 13 49 2.7	+ 10.2	Bessel and Rümker	14.5	
8	8 41 53	*c*	21 8 57.85	+ 2.33	− 13 59 46.1	+ 10.0	Bessel	24.5	
9	8 25 5	*d*	21 9 12.05	+ 2.33	− 14 5 58.2	+ 10.0	Bessel and Schjellerup . . .	15.5	

ERATO, (62)

Date.	Sidereal Time.	Δ α	Δ δ	Δ ρ	α	l. Δ p	δ	l. Δ p	Star.	Observer.
1871.	h. m. s.	m. s.	′ ″	s. ″	h. m. s.		° ′ ″			
Sept. 5	21 1 43.7	− 2 17.16	+ 1 45.5	0.00+0.1	23 53 20.85	9.4964*n*	− 3 27 3.3	0.7650	*a*	H.
8	20 33 50.9	+ 0 52.55	− 1 16.5	0.00−0.1	23 51 22.05	9.5437*n*	− 3 42 40.1	0.7639	*b*	H.
9	20 15 29.0	+ 0 11.98	− 6 32.0	+0.02−0.3	23 50 41.51	9.5704*n*	− 3 47 55.7	0.7615	*b*	H.

COMPARISON STARS.

Date.	Mean Time.	Star.	α 1871.	Reduction.	δ 1871.	Reduction.	Authority.	Comp.	C.−O.
1871.	h. m. s.		h. m. s.	s.	° ′ ″	″			s. ′ ″
Sept. 5	10 2 38	*a*	23 55 25.73	+ 2.28	−3 29 4.0	+ 15.1	Bessel and Rümker	18.6	+24.90 +2 33.1
8	9 23 2	*b*	23 50 27.18	+ 2.32	−3 41 38.7	+ 15.2	Bessel, Rümker, Lamont, Lalande	18.6	+25.09 +2 34.2
9	9 0 47	*b*	23 50 27.18	+ 2.33	−3 41 38.7	+ 15.3	Bessel, Rümker, Lamont, Lalande	20.5	+25.14 +2 35.0

SIRONA, (116)

Date.		Sidereal Time.	Δ α	Δ δ	Δ ρ	α	l. Δ p	δ	l. Δ p	Star.	Observer.
1871.		h. m. s.	m. s.	′ ″	s. ″	h. m. s.		° ′ ″			
Sept.	9	22 38 4.1	− 0 59.90	− 1 58.4	0.00−0.1	0 13 30.21	9.2789*n*	− 3 48 42.4	0.7732	*a*	H.
	10	21 31 28.3	− 1 42.30	− 6 41.2	0.00−0.2	0 12 47.81	9.4746*n*	− 3 53 25.3	0.7687	*a*	H.
	16	22 25 38.6	− 0 45.73	− 1 32.6	0.00−0.1	0 8 8.18	9.2997*n*	− 4 23 35.0	0.7843	*b*	H.
	18	21 53 42.7	− 0 53.98	+ 3 56.0	0.00+0.1	0 6 33.34	9.4025*n*	− 4 33 20.0	0.7758	*c*	H.
	21	22 30 36.8	− 1 25.84	− 5 26.9	0.00−0.2	0 4 6.41	9.2625*n*	− 4 48 14.3	0.7809	*d*	H.
	22	23 15 33.2	− 2 16.01	− 10 27.8	0.00−0.3	0 3 16.24	8.9795*n*	− 4 53 15.3	0.7840	*d*	H.
Oct.	7	0 21 14.7	+ 0 10.47	+ 11 51.2	0.00+0.4	23 51 23.54	8.7785	− 5 58 28.9	0.7930	*e*	H.
	9	21 36 2.1	− 0 33.07	+ 4 59.4	0.00+0.2	23 50 1.67	9.4342*n*	− 6 5 13.4	0.7844	*f*	H.
	12	22 46 22.4	− 2 40.45	− 5 0.7	0.00−0.2	23 47 54.28	9.0888*n*	− 6 15 13.9	0.7937	*f*	H.
	13	21 41 22.6	− 0 30.29	+ 7 50.8	+ 0.01+0.3	23 47 15.96	9.3829*n*	− 6 18 8.0	0.7881	*g*	H.
	18	0 11 58.0	− 1 4.53	− 8 3.2	0.00−0.3	23 44 5.76	8.7491	− 6 31 36.4	0.7972	*h*	H.
	19	23 28 52.3	+ 2 29.20	− 1 27.6	0.00−0.0	23 43 32.04	8.4713*n*	− 6 33 43.6	0.7978	*i*	H.
	20	23 35 56.3	+ 1 55.82	− 3 33.1	0.00−0.1	23 42 58.66	8.1534*n*	− 6 35 49.2	0.7981	*i*	H.
Nov.	11	23 47 55.0	+ 0 35.43	− 3 47.0	0.00−0.1	23 35 52.48	8.3862	− 6 45 20.9	0.7992	*k*	H.

COMPARISON STARS.

Date.		Mean Time.	Star.	α 1871.	Reduction.	δ 1871.	Reduction.	Authority.	Comp.	C.−O.
1871.		h. m. s.		h. m. s.	s.	° ′ ″	″			s. ″
Sept.	9	11 22 59	*a*	0 14 27.79	+ 2.32	− 3 46 59.5	+ 15.5	Cambridge and Washington Obs.	24.8	
	10	10 12 38	*a*	0 14 27.79	+ 2.31	− 3 46 59.5	+ 15.6	Cambridge and Washington Obs.	18.6	
	16	10 43 4	*b*	0 8 51.53	+ 2.38	− 4 22 18.1	+ 15.8	Washington Observations . .	12.4	
	18	10 3 22	*c*	0 7 24.92	+ 2.40	− 4 37 31.9	+ 15.8	Bessel, Lamont, and Schjellerup	9.3	
	21	10 28 22	*d*	0 5 29.82	+ 2.43	− 4 43 3.1	+ 15.9	Bessel	17.6	
	22	11 9 15	*d*	0 5 29.82	+ 2.43	− 4 43 3.1	+ 15.9	Bessel	14.5	
Oct.	7	11 15 47	*e*	23 51 10.59	+ 2.48	− 6 10 35.9	+ 15.4	Washington, 3 observations . .	15.4	
	9	8 23 10	*f*	23 50 32.26	+ 2.48	− 6 10 28.3	+ 15.3	Washington, 3 observations . .	23.5	
	12	9 21 31	*f*	23 50 32.26	+ 2.47	− 6 10 28.3	+ 15.3	Washington, 3 observations . .	9.5	
	13	8 12 46	*g*	23 47 43.77	+ 2.47	− 6 26 14.5	+ 15.4	Washington, 3 observations . .	24.6	
	18	10 23 17	*h*	23 45 7.83	+ 2.46	− 6 23 47.8	+ 14.9	Washington, 3 observations . .	15.5	
	19	9 36 22	*i*	23 41 0.41	+ 2.43	− 6 32 30.7	+ 14.7	Bessel and Schjellerup . . .	18.6	
	20	9 39 29	*i*	23 41 0.41	+ 2.43	− 6 32 30.7	+ 14.7	Bessel and Schjellerup . . .	24.8	
Nov.	11	8 24 56	*k*	23 35 14.81	+ 2.24	− 6 41 47.1	+ 13.3	Bessel, Rümker, and Schjellerup	18.4	

DAPHNE, ㊶

Date.		Sidereal Time.	Δ α	Δ δ	Δ ρ	α	l. Δ p	δ	l. Δ p	Star.	Observer.
1871.		h. m. s.	m. s.	′ ″	s. ″	h. m. s.		° ′ ″			
Sept.	18	20 49 41.0	+ 1 7.82	− 3 19.1	0.00−0.1	22 53 41.01	9.3746*n*	− 1 55 23.7	0.7576	*a*	H.

COMPARISON STAR.

Date.		Mean Time.	Star.	α 1871.	Reduction.	δ 1871.	Reduction.	Authority.	Comp.	C.−O.
1871.		h. m. s.		h. m. s.	s.	° ′ ″	″			s. ″
Sept.	18	8 59 30	*a*	22 52 30.81	+ 2.38	− 1 52 19.6	+ 15.1	Bessel and Lamont	14.5	+0.08 +8.5

THISBE, (88)

Date.		Sidereal Time.	Δ α	δ	Δ ρ	α	l. Δ p	δ	l. Δ p	Star.	Observer.
1871.		h. m. s.	m. s.	′ ″	s. ″	h. m. s.		° ′ ″			
Oct.	3	20 41 43.2	+ 4 21.08	− 1 42.7	0.00−0.0	23 38 28.56	9.5092*n*	+ 7 8 50.4	0.6874	*a*	H.
	9	20 50 58.0	− 0 54.24	+ 2 0.5	0.00+0.0	23 34 30.70	9.4814*n*	+ 6 34 30.9	0.6896	*b*	H.

COMPARISON STARS.

Date.		Mean Time.	Star.	α 1871.	Reduction.	δ 1871.	Reduction.	Authority.	Comp.	C.−O.
1871.		h. m. s.		h. m. s.	s.	° ′ ″	″			s. ″
Oct.	3	7 52 35	*a*	23 34 5.06	+ 2.42	+ 7 10 16.6	+ 16.5	Bessel and Washington Obs. .	6.2	+0.24 −5.7
	9	7 38 13	*b*	23 35 22.52	+ 2.42	+ 6 32 13.6	+ 16.8	Bessel	15.5	+0.21 −5.6

NIOBE, (71)

Date.	Sidereal Time.	*a*	Δ δ	Δ ρ	*a*	*l*. Δ *p*	δ	*l*. Δ *p*	Star.	Observer.
1871.	h. m. s.	m. s.	′ ″	s. ″	h. m. s.		° ′ ″			
Oct. 9	22 58 15.9	+ 0 28.07	− 0 47.2	0.00−0.0	1 49 3.73	9.6242*n*	+ 45 10 13.9	9.2056	*a*	H.

COMPARISON STAR.

Date.	Mean Time.	Star.	*a* 1871.	Reduction.	δ 1871.	Reduction.	Authority.	Comp.	C.—O.
1871.	h. m. s.		h. m. s.	s.	° ′ ″	″			s. ″
Oct. 9	9 45 10	*a*	1 48 32.45	+ 3.21	+ 45 10 49.8	+ 11.3	Argelander	23.5	−1.92 +16.6

ENCKE'S COMET.

Date.	Sidereal Time.	Δ *a*	Δ δ	Δ ρ	*a*	*l*. Δ *p*	δ	*l*. Δ *p*	Star.	Observer.
1871.	h. m. s.	m. s.	′ ″	s. ″	h. m. s.		° ′ ″			
Nov. 2	21 52 23.2	− 0 50.25	− 2 51.5	0.00−0.00	22 36 15.83	9.0402*n*	+ 37 5 13.6	9.5130	*a*	H.
6	22 45 16.4	+ 0 44.55	− 7 34.4	0.00−0.00	21 56 9.70	9.0745	+ 34 33 43.7	9.8559	*b*	H.
7	22 30 16.9	− 0 33.56	− 1 8.6	0.00−0.00	21 46 15.81	9.0225	+ 33 45 44.7	9.9203	*c*	H.
8	23 2 42.1	+ 0 17.96	+ 4 24.4	0.00+0.10	21 36 6.94	9.3058	+ 32 52 3.5	0.0678	*d*	H.
10	22 21 40.6	− 2 52.02	+ 1 55.9	0.00+0.00	21 16 48.06	9.1754	+ 30 57 30.8	0.1248	*f*	H.
11	22 25 48.8	+ 3 23.88	+ 2 37.1	0.00+0.00	21 7 6.54	9.2518	+ 29 54 8.8	0.1913	*g*	H.
17	23 4 17.5	− 1 9.09	+ 0 46.2	0.00+0.00	20 12 43.03	9.5302	+ 22 36 43.0	0.4996	*h*	H.
25	22 44 50.8	− 2 32.86	+ 4 15.7	0.00+0.10	19 11 16.85	9.5765	+ 11 52 15.6	0.6592	*i*	H.
25	22 49 8.4	− 1 6.01	− 3 55.4	0.00−0.10	19 11 15.50	9.5824	+ 11 52 1.3	0.6613	*k*	H.
26	22 23 10.2	− 0 57.05	− 8 19.9	0.00−0.20	19 4 28.14	9.5521	+ 10 32 57.6	0.6643	*l*	H.
27	22 31 57.9	+ 0 2.32	+ 1 39.0	0.00+0.00	18 57 39.36	9.5738	+ 9 12 41.9	0.6813	*m*	H.
29	22 56 9.9	+ 2 39.06	+ 2 28.7	0.00+0.10	18 44 25.62	9.6151	+ 6 33 43.8	0.7103	*n*	H.
Dec. 1	22 41 13.7	+ 2 36.37	+ 2 20.9	−0.01+0.10	18 31 54.89	9.6109	+ 4 0 21.2	0.7242	*o*	H.
2	22 42 59.2	− 0 10.60	− 5 17.9	+0.02−0.30	18 25 48.39	9.6178	+ 2 44 41.0	0.7306	*p*	H.
5	23 7 21.4	− 1 44.42	+ 3 1.5	+0.04+0.60	18 8 10.49	9.6472	− 0 57 2.9	0.7448	*q*	H.
7	22 57 9.6	− 2 59.15	− 3 8.7	+0.05−0.60	17 57 10.76	9.6482	− 3 17 59.2	0.7498	*r*	H.

COMPARISON STARS.

Date.	Mean Time.	Star.	*a* 1871.	Reduction.	δ 1871.	Reduction.	Authority.	Comp.	C.—O. Glasenapp's Ephemeris.
1871.	h. m. s.		h. m. s.	s.	° ′ ″	″			m. s. ′ ″
Nov. 2	7 5 6	*a*	22 37 4.13	+ 1.95	+37 7 41.2	+ 23.9	Bessel 1 obs., Wash. 2 obs.	10.5	− 0 57.28+18 37.3
6	7 42 7	*b*	21 55 23.61	+ 1.54	+34 40 54.7	+ 23.4	Bessel	30.6	− 1 37.18+16 51.8
7	7 23 14	*c*	21 46 47.91	+ 1.46	+33 46 30.2	+ 23.1	Bessel	20.5	− 1 45.50+16 1.0
8	7 51 38	*d*	21 35 47.62	+ 1.36	+32 47 16.3	+ 22.7	Washington Obs'y, 3 obs. .	18.5	− 1 56.04+15 17.6
10	7 2 52	*f*	21 19 38.87	+ 1.21	+30 55 13.2	+ 21.7	Bessel	14.7	− 2 18.07+13 19.3
11	7 3 3	*g*	21 3 41.58	+ 1.08	+29 51 10.9	+ 20.8	Bessel	20.7	− 2 19.98+12 0.6
17	7 17 50	*h*	20 13 51.38	+ 0.74	+22 35 40.7	+ 16.1	Bessel	18.6	− 2 58.55+ 3 24.2
25	6 26 59	*i*	19 13 49.17	+ 0.54	+11 47 51.0	+ 8.9	Bessel	18.6	− 3 17.78− 6 34.0
25	6 31 16	*k*	19 12 21.01	+ 0.50	+11 55 47.8	+ 8.9	Bessel	12.4	− 3 17.65+ 6 34.3
26	6 1 27	*l*	19 5 24.70	+ 0.49	+10 41 9.4	+ 8.1	Bessel and Lamont . . .	17.6	− 3 18.35− 7 25.7
27	6 6 17	*m*	18 57 36.56	+ 0.48	+ 9 10 55.7	+ 7.2	Bessel, Lamont, Lalande .	30.6	− 3 18.39− 8 23.2
29	6 22 33	*n*	18 41 46.10	+ 0.46	+ 6 31 9.6	+ 5.4	Bessel, Lamont, Schjellerup	18.6	− 3 17.28− 9 42.4
Dec. 1	5 59 48	*o*	18 29 18.07	+ 0.46	+ 3 57 56.2	+ 4.0	Lamont	17.6	− 3 15.35−10 46.9
2	5 57 37	*p*	18 25 58.50	+ 0.47	+ 2 49 55.7	+ 3.5	Bessel, Lamont, Schjellerup	18.6	− 3 13.74−11 15.3
5	6 10 7	*q*	18 9 54.38	+ 0.49	− 1 0 6.8	+ 1.8	Bessel, Lamont, Schjellerup	15.5	− 3 7.15−12 1.0
7	5 52 5	*r*	18 0 9.35	+ 0.51	− 3 14 50.8	+ 0.9	Bessel, Lamont, Schjellerup	9.3	− 3 1.78−11 57.2

EUPHROSYNE, ㉛

Date.	Sidereal Time.	Δ *a*	Δ δ	Δ ρ	*a*	*l*. Δ *p*	δ	*l*. Δ *p*	Star.	Observer.
1871.	h. m. s.	m. s.	′ ″	s. ″	h. m. s.		° ′ ″			
Nov. 6	23 56 15.7	+ 0 19.27	+ 6 8.6	0.00+0.1	1 56 53.16	9.3822*n*	+ 16 41 16.9	0.5541	*a*	H.

COMPARISON STAR.

Date.	Mean Time.	Star.	*a* 1871.	Reduction.	δ 1871.	Reduction.	Authority.	Comp.	C.—O.
1871.	h. m. s.		h. m. s.	s.	° ′ ″	″			s. ″
Nov. 6	8 52 55	*a*	1 56 31.04	+ 2.85	+ 16 34 51.9	+ 16.3	Bessel	27.5	−7.41 −3 34.1

TUTTLE'S COMET.

Date.		Sidereal Time.	$\Delta \alpha$	$\Delta \delta$	$\Delta \rho$	α	$l. \Delta p$	δ	$l. \Delta p.$	Star.	Observer.
1871.		h. m. s.	m. s.	′ ″	s. ″	h. m. s.		° ′ ″			
Nov.	7	6 20 37.0	+ 0 46.80	+ 0 34.1	0.00+0.0	10 10 33.23	9.6023*n*	+ 14 22 40.6	0.6467	*a*	H.
	8	7 15 36.7	+ 0 18.96	+ 5 20.5	0.00+0.1	10 12 46.04	9.5174*n*	+ 12 42 59.6	0.6339	*b*	H.
	11	6 44 35.3	− 1 35.97	− 7 36.9	+0.01−0.3	10 19 6.01	9.5725*n*	+ 7 45 7.1	0.6924	*c*	H.
	16	6 25 27.0	− 0 2.40	− 3 39.6	0.00−0.1	10 29 47.31	9.6048*n*	− 1 10 9.6	0.7477	*d*	H.
	16	6 49 32.7	− 1 53.34	− 2 37.1	0.00−0.1	10 29 49.52	9.5764*n*	− 1 11 57.0	0.7488	*e*	H.
	16	7 5 45.6	− 1 46.85	+ 5 2.4	−0.01+0.2	10 29 50.75	9.5533*n*	− 1 13 17.0	0.7496	*f*	H.
	17	8 7 31.4	+ 0 55.96	+ 3 44.0	0.00+0.1	10 32 6.60	9.4340*n*	− 3 9 30.2	0.7653	*g*	H.
	18	8 34 38.2	+ 1 39.68	+ 8 41.6	−0.01+0.3	10 34 19.73	9.3622*n*	− 5 4 0.8	0.7805	*h*	H.
	21	9 8 43.7	− 5 19.83	− 3 32.6	0.00−0.2	10 41 3.02	9.2636*n*	− 10 48 6.0	0.8207	*i*	H.
	22	8 55 26.6	+ 3 12.90	+ 5 34.4	−0.01+0.3	10 43 16.12	9.3297*n*	− 12 41 22.5	0.8288	*k*	H.
	24	9 15 5.7	+ 1 13.90	+ 4 31.0	0.00+0.2	10 47 53.13	9.2762*n*	− 16 31 14.0	0.8513	*l*	H.
Dec.	1	10 4 21.6	− 2 41.16	− 5 29.1	+0.01−0.7	11 4 54.15	9.1394*n*	− 29 27 14.0	0.9078	*m*	H.
	1	10 10 29.9	− 3 12.00	− 0 5.5	0.00−0.0	11 4 54.81	9.0942*n*	− 29 27 41.1	0.9090	*n*	H.
	4	10 6 58.4	− 0 3.82	− 5 23.5	+0.01−1.1	11 12 41.20	9.1985*n*	− 34 35 9.9	0.9239	*o*	H.
	5	10 28 56.6	− 2 56.51	+ 1 7.7	+0.01+0.2	11 14 44.35	9.0538*n*	− 36 16 27.8	0.9271	*p*	H.
	5	10 35 9.6	− 4 52.11	− 5 14.5	+0.02−1.0	11 14 45.33	8.9913*n*	− 36 16 55.7	0.9282	*q*	H.
	6	9 52 32.1	− 5 21.97	− 4 20.8	+0.02−1.1	11 18 5.07	9.3269*n*	− 37 49 5.0	0.9193	*r*	H.
	6	10 19 4.4	+ 0 31.82	− 4 22.7	−0.02−1.1	11 18 7.46	9.1714*n*	− 37 50 53.4	0.9272	*s*	H.
	7	10 21 16.8	− 4 31.50	+ 2 53.4	+0.01+1.0	11 21 12.84	9.1876*n*	− 39 25 10.0	0.9294	*t*	H.
	9	10 53 51.7	− 1 33.95	+ 2 57.4	+0.01+1.8	11 26 40.54	8.9493*n*	− 42 28 30.3	0.9388	*u*	H.
	9	10 53 51.7	− 8 20.44	− 5 40.6	+0.02−3.1	11 26 40.51	8.9493*n*	− 42 28 30.0	0.9388	*v*	H.
	10	10 29 19.8	+ 5 43.70	+ 4 29.3	−0.10+4.9	11 29 34.24	9.2196*n*	− 43 54 10.7	0.9345	*w*	H.
	10	10 29 19.8	+ 4 10.10	+ 7 11.6	−0.16+7.7	11 29 34.22	9.2196*n*	− 43 54 15.7	0.9345	*x*	H.

COMPARISON STARS.

Date.		Mean Time.	Star.	α 1871.	Reduction.	δ 1871.	Reduction.	Authority.	Comp.	C—O.
1871.		h. m. s.		h. m. s.	s.	° ′ ″	″			
Nov.	7	15 12 17	*a*	10 9 45.18	+1.25	+ 14 22 13.8	− 7.3	Bessel, Rümker, and Greenwich .	30.6	
	8	16 3 12	*b*	10 12 45.83	+1.25	+ 12 37 46.0	− 7.0	Bessel and Rümker	20.5	
	11	15 20 28	*c*	10 20 40.70	+1.27	+ 7 52 20.3	− 6.0	Bessel and Lamont.	24.8	
	16	14 41 44	*d*	10 29 48.39	+1.32	− 1 6 25.9	− 4.0	Bessel, Lamont, Copeland-Börgen.	27.8	
	16	15 5 45	*e*	10 31 41.54	+1.32	− 1 9 15.8	− 4.0	Washington, one observation. .	11.4	
	16	15 21 56	*f*	10 31 36.30	+1.31	− 1 18 15.6	− 4.0	Bessel, Lamont, Copeland-Börgen.	15.5	
	17	16 19 35	*g*	10 31 9.30	+1.34	− 3 13 10.8	− 3.5	Bessel and Schjellerup. . . .	24.8	
	18	16 42 42	*h*	10 32 38.71	+1.35	− 5 12 39.6	− 3.1	Bessel and Schjellerup. . . .	20.7	
	21	17 4 54	*i*	10 46 21.50	+1.35	− 10 44 31.1	− 2.1	Bessel and Lalande	18.6	
	22	16 47 43	*k*	10 40 1.84	+1.39	− 12 46 55.9	− 1.3	Bessel and Lalande	23.8	
	24	16 59 27	*l*	10 46 37.83	+1.40	− 16 35 44.5	− 0.7	Lalande and Argelander . . .	24.8	
Dec.	1	17 21 4	*m*	11 7 33.85	+1.45	− 29 21 45.7	+ 1.5	Argelander . . . . ,	24.7	
	1	17 27 11	*n*	11 8 5.36	+1.45	− 29 27 37.1	+ 1.5	Eq. from Argelander	18.6	
	4	17 11 52	*o*	11 12 43.51	+1.50	− 34 29 47.7	+ 2.4	Washington Observations . .	24.6	
	5	17 29 51	*p*	11 17 39.35	+1.50	− 36 17 38.2	+ 2.5	Equatorial comp. with q . . .	18.6	
	5	17 36 3	*q*	11 19 35.91	+1.51	− 36 11 42.7	+ 2.5	Washington Observations . .	12.4	
	6	16 49 36	*r*	11 23 25.52	+1.50	− 37 44 45.7	+ 2.6	Madras Cat. and Mural Zones .	18.6	
	6	17 16 4	*s*	11 17 34.13	+1.53	− 37 46 32.4	+ 2.8	Mural Zones .	6.3	
	7	17 14 20	*t*	11 26 44.72	+1.51	− 39 28 7.3	+ 2.9	Mural Zones .	15.5	
	9	17 38 58	*u*	11 28 12.91	+1.57	− 42 31 32.6	+ 3.1	Equatorial comp. with v . . .	15.5	
	9	17 38 58	*v*	11 34 59.36	+1.57	− 42 22 49.4	+ 3.1	Washington, two observations .	15.5	
	10	17 10 34	*w*	11 23 49.03	+1.61	− 43 58 48.5	+ 3.6	Madras Catalogue	18.6	
	10	17 10 35	*x*	11 25 22.68	+1.60	− 44 1 38.6	+ 3.6	Madras Catalogue	18.6	

OCCULTATIONS OF STARS BY THE MOON, 1871.

Date.	Object.	Phase.	Chron. Time.			Corr. Chron.			Mean Time.			Obs.	Remarks.
1871.			h.	m.	s.		m.	s.	h.	m	s.		
Feb. 28	141 Tauri	Immersion . .	9	30	40.8	—	0	26.8	10	56	8.4	H.	Good.
June 29	ν^1 Scorpii	Immersion . .	14	16	32.5	—	2	46.5	7	43	8.9	H.	Fair.
29	ν^1 Scorpii	Immersion . .	7	43	33.8	—	0	26.4	7	43	7.4	N.	Observed with comet-seeker.
29	ν^2 Scorpii	Immersion . .	7	44	58.7	—	0	26.4	7	44	32.3	N.	Observed with comet-seeker.
29	ν^2 Scorpii	Immersion . .	14	17	56.5	—	2	46.5	7	44	32.7	H.	Good.
29	ν^2 Scorpii	Emersion. . .	8	53	46.0	—	0	26.4	8	53	19.6	H.	Doubtful.
Sept. 7	3 Geminorum . .	Emersion. . .	13	52	59.2	—	0	20.2	13	52	39.0	N.	
21	B. A. C. 6217 . .	Immersion . .	8	42	48.0	—	0	22.5	8	42	25.5	H.	Good.
22	χ^1 Sagittarii . . .	Immersion . .	21	39	39.2	—	3	25.8	9	30	11.5	H.	Good,
22	χ^1 Sagittarii . . .	Immersion . .	9	30	33.8	—	0	22.4	9	30	11.4	N.	Observed with comet-seeker.
22	χ^2 Sagittarii . . .	Immersion . .	21	58	12.0	—	3	25.8	9	48	31.5	H.	Good.
27	30 Piscium . . .	Immersion . .	7	33	34.0	—	0	22.1	7	33	11.9	H.	Uncertain.
27	30 Piscium . . .	Emersion. . .	8	36	41.0	—	0	22.1	8	36	18.9	H.	Weight = 2.
27	33 Piscium . . .	Immersion . .	9	33	36.8	—	0	22.1	9	33	14.7	H.	Weight = 2.
27	33 Piscium . . .	Immersion . .	22	1	33.5	—	3	32.9	9	33	15.6	T.	Observed with comet-seeker.
27	33 Piscium . . .	Emersion. . .	10	52	10.0	—	0	22.1	10	51	47.9	H.	Weight = 2.
Oct. 3	ι Tauri	Immersion . .	3	18	23.5	—	3	41.2	14	24	30.0	Sk.	
3	ι Tauri	Emersion. . .	4	46	54.8	—	3	41.2	15	52	46.8	Sk.	
3	ι Tauri	Immersion . .	3	18	38.	—	3	41.2	14	24	44.4	T.	Uncertain.
21	χ Capricorni . . .	Immersion . .	21	50	15.9	—	4	7.4	7	46	3.7	Sk.	
27	64 Ceti.	Immersion . .	9	11	33.0	—	0	16.0	9	11	17.0	H.	Weight = 3.
27	64 Ceti.	Emersion. . .	10	8	28.0	—	0	16.0	10	8	12.0	H.	Weight = 2.
Dec. 18	B. A. C. 17 . .	Immersion . .	7	29	40.0	—	0	1.0	7	29	39.0	H.	Weight = 2.

NOTE.—In the column for "Observer" the initials denote as follows: H., Prof. Hall; N., Prof. Newcomb; T., Paymaster Tuttle, U. S. N.; Sk., Assistant Observer Skinner.

The weights are estimated on a scale of 5, 3 denoting an average observation.

CORRECTIONS

TO THE

RIGHT ASCENSIONS AND NORTH POLAR DISTANCES

OF THE

AMERICAN EPHEMERIS

GIVEN BY

INDIVIDUAL OBSERVATIONS OF STARS

WITH

THE TRANSIT CIRCLE.

1871.

CORRECTIONS

TO THE

STAR-POSITIONS OF THE AMERICAN EPHEMERIS, ETC.

NOTE.—In order to obviate the necessity for reference to the American Ephemeris, immediately below the name of each star is given its mean right ascension and mean north polar distance for 1871.0 as stated in that work.

α ANDROMEDÆ.

	h.	m.	s.
Right Ascension . . .	0	1	43.382
North Polar Distance .	61°	37′	17″.93

1871.				s.		″
Aug.	30	F.	—	0.05	—	0.4
	31	Ha.	+	0.02	+	0.3
Sept.	21	F.	+	0.04	—	0.5
	28	S.	+	0.08	—	0.6
	29	Ha.	—	0.01	+	0.6
Oct.	12	F.	+	0.08	+	0.6
Nov.	6	F.	+	0.19	+	0.9
	7	Ha.	+	0.06	+	0.8
Mean			+	0.051	+	0.21
Div., Flex., etc. .				. .	—	0.27

γ PEGASI.

	h.	m.	s.
Right Ascension . . .	0	6	35.700
North Polar Distance .	75°	32′	0″.63

1871.				s.		″
Aug.	31	Ha.	+	0.01	+	0.7
Sept.	29	Ha.	+	0.03	+	0.2
Oct.	12	F.	—	0.01	+	1.5
Nov.	6	F.	+	0.12		. .
	7	Ha.		0.00	—	0.1
	11	Ha.	+	0.04	+	0.8
Mean			+	0.032	+	0.62
Div., Flex., etc. .				. .	—	0.05

α CASSIOPEÆ.

	h.	m.	s.
Right Ascension . . .	0	33	12.045
North Polar Distance .	34°	10′	14″.15

1871.				s.		″
Oct.	12	F.	—	0.05	+	1.5
Div., Flex., etc. .				. .	—	0.23

α CASSIOPEÆ, (Ref.)

				s.		″
Nov.	7	Ha.	—	0.34	—	2.0

β CETI.

	h.	m.	s.
Right Ascension . . .	0	37	6.754
North Polar Distance .	108°	41′	41″.88

1871.				s.		″
Aug.	31	Ha.	+	0.01	—	0.5
Nov.	18	E.	—	0.03	+	0.5
Dec.	18	Ha.	+	0.07		. .
Mean			+	0.017		0.00
Div., Flex., etc. .				. .	—	0.34

ε PISCIUM.

	h.	m.	s.
Right Ascension . . .	0	56	14.987
North Polar Distance .	82°	48′	17″.44

1871.				s.		″
Aug.	31	Ha.	+	0.08	—	0.4
Sept.	5	F.	+	0.04	+	0.7
	28	S.	+	0.04	—	0.1
	29	Ha.	+	0.04	—	0.6
Oct.	27	Ha.	—	0.01	+	0.8
Nov.	11	Ha.	+	0.03	+	1.0
	17	F.	—	0.10	+	0.5
	25	E.	—	0.03	—	0.1
Dec.	18	Ha.	+	0.02		. .
Mean			+	0.012	+	0.20
Div., Flex., etc. .				. .	—	0.28

POLARIS.

	h.	m.	s.
Right Ascension . . .	1	11	37.880
North Polar Distance .	1°	22′	42″.45

1871.				s.		″
Aug.	31	Ha.	—	0.34	+	0.7
Sept.	2	Ha.		. .	+	1.0
	4	Ha.	—	2.45	+	0.5
	5	F.		. .	—	1.0
	28	S.	—	2.49	—	0.5
	29	Ha.		. .	—	0.3
	30	F.	—	0.21		. .
Oct.	2	Ha.		. .	+	1.0
	12	F.		. .	—	0.4
	27	Ha.		. .	+	1.2
Nov.	6	F.		. .	—	2.0
	11	Ha.		. .	+	0.3
	17	F.		. .	—	1.3
	25	E.		. .	—	0.7
Dec.	8	F.	+	0.02	—	2.1
	11	E.		. .	—	2.1
	15	E.		. .	—	3.9
Mean			—	1.094	—	0.60
Div., Flex., etc. .				. .	—	0.32

POLARIS, S. P.

	h.	m.	s.
Right Ascension . . .	1	11	37.880
North Polar Distance .	358°	37′	17″.55

1871.				s.		″
Aug.	11	F.		. .	+	0.2
	15	F.		. .	+	0.9
	16	S.	—	1.29		0.0
	20	Ha.		. .	+	0.1
	21	F.		. .	+	1.2
	31	Ha.	—	1.09	+	0.4
Sept.	4	Ha.	—	1.65		. .
Sept.	5	F.		. .		0.0
	21	F.		. .	—	1.2
	22	S.	—	1.27	+	0.9
	27	F.		. .	+	0.2
	28	S.	—	3.48		. .
	30	F.	—	1.01	+	1.0
Oct.	7	F.	—	0.72	—	0.9
	9	F.		. .	+	1.3
Dec.	5	F.		. .	+	0.5
	6	E.		. .	—	2.6
	7	F.	—	0.10		. .
Mean			—	1.326	+	0.13
Div., Flex., etc. .				. .	—	0.15

θ¹ CETI.

	h.	m.	s.
Right Ascension . . .	1	17	34.542
North Polar Distance .	98°	50′	57″.85

1871.				s.		″
Sept.	5	F.	+	0.10	+	0.9
	29	Ha.	—	0.01	+	0.8
Oct.	12	F.	—	0.04	+	1.7
	27	Ha.	—	0.09	+	2.2
Nov.	25	E.	+	0.01	+	1.8
Dec.	8	F.	—	0.03	+	1.8
	18	Ha.	—	0.01		. .
Mean			—	0.010	+	1.53
Div., Flex., etc. .				. .	—	0.43

38 CASSIOPEÆ.

	h.	m.	s.
Right Ascension . . .	1	21	39.996
North Polar Distance .	20°	24′	1″.96

1871.				s.		″
Sept.	5	F.	—	0.46		. .
Dec.	18	Ha.	+	0.03		. .
	21	S.	+	0.03		. .
Mean			—	0.133		. .

η PISCIUM.

	h.	m.	s.
Right Ascension . . .	1	24	34.925
North Polar Distance .	75°	19′	11″.08

1871.				s.		″
Aug.	5	S.	+	0.03		. .
Sept.	2	Ha.	+	0.06	+	1.8
	29	Ha.	+	0.14	+	1.2
Oct.	12	F.	+	0.08	+	0.8
Nov.	25	E.	+	0.14	+	0.3

η PISCIUM—Continued.

1871.			s.	″
Dec.	11	E.	+ 0.08	+ 1.3
	18	Ha.	+ 0.08	. .
	21	S.	+ 0.14	+ 1.1
Mean			+ 0.094	+ 1.08
Div., Flex., etc. .			. .	− 0.04

o PISCIUM.

	h.	m.	s.
Right Ascension. . . .	1	38	35.072
North Polar Distance .	81°	29′	32″.66

1871.			s.	″
Sept.	2	Ha.	+ 0.03	+ 0.4
	4	Ha.	− 0.10	+ 0.9
	5	F.	− 0.05	+ 0.3
Oct.	12	F.	− 0.01	+ 0.7
	27	Ha.	+ 0.05	+ 0.2
Dec.	8	F.	+ 0.03	+ 1.2
	11	E.	− 0.04	+ 0.4
	15	E.	− 0.09	− 0.3
	16	F.	− 0.08	+ 1.1
	18	Ha.	− 0.04	. .
	21	S.	− 0.05	+ 0.8
Mean			− 0.032	+ 0.57
Div., Flex., etc. .			. .	− 0.25

β ARIETIS.

	h.	m.	s.
Right Ascension. . . .	1	47	31.034
North Polar Distance .	69°	49′	24″.14

1871.			s.	″
Sept.	2	Ha.	− 0.03	+ 1.2
Oct.	2	Ha.	− 0.01	+ 0.4
Dec.	11	E.	+ 0.03	+ 1.2
	15	E.	− 0.08	− 0.2
	18	Ha.	− 0.02	. .
	20	F.	+ 0.02	. .
	21	S.	+ 0.09	+ 0.5
Mean			0.000	+ 0.62
Div., Flex., etc. .			. .	+ 0.03

β ARIETIS, (Ref.)

1871.			s.	″
Oct.	27	Ha.	− 0.04	+ 2.0
Nov.	17	F.	0.00	+ 4.3
Dec.	8	F.	− 0.08	− 0.6
Mean			− 0.040	+ 1.90
Div., Flex., etc. .			. .	. .

50 CASSIOPEÆ.

	h.	m.	s.
Right Ascension. . . .	1	52	27.949
North Polar Distance .	18°	12′	17″.95

1871.			s.	″
Sept.	5	F.	− 0.48	− 3.0
Dec.	15	E.	− 0.06	− 1.8
	18	Ha.	− 0.19	. .
Mean			− 0.243	− 2.40
Div., Flex., etc. .			. .	− 0.26

α ARIETIS.

	h.	m.	s.
Right Ascension. . . .	1	59	54.319
North Polar Distance .	47°	8′	54″.94

1871.			s.	″
Sept.	5	F.	− 0.04	− 0.6
Oct.	2	Ha.	+ 0.02	− 0.2
	12	F.	. .	+ 1.0
	27	Ha.	+ 0.02	+ 0.6
Dec.	15	E.	− 0.02	− 0.2
	18	Ha.	+ 0.04	. .
	20	F.	0.00	. .
	21	S.	+ 0.02	+ 1.0
Mean			+ 0.006	+ 0.27
Div., Flex., etc. .			. .	+ 0.01

α ARIETIS, (Ref.)

1871.			s.	″
Dec.	8	F.	− 0.09	+ 2.2
Div., Flex., etc. .			. .	. .

ξ¹ CETI.

	h.	m.	s.
Right Ascension. . . .	2	6	9.833
North Polar Distance .	81°	45′	34″.56

1871.			s.	″
Sept.	2	Ha.	+ 0.02	− 0.2
Oct.	2	Ha.	+ 0.06	− 0.7
	12	F.	+ 0.08	+ 0.1
Dec.	8	F.	+ 0.13	+ 0.3
	15	E.	+ 0.08	− 1.2
	18	Ha.	+ 0.06	. .
	21	S.	+ 0.12	− 0.4
Mean			+ 0.079	− 0.35
Div., Flex., etc. .			. .	− 0.26

ι CASSIOPEÆ.

	h.	m.	s.
Right Ascension. . . .	2	18	27.992
North Polar Distance .	23°	10′	47″.72

1871.			s.	″
Sept.	2	Ha.	+ 0.13	− 0.1
Oct.	12	F.	+ 0.34	− 0.5
	27	Ha.	+ 0.37	− 0.6
Dec.	15	E.	+ 0.25	− 1.9
	18	Ha.	+ 0.23	. .
Mean			+ 0.264	− 0.78
Div., Flex., etc. .			. .	− 0.18

ι CASSIOPEÆ, (Ref.)

			s.	″
Nov.	17	F.	+ 0.17	− 3.0
Div., Flex., etc. .			. .	. .

γ CETI.

	h.	m.	s.
Right Ascension. . . .	2	36	37.007
North Polar Distance .	87°	18′	32″.85

1871.			s.	″
Sept.	2	Ha.	+ 0.03	+ 0.3
	3	F.	− 0.10	+ 0.4
	4	Ha.	+ 0.01	+ 0.3
	5	F.	− 0.12	− 1.2

γ CETI—Continued.

1871.			s.	″
Sept.	30	F.	− 0.06	. .
Oct.	2	Ha.	+ 0.03	− 0.1
	12	F.	− 0.04	+ 2.4
	27	Ha.	. .	+ 1.3
Dec.	15	E.	+ 0.01	− 0.1
Mean			− 0.031	+ 0.41
Div., Flex.. etc. .			. .	− 0.36

α CETI.

	h.	m.	s.
Right Ascension. . . .	2	55	32.226
North Polar Distance .	86°	25′	4″.50

1871.			s.	″
Sept.	3	F.	0.00	+ 0.2
	5	F.	− 0.04	− 1.4
Oct.	2	Ha.	+ 0.09	− 1.2
	27	Ha.	+ 0.03	− 0.3
Dec.	15	E.	+ 0.02	− 1.3
	21	S.	0.00	− 1.2
	27	E.	+ 0.05	+ 1.1
Mean			+ 0.021	− 0.59
Div., Flex., etc. .			. .	− 0.38

48 CEPHEI.

	h.	m.	s.
Right Ascension. . . .	3	4	2.569
North Polar Distance .	12°	44′	37″.19

1871.			s.	″
Sept.	3	F.	+ 0.16	− 1.1
	5	F.	− 0.73	− 2.5
Dec.	15	E.	+ 0.08	+ 0.5
	27	E.	+ 0.34	− 0.7
Mean			− 0.038	− 0.95
Div., Flex., etc. .			. .	0.28

ζ ARIETIS.

	h.	m.	s.
Right Ascension. . . .	3	7	29.395
North Polar Distance .	69°	26′	6″.41

1871.			s.	″
Sept.	4	Ha.	− 0.04	+ 1.4
Dec.	8	F.	+ 0.02	+ 2.2
	27	E.	+ 0.02	+ 3.0
Mean			0.000	+ 2.20
Div., Flex., etc.			. .	+ 0.02

α PERSEI.

	h.	m.	s.
Right Ascension. . . .	3	15	7.375
North Polar Distance .	40°	36′	1″.71

1871.			s.	″
Sept.	3	F.	+ 0.16	0.0
	4	Ha.	− 0.06	+ 0.6
Dec.	27	E.	+ 0.13	− 0.8
Mean			+ 0.077	− 0.07
Div., Flex., etc. .			. .	− 0.09

δ PERSEI.

	h.	m.	s.
Right Ascension . . .	3	33	44.812
North Polar Distance .	42°	37′	39″.54

1871.			s.	″
Sept.	3	F.	+ 0.02	− 2.4
Nov.	29	E.	+ 0.19	− 1.2
Dec.	8	F.	+ 0.04	− 1.2
	27	E.	+ 0.22	+ 1.0
Mean			+ 0.118	− 1.20
Div., Flex., etc. .			. .	− 0.15

η TAURI.

	h.	m.	s.
Right Ascension . . .	3	39	49.147
North Polar Distance .	66°	17′	44″.90

1871.			s.	″
Sept.	5	F.	− 0.07	− 1.3
Nov.	29	E.	+ 0.06	− 0.4
Dec.	8	F.	− 0.01	− 1.6
	9	S.	− 0.03	− 0.6
	16	F.	+ 0.01	− 0.3
	27	E.	+ 0.06	+ 0.4
Mean			+ 0.003	− 0.63
Div., Flex., etc. .			. .	− 0.03

ζ PERSEI.

	h.	m.	s.
Right Ascension . . .	3	46	1.628
North Polar Distance .	58°	30′	6″.28

1871.			s.	″
Aug.	8	S.	+ 0.11	. .
Sept.	4	Ha.	− 0.01	+ 0.3
	5	F.	− 0.08	− 0.6
Nov.	29	E.	+ 0.05	+ 0.5
Dec.	8	F.	− 0.07	+ 0.8
	9	S.	− 0.01	+ 3.8
	27	E.	+ 0.06	+ 2.8
Mean			+ 0.071	+ 1.27
Div., Flex., etc. .			. .	− 0.30

γ^1 ERIDANI.

	h.	m.	s.
Right Ascension . . .	3	52	0.677
North Polar Distance	103°	52′	36″.78

1871.			s.	″
Aug.	8	S.	− 0.08	. .
Sept.	3	F.	+ 0.03	+ 2.1
	4	Ha.	− 0.04	+ 1.8
	5	F.	+ 0.07	+ 0.8
Nov.	29	E.	− 0.02	+ 0.9
Dec.	8	F.	+ 0.01	+ 3.1
	27	E.	+ 0.09	+ 3.9
Mean			+ 0.009	+ 2.10
Div., Flex., etc. .			. .	− 0.27

γ TAURI.

	h.	m.	s.
Right Ascension . . .	4	12	27.240
North Polar Distance .	74°	41′	9″.12

1871.			s.	″
Sept.	3	F.	+ 0.01	+ 1.3
	5	F.	− 0.05	− 1.3
Nov.	29	E.	+ 0.02	− 0.8
Mean			− 0.007	− 0.27
Div., Flex., etc. .			. .	− 0.01

ε TAURI.

	h.	m.	s.
Right Ascension . . .	4	21	5.150
North Polar Distance .	71°	6′	27″.80

1871.			s.	″
Aug.	8	S.	+ 0.05	. .
Sept.	5	F.	− 0.08	− 1.3
Nov.	29	E.	− 0.02	+ 1.3
Dec.	27	E.	+ 0.05	+ 1.7
Mean			0.000	+ 0.57
Div., Flex., etc. .			. .	+ 0.07

α TAURI.

	h.	m.	s.
Right Ascension . . .	4	28	31.227
North Polar Distance .	73°	45′	7″.52

1871.			s.	″
Aug.	8	S.	− 0.04	. .
Sept.	3	F.	+ 0.02	+ 2.4
	5	F.	− 0.06	− 1.1
Nov.	29	E.	+ 0.02	+ 1.1
Dec.	8	F.	− 0.06	+ 2.2
	27	E.	− 0.03	+ 3.0
Mean			− 0.025	+ 1.52
Div., Flex., etc. .			. .	+ 0.01

9 CAMELOPARDALIS.

	h.	m.	s.
Right Ascension . . .	4	41	14.358
North Polar Distance .	23°	52′	49″.70

1871.			s.	″
Sept.	7	F.	+ 0.16	+ 1.6
Div., Flex., etc. .			. .	− 0.20

ι AURIGÆ.

	h.	m.	s.
Right Ascension . . .	4	48	35.715
North Polar Distance .	57°	2′	26″.41

1871.			s.	″
Sept.	3	F.	+ 0.03	+ 0.5
	5	F.	− 0.09	− 0.6
	7	F.	+ 0.06	+ 1.7
	8	F.	+ 0.05	+ 2.6
	9	S.	− 0.10	+ 1.4
Mean			− 0.010	+ 1.12
Div., Flex., etc. .			. .	− 0.29

11 ORIONIS.

	h.	m.	s.
Right Ascension . . .	4	57	11.998
North Polar Distance .	74°	46′	39″.86

1871.			s.	″
Sept.	5	F.	− 0.04	− 0.6
	7	F.	− 0.12	+ 0.8
	8	F.	+ 0.03	+ 1.8
Mean			− 0.043	+ 0.67
Div., Flex., etc. .			. .	− 0.01

α AURIGÆ.

	h.	m.	s.
Right Ascension . . .	5	7	9.753
North Polar Distance .	44°	8′	10″.82

1871.			s.	″
Sept.	7	F.	− 0.02	+ 0.7
Dec.	27	E.	− 0.05	− 2.3
Mean			− 0.035	− 0.80
Div., Flex., etc. .			. .	− 0.18

β ORIONIS.

	h.	m.	s.
Right Ascension . . .	5	8	20.337
North Polar Distance	108°	21′	9″.42

1871.			s.	″
Sept.	7	F.	− 0.02	+ 1.3
Dec.	27	E.	− 0.09	+ 3.2
Mean			− 0.055	+ 2.25
Div., Flex., etc. .			. .	− 0.19

β TAURI.

	h.	m.	s.
Right Ascension . . .	5	18	8.300
North Polar Distance .	61°	30′	15″.08

1871.			s.	″
Sept.	7	F.	+ 0.08	+ 0.3
Oct.	3	F.	+ 0.03	+ 1.0
Dec.	27	E.	0.00	− 1.7
Mean			+ 0.037	− 0.13
Div., Flex., etc. .			. .	− 0.27

δ ORIONIS.

	h.	m.	s.
Right Ascension . . .	5	25	25.038
North Polar Distance .	90°	23′	48″.63

1871.			s.	″
Sept.	6	F.	− 0.02	− 1.0
	7	F.	− 0.01	+ 0.6
Dec.	25	S.	− 0.03	. .
Mean			− 0.020	− 0.20
Div., Flex., etc. .			. .	− 0.41

α LEPORIS.

	h.	m.	s.
Right Ascension . . .	5	27	2.528
North Polar Distance	107°	54′	58″.73

1871.			s.	″
Oct.	3	F.	− 0.10	+ 2.1
Dec.	27	E.	− 0.20	0.0
Mean			− 0.150	+ 1.05
Div., Flex., etc. .			. .	− 0.20

ε ORIONIS.

	h.	m.	s.
Right Ascension . . .	5	29	40.096
North Polar Distance .	91°	17′	11″.05

1871.			s.	″
Sept.	6	F.	− 0.01	+ 0.2
	7	F.	+ 0.01	+ 1.1

ε Orionis—Continued.

1871.			s.	″
Oct.	3	F.	+ 0.06	+ 2.2
Dec.	8	F.	− 0.13	+ 0.8
	25	S.	+ 0.01	. .
	27	E.	− 0.01	+ 0.7
Mean			− 0.012	+ 1.00
Div., Flex., etc. .			. .	− 0.47

α Columbæ.

	h.	m.	s.
Right Ascension . . .	5	34	58.752
North Polar Distance	124°	8′	38″.82

1871.			s.	″
Sept.	7	F.	− 0.07	+ 0.7
Oct.	3	F.	− 0.16	+ 1.2
Nov.	29	E.	− 0.03	+ 1.3
Dec.	27	E.	− 0.01	+ 1.0
Mean			− 0.068	+ 1.05
Div., Flex., etc. .			. .	+ 0.04

α Orionis.

	h.	m.	s.
Right Ascension . . .	5	48	11.316
North Polar Distance .	82°	37′	9″.22

1871.			s.	″
Sept.	6	F.	− 0.04	− 0.9
	7	F.	− 0.02	+ 1.1
	8	Ha.	− 0.08	+ 0.7
Mean			− 0.047	− 0.30
Div., Flex., etc. .			. .	− 0.28

α Orionis, (Ref.)

1871.			s.	″
Oct.	3	F.	+ 0.09	+ 1.5

22 Camelopardalis.

	h.	m.	s.
Right Ascension . . .	6	4	37.458
North Polar Distance .	20°	38′	22″.28

1871.			s.	″
Nov.	29	E.	+ 0.47	+ 0.3
Div., Flex., etc. .			. .	− 0.23

γ Geminorum.

	h.	m.	s.
Right Ascension . . .	6	30	15.585
North Polar Distance .	73°	29′	34″.22

1871.			s.	″
Aug.	10	S.	− 0.10	− 0.8
Sept.	7	F.	− 0.06	+ 0.9
	8	Ha.	− 0.08	− 0.1
Oct.	3	F.	− 0.03	+ 0.9
Dec.	25	S.	− 0.03	. .
	27	E.	− 0.03	− 1.4
Mean			− 0.055	− 0.10
Div., Flex., etc. .			. .	+ 0.02

51 Cephei.

	h.	m.	s.
Right Ascension . . .	6	39	13.322
North Polar Distance .	2°	45′	41″.39

1871.			s.	″
Sept.	9	F.	− 0.30	− 0.5
Oct.	3	F.	− 0.84	+ 0.5
Nov.	29	E.	+ 0.72	+ 0.3
Dec.	25	S.	+ 0.15	. .
	27	E.	+ 0.11	− 0.9
Mean			− 0.032	− 0.30
Div., Flex., etc. .			. .	− 0.43

51 Cephei, S. P.

	h.	m.	s.
Right Ascension . . .	6	39	13.322
North Polar Distance	357°	14′	18″.61

1871.			s.	″
Aug.	12	S.	. .	+ 0.5
	16	S.	+ 0.61	+ 0.5
	18	E.	− 0.04	+ 3.4
Sept.	9	F.	− 0.75	− 0.2
	22	S.	− 0.33	+ 1.9
Mean			− 0.128	+ 1.22
Div., Flex., etc. .			. .	− 0.16

α Canis Majoris.

	h.	m.	s.
Right Ascension . . .	6	39	27.773
North Polar Distance	106°	32′	27″.02

1871.			s.	″
Aug.	13	E.	+ 0.04	− 0.7
	15	S.	0.00	+ 1.0
Sept.	8	Ha.	− 0.03	+ 0.1
Mean			+ 0.003	+ 0.13
Div., Flex., etc. .			. .	− 0.22

ε Canis Majoris.

	h.	m.	s.
Right Ascension . . .	6	53	33.444
North Polar Distance	118°	47′	53″.06

1871.			s.	″
Aug.	8	E.	− 0.08	− 2.0
	13	E.	− 0.03	− 2.3
Sept.	7	F.	− 0.13	− 0.6
Oct.	3	F.	− 0.12	+ 0.3
Nov.	29	E.	− 0.12	+ 0.2
Mean			− 0.096	− 0.88
Div., Flex., etc. .			. .	− 0.06

δ Canis Majoris.

	h.	m.	s.
Right Ascension . . .	7	3	8.834
North Polar Distance	116°	11′	22″.53

1871.			s.	″
Aug.	8	E.	− 0.05	+ 0.7
	10	S.	. .	+ 0.9
	14	F.	+ 0.10	− 0.5
Oct.	3	F.	− 0.12	+ 0.3
Mean			− 0.023	+ 0.35
Div., Flex., etc. .			. .	− 0.09

δ Geminorum.

	h.	m.	s.
Right Ascension . . .	7	12	25.072
North Polar Distance .	67°	46′	56″.51

1871.			s.	″
Sept.	9	F.	− 0.10	+ 1.1
Oct.	3	F.	0.00	− 0.4
Nov.	2	Ha.	− 0.02	+ 0.1
	29	E.	− 0.11	+ 0.3
Mean			− 0.058	+ 0.28
Div., Flex., etc. .			. .	+ 0.02

α^2 Geminorum.

	h.	m.	s.
Right Ascension . . .	7	26	21.690
North Polar Distance .	57°	49′	52″.26

1871.			s.	″
Aug.	6	E.	. .	+ 1.1
	8	E.	+ 0.22	+ 0.2
	10	F.	. .	+ 0.9
	13	E.	+ 0.30	− 0.9
	14	F.	+ 0.20	+ 0.5
	15	S.	. .	+ 1.2
Sept.	8	Ha.	+ 0.29	0.0
	9	F.	+ 0.32	+ 0.9
Nov.	2	Ha.	+ 0.26	− 0.9
Dec.	27	E.	+ 0.24	+ 0.2
Mean			+ 0.261	+ 0.32
Div., Flex., etc. .			. .	− 0.30

α Canis Minoris.

	h.	m.	s.
Right Ascension . . .	7	32	32.974
North Polar Distance .	84°	26′	47″.35

1871.			s.	″
Aug.	13	E.	− 0.08	− 0.6
	14	F.	− 0.06	+ 0.4
	15	S.	− 0.14	+ 1.3
Sept.	8	Ha.	− 0.07	− 1.1
	9	F.	− 0.09	+ 0.3
Nov.	2	Ha.	− 0.17	− 0.7
Mean			− 0.122	− 0.07
Div., Flex., etc. .			. .	− 0.33

β Geminorum.

	h.	m.	s.
Right Ascension . . .	7	37	25.186
North Polar Distance .	61°	39′	51″.71

1871.			s.	″
Aug.	8	E.	− 0.03	− 0.3
	10	F.	− 0.01	+ 1.6
	14	F.	− 0.03	+ 1.5
	15	S.	− 0.05	+ 4.6
Sept.	8	Ha.	− 0.03	+ 0.2
	9	F.	− 0.11	+ 1.0
Nov.	2	Ha.	− 0.07	− 0.6
Dec.	27	E.	− 0.06	+ 0.5
Mean			− 0.049	+ 1.06
Div., Flex., etc. .			. .	− 0.27

φ Geminorum.

	h.	m.	s.
Right Ascension . . .	7	45	36.039
North Polar Distance .	62°	54′	9″.16

1871.			s.	″
Dec.	27	E.	− 0.20	. .

3 URSÆ MAJORIS, S. P.

	h.	m.	s.
Right Ascension . . .	7	59	56.698
North Polar Distance	338°	50′	59″.83

1871.				s.		″
Aug.	25	F.	−	0.40	+	1.8
Div., Flex., etc. .				. .	+	0.45

ε HYDRÆ.

	h.	m.	s.
Right Ascension . . .	8	39	56.647
North Polar Distance .	83°	6′	33″.58

1871.				s.		″
Oct.	6	F.	−	0.13		. .
	8	F.	−	0.02	+	0.9
Nov.	2	Ha.	−	0.02		0.0
	7	Ha.	−	0.09	+	0.3
Mean			−	0.065	+	0.40
Div., Flex., etc. .				. .	−	0.29

ι URSÆ MAJORIS.

	h.	m.	s.
Right Ascension . . .	8	50	21.867
North Polar Distance .	41°	27′	14″.29

1871.				s.		″
Nov.	7	Ha.	−	0.04	−	0.9
Div., Flex., etc, .				. .	−	0.11

σ² URSÆ MAJORIS, S, P.

	h.	m.	s.
Right Ascension . . .	8	59	0.544
North Polar Distance	337°	39′	18″.28

1871.				s.		″
Aug.	11	F.	+	0.27	+	3.9
Sept.	26	Ha.	+	0.70	−	0.5
Mean			+	0.485	+	1.70
Div., Flex., etc. .				. .	+	0.46

κ CANCRI.

	h.	m.	s.
Right Ascension . . .	9	0	45.490
North Polar Distance .	78°	48′	50″.35

1871.				s.		″
Nov.	2	Ha.	−	0.01	−	0.4
	7	Ha.	+	0.07	+	0.5
Mean			+	0.030	+	0.05
Div., Flex., etc. .				. .	−	0.12

1 DRACONIS.

	h.	m.	s.
Right Ascension . . .	9	18	29.445
North Polar Distance .	8°	6′	34″.95

1871.				s.		″
Nov.	7	Ha.	+	0.25	+	0.8
Div., Flex., etc. .				. .	−	0.37

1 DRACONIS, S. P.

	h.	m.	s.
Right Ascension . . .	9	18	29.445
North Polar Distance	351°	53′	35′.05

1871.				s.		″
Oct.	18	Ha.	+	0.52	+	0.2
	22	Ha.	−	1.75	−	1.8
Mean			−	0.615	−	0.80
Div., Flex., etc. .				. .		0.00

α HYDRÆ.

	h.	m.	s.
Right Ascension . . .	9	21	14.905
North Polar Distance .	98°	6′	1″.90

1871.				s.		″
Oct.	8	F.	+	0.02	+	0.8
Nov.	7	Ha.	−	0.15	+	1.0
Mean			−	0.065	+	0.90
Div., Flex., etc. .				. .	−	0.44

d URSÆ MAJORIS, S. P.

	h.	m.	s.
Right Ascension . . .	9	23	1.821
North Polar Distance	340°	23′	41″.53

1871.				s.		″
Aug.	11	F.	+	0.25	+	1.5
Div., Flex., etc. .				. .	+	0.37

ε LEONIS.

	h.	m.	s.
Right Ascension . . .	9	38	31.542
North Polar Distance .	65°	37′	58″.38

1871.				s.		″
Oct.	8	F.	−	0.10	+	0.3
Nov.	7	Ha.	−	0.05	+	0.1
Mean			−	0.075	+	0.20
Div., Flex., etc. .				. .	−	0.08

μ LEONIS.

	h.	m.	s.
Right Ascension . . .	9	45	25.348
North Polar Distance .	63°	23′	11″.86

1871.				s.		″
Oct.	8	F.	−	0.04	+	1.9
Nov.	7	Ha.	−	0.02	+	0.2
Mean			−	0.030	+	1.05
Div., Flex., etc. .				. .	−	0.25

α LEONIS.

	h.	m.	s.
Right Ascension . . .	10	1	30.038
North Polar Distance .	77°	24′	10″.94

1871.				s.		″
Aug.	29	F.	−	0.17		. .
Sept.	26	F.	−	0.01	−	0.1
	27	S.	−	0.13	−	0.4
Nov.	7	Ha.	−	0.05	+	0.2
Mean			−	0.090	−	0.10
Div., Flex., etc. .				. .	−	0.10

γ¹ LEONIS.

	h.	m.	s.
Right Ascension . . .	10	12	51.442
North Polar Distance .	69°	30′	23″.80

1871.				s.		″
Sept.	26	F.	+	0.01	+	0.8
	27	S.	+	0.05	+	2.0
	29	F.	+	0.02	−	0.5
Nov.	7	Ha.	+	0.05	+	0.8
Mean			+	0.032	+	0.78
Dix., Flex., etc. .				. .	+	0.03

9 DRACONIS, S. P.

	h.	m.	s.
Right Ascension . . .	10	24	3.799
North Polar Distance	346°	22′	33″.45

1871.				s.		″
Sept.	22	S.	−	0.60	−	0.1
Oct.	20	Ha.	+	0.22	−	0.5
Nov.	17	F.	−	0.77	−	0.5
	18	E.	−	0.52	−	0.9
Mean			−	0.418	−	0.50
Div., Flex., etc. .				. .	+	0.26

α URSÆ MAJORIS.

	h.	m.	s.
Right Ascension . . .	10	55	44.792
North Polar Distance .	27°	33′	11″.94

1871.				s.		″
Sept.	21	S.	−	0.42		. .
	27	S.	+	0.06	−	0.8
Mean			−	0.180		. .
Div., Flex., etc. .				. .	−	0.27

δ LEONIS.

	h.	m.	s.
Right Ascension . . .	11	7	14.755
North Polar Distance .	68°	46′	10″.89

1871.				s.		″
Aug.	9	E.	−	0.01	+	1.7
	11	F.	+	0.04	+	1.7
	15	F.	−	0.11	+	0.3
Sept.	27	S.	+	0.11		. .
Mean			+	0.008	+	1.23
Div., Flex., etc. .				. .	+	0.02

λ DRACONIS, S. P.

	h.	m.	s.
Right Ascension . . .	11	23	43.003
North Polar Distance	340°	2′	32″.49

1871.				s.		″
Nov.	6	F.	+	0.15	+	1.7
Div., Flex., etc. .				. .	+	0.39

υ LEONIS.

	h.	m.	s.
Right Ascension . . .	11	30	20.679
North Polar Distance .	90°	6′	41″.53

1871.				s.		″
Dec.	7.	H.	−	0.05	+	4.2
Div., Flex., etc. .				. .	−	0.47

β LEONIS.

	h.	m.	s.
Right Ascension. . .	11	42	28.710
North Polar Distance .	74°	42′	23″.78

1871.				s.		″
Aug.	9	E.	+	0.04	+	2.9
Dec.	7	H.		0.00	+	3.3
	10	H.	−	0.01	+	1.2
Mean			+	0.010	+	2.47
Div., Flex., etc. .				. .	−	0.01

ο VIRGINIS.

	h.	m.	s.
Right Ascension. . .	11	58	38.278
North Polar Distance .	80°	33′	0″.85

1871.				s.		″
Dec.	10	H.	−	0.03	+	0.7
Div., Flex., etc. .				. .	−	0.21

4 DRACONIS, S. P.

	h.	m.	s.
Right Ascension. . .	12	6	7.747
North Polar Distance	348°	19′	57″.89

1871.				s.		″
Oct.	27	Ha.	+	0.02	+	3.0
Div., Flex., etc. .				. .	+	0.21

η VIRGINIS.

	h.	m.	s.
Right Ascension. . .	12	13	18.411
North Polar Distance .	89°	56′	58″.24

1871.				s.		″
Dec.	5	F.	−	0.04	+	0.3
Div., Flex., etc. .				. .	−	0.39

β CORVI.

	h.	m.	s.
Right Ascension. . .	12	27	36.879
North Polar Distance	112°	40′	57″.30

1871.				s.		″
Dec.	5	F.	−	0.10		0.0
	6	E.	−	0.04	+	1.4
Mean			−	0.070	+	0.70
Div., Flex., etc. .				. .	−	0.06

32^1 CAMELOPARDALIS, S. P.

	h.	m.	s.
Right Ascension. . .	12	48	12.365
North Polar Distance .	5°	53′	10″.46

1871.				s.		″
Nov.	25	E.	−	7.05	+	20.8
Dec.	18	Ha.	−	7.69		. .
Mean			−	7.37		. .
Div., Flex., etc. .				. .	−	0.38

32^2 CAMELOPARDALIS, S. P.

	h.	m.	s.
Right Ascension. . .	12	48	12.365
North Polar Distance .	5°	53′	10″.46

1871.				s.		″
Sept.	2	Ha.	+	0.10	+	2.8
Oct.	27	Ha.	+	0.40	+	2.8
Nov.	25	E.	+	0.61	+	2.5
Dec.	18	Ha.	−	0.31		. .
Mean			+	0.200	+	2.70
Div., Flex., etc. .				. .	−	0.38

12 CANUM VENATICORUM.

	h.	m.	s.
Right Ascension. . .	12	49	59.417
North Polar Distance .	50°	59′	3″.59

1871.				s.		″
Sept.	5	F.	+	0.13	+	2.8
Dec.	5	F.	+	0.02	−	0.4
	6	E.	−	0.04	−	0.2
Mean			−	0.037	+	0.73
Div., Flex., etc. .				. .	−	0.25

θ VIRGINIS.

	h.	m.	s.
Right Ascension. . .	13	3	16.381
North Polar Distance .	94°	50′	57″.99

1871.				s.		″
Dec.	5	F.	+	0.02	+	1.5
Div., Flex., etc. .				. .	−	0.54

α VIRGINIS.

	h.	m.	s.
Right Ascension. . .	13	18	23.989
North Polar Distance	100°	29′	12″.97

1871.				s.		″
Aug.	11	F.	+	0.15	−	0.3
	15	F.	+	0.04		. .
	25	F.	−	0.06	+	1.1
Sept.	4	Ha.	+	0.15		. .
	21	F.	+	0.03		. .
	27	F.	+	0.10		. .
Dec.	6	E.	−	0.03	+	2.2
Mean			+	0.054	+	1.00
Div., Flex., etc. .				. .	−	0.34

ζ VIRGINIS.

	h.	m.	s.
Right Ascension. . .	13	28	7.284
North Polar Distance .	89°	56′	6″.67

1871.				s.		″
Sept.	5	F.	+	0.11	+	1.4
Dec.	6	E.	−	0.01	+	1.2
Mean			+	0.050	+	1.30
Div., Flex., etc. .				. .	−	0.39

η URSÆ MAJORIS.

	h.	m.	s.
Right Ascension. . .	13	42	27.360
North Polar Distance .	40°	2′	31″.64

1871.				s.		″
Sept.	5	F.	+	0.08	−	1.8
Div., Flex., etc. .				. .	−	0.08

η BOOTIS.

	h.	m.	s.
Right Ascension. . .	13	48	32.588
North Polar Distance .	70°	57′	15″.72

1871.				s.		″
Aug.	30	F.	−	0.08		. .
Sept.	5	F.	+	0.05	+	2.5
Mean			−	0.015		. .
Div., Flex., etc. .				. .	+	0.07

α DRACONIS.

	h.	m.	s.
Right Ascension. . .	14	0	53.888
North Polar Distance .	25°	0′	26″.96

1871.				s.		″
Dec.	20	S.	−	0.08		. .

α DRACONIS, S. P.

	h.	m.	s.
Right Ascension . .	14	0	53.888
North Polar Distance .	334°	59′	33″.04

1871.				s.		″
Sept.	5	F.	+	0.75	+	1.5
Div., Flex., etc. .				. .	+	0.35

α BOOTIS.

	h.	m.	s.
Right Ascension. . .	14	9	46.676
North Polar Distance .	70°	8′	40″.36

1871.				s.		″
Aug.	21	F.		. .	+	4.2
Sept.	5	F.	+	0.10	+	3.0
	21	F.	+	0.09	+	1.2
Dec.	20	S.		0.00		. .
Mean			+	0.063	+	2.80
Div., Flex., etc. .				. .	+	0.03

θ BOOTIS.

	h.	m.	s.
Right Ascension. . .	14	20	48.272
North Polar Distance .	37°	33′	7″.22

1871.				s.		″
Sept.	21	F.	+	0.16	−	0.6
Div., Flex., etc. .				. .	−	0.10

5 URSÆ MINORIS.

	h.	m.	s.
Right Ascension. . .	14	27	49.617
North Polar Distance .	13°	43′	51″.42

1871.				s.		″
Sept.	21	F.	+	0.21	−	1.6
Div., Flex., etc. .				. .	−	0 28

5 URSÆ MINORIS, S. P.

	h.	m.	s.
Right Ascension . .	14	27	49.617
North Polar Distance .	346°	16′	8″.58

1871.		s.	″
Sept. 2	Ha.	+ 0.33	+ 4.2
5	F.	+ 0.72	+ 1.3
Oct. 27	Ha.	+ 0.13	+ 3.1
Dec. 15	E.	+ 0.22	+ 0.4
18	Ha.	+ 0.36	. .
Mean		+ 0.352	+ 2.25
Div., Flex., etc. .		. .	+ 0.26

ε BOOTIS.

	h.	m.	s.
Right Ascension. . .	14	39	21.224
North Polar Distance .	62°	22′	49″.81

1871.		s.	″
Sept. 21	F.	+ 0.06	+ 1.0
Dec. 20	S.	− 0.08	. .
Mean		− 0.010	. .
Div., Flex., etc. .		. .	− 0.27

α² LIBRÆ.

	h.	m.	s.
Right Ascension . .	14	43	44.707
North Polar Distance .	105°	30′	13″.69

1871.		s.	″
Sept. 22	S.	+ 0.17	. .
Dec. 20	S.	− 0.11	. .
Mean		+ 0.030	. .

β URSÆ MINORIS.

	h.	m.	s.
Right Ascension. . .	14	51	6.388
North Polar Distance .	15°	19′	3″.66

1871.		s.	″
Dec. 20	S.	+ 0.03	. .

β URSÆ MINORIS, S. P.

	h.	m.	s.
Right Ascension . .	14	51	6.388
North Polar Distance .	344°	40′	56″.34

1871.		s.	″
Sept. 5	F.	+ 0.39	− 0.2
Oct. 27	Ha.	+ 0.03	+ 1.2
Dec. 15	E.	+ 0.21	+ 0.4
27	E.	. .	− 0.4
Mean		+ 0.210	+ 0.25
Div., Flex., etc. .		. .	+ 0.33

β BOOTIS.

	h.	m.	s.
Right Ascension. . .	14	57	5.208
North Polar Distance .	49°	5′	57″.81

1871.		s.	″
Dec. 20	S.	− 0.01	. .

β LIBRÆ.

	h.	m.	s.
Right Ascension. . .	15	10	4.055
North Polar Distance .	98°	54′	17″.35

1871.		s.	″
Dec. 8	S.	+ 0.06	+ 2.9
Div., Flex., etc. .		. .	− 0.43

μ¹ BOOTIS.

	h.	m.	s.
Right Ascension. . .	15	19	37.092
North Polar Distance .	52°	10′	8″.47

1871.		s.	″
Dec. 20	S.	− 0.10	. .

γ² URSÆ MINORIS, S. P.

	h.	m.	s.
Right Ascension . .	15	20	57.076
North Polar Distance .	342°	17′	35″.33

1871.		s.	″
Sept. 3	F.	+ 0.09	+ 1.0
4	Ha.	+ 0.42	− 0.1
Dec. 27	E.	− 0.66	+ 0.7
Mean		− 0.050	+ 0.53
Div., Flex., etc. .		. .	+ 0.35

α CORONÆ BOREALIS.

	h.	m.	s.
Right Ascension. . .	15	29	13.596
North Polar Distance .	62°	50′	57″.98

1871.		s.	″
Oct. 7	F.	+ 0.07	+ 1.5
Dec. 8	S.	+ 0.04	+ 1.8
12	S.	0.00	1.4
20	S.	0.00	. .
27	F.	0.00	. .
Mean		+ 0.022	+ 1.57
Div., Flex., etc. .		. .	− 0.27

α SERPENTIS.

	h.	m.	s.
Right Ascension. . .	15	37	54.886
North Polar Distance .	83°	9′	59″.51

1871.		s.	″
Sept. 27	F.	+ 0.12	+ 1.4
Oct. 7	F.	+ 0.02	+ 1.5
Dec. 8	S.	+ 0.09	. .
12	S.	+ 0.11	− 0.8
Mean		+ 0.085	+ 0.70
Div., Flex., etc. .		. .	− 0.29

ε SERPENTIS.

	h.	m.	s.
Right Ascension. . .	15	44	23.230
North Polar Distance .	85°	7′	55″.32

1871.		s.	″
Oct. 27	F.	+ 0.02	+ 1.4
Dec. 20	S.	− 0.04	. .
Mean		− 0.010	. .
Div., Flex., etc. .		. .	− 0.35

GROOMBRIDGE 2320, S. P.

	h.	m.	s.
Right Ascension . .	16	5	58.595
North Polar Distance .	338°	9′	0″.46

1871.		s.	″
Sept. 3	F.	+ 0.44	− 0.9
Nov. 29	E.	− 0.29	− 2.4
Dec. 8	F.	+ 0.18	− 2.4
27	E.	+ 0.43	− 4.8
Mean		+ 0.190	− 2.62
Div., Flex., etc. .		. .	+ 0.46

α SCORPII.

	h.	m.	s.
Right Ascension . .	16	21	30.079
North Polar Distance .	116°	8′	35″.05

1871.		s.	″
Dec. 12	S.	− 0.09	. .

ζ OPHIUCHI.

	h.	m.	s.
Right Ascension . .	16	30	3.430
North Polar Distance .	100°	18′	11″.45

1871.		s.	″
Oct. 17	F.	− 0.04	+ 3.8
Dec. 26	E.	+ 0.11	+ 0.5
Mean		+ 0.035	+ 2.15
Div., Flex., etc. .		. .	− 0.35

η HERCULIS.

	h.	m.	s.
Right Ascension. . .	16	38	28.444
North Polar Distance .	50°	49′	50″.48

1871.		s.	″
Dec. 26	E.	− 0.04	− 0.5
27	F.	+ 0.01	. .
Mean		− 0.015	. .
Div., Flex., etc. .		. .	− 0.24

κ OPHIUCHI.

	h.	m.	s.
Right Ascension. . .	16	51	33.739
North Polar Distance .	80°	25′	19″.67

1871.		s.	″
Aug. 1	E.	+ 0.09	+ 1.5
12	S.	+ 0.07	+ 2.1
Oct. 17	F.	0.00	+ 2.4
Dec. 26	E.	+ 0.03	− 0.3
Mean		+ 0.048	+ 1.42
Div., Flex., etc. .		. .	− 0.20

ε URSÆ MINORIS.

	h.	m.	s.
Right Ascension. . .	16	59	16.436
North Polar Distance .	7°	45′	16″.16

1871.		s.	″
Aug. 1	E.	. .	− 1.1
5	S.	. .	+ 1.1
12	S.	− 0.75	+ 0.1

ε Ursæ Minoris—Continued.

1871.				s.		″
Oct.	17	F.	+	0.34	+	1.7
Mean			−	0.205	+	0.45
Div., Flex., etc. .				. .	−	0.37

ε Ursæ Minoris, S. P.

	h.	m.	s.
Right Ascension . .	16	59	16.436
North Polar Distance .	352°	14′	43″.84

1871.				s.		″
Sept.	7	F.	+	0.09	+	0.4
Dec.	9	S.	+	0.36		. .
Mean			+	0.225		. .
Div., Flex., etc. .				. .	−	0.01

α¹ Herculis.

	h.	m.	s.
Right Ascension. . .	17	8	45.947
North Polar Distance .	75°	27′	37″.61

1871.				s.		″
Aug.	1	E.	−	0.02	+	0.9
Oct.	17	F.	−	0.01	+	2.3
Dec.	26	E.	+	0.06	−	1.0
Mean			+	0.010	+	0.73
Div., Flex., etc. .				. .	−	0.04

α Ophiuchi.

	h.	m.	s.
Right Ascension. . .	17	28	56.789
North Polar Distance .	77°	20′	37″.80

1871.				s.		″
Aug.	1	E.	+	0.03	+	0.9
	16	S.	+	0.01	+	3.2
Dec.	26	E.	+	0.04	−	1.1
Mean			+	0.027	+	1.00
Div., Flex., etc. .				. .	−	0.10

μ¹ Herculis.

	h.	m.	s.
Right Ascension. . .	17	41	24.632
North Polar Distance .	62°	12′	6″.96

1871.				s.		″
Aug.	1	E.	−	0.02	+	0.9
	14	E.		. .	+	1.5
	16	S.	−	0.04	+	2.8
	24	E.	−	0.03	+	3.3
Mean			−	0.023	+	2.12
Div., Flex., etc. .				. .	−	0.27

ψ¹ Draconis, S. P.

	h.	m.	s.
Right Ascension . .	17	44	14.213
North Polar Distance .	342°	12′	41″.37

1871.				s.		″
Nov.	29	E.	−	0.06	−	2.4
Div., Flex., etc. .				. .	+	0.34

γ Draconis.

	h.	m.	s.
Right Ascension. . .	17	53	36.795
North Polar Distance .	28°	29′	42″.19

1871.				s.		″
Aug.	24	E.	−	0.22	+	1.1
Div., Flex., etc. .				. .	−	0.08

γ² Sagittarii.

	h.	m.	s.
Right Ascension . .	17	57	31.314
North Polar Distance .	120°	25′	22″.00

1871.				s.		″
Aug.	24	E.	−	0.05	+	0.5
Sept.	23	Ha.	+	0.04	+	0.2
Mean			−	0.005	+	0.35
Div., Flex., etc. .				. .	−	0.04

μ¹ Sagittarii.

	h.	m.	s.
Right Ascension . .	18	6	2.926
North Polar Distance .	111°	5′	23″.15

1871.				s.		″
Aug.	24	E.	+	0.04	+	1.5
	25	F.	−	0.05	+	1.7
Mean			−	0.005	+	1.60
Div., Flex., etc. .				. .	−	0.13

δ Ursæ Minoris.

	h.	m.	s.
Right Ascension. . .	18	13	56.963
North Polar Distance .	3°	23′	37″.42

1871.				s.		″
Aug.	14	E.		. .	−	2.3
	16	S.	−	0.08	+	0.6
	18	E.	−	0.13	+	1.1
	24	E.		. .	+	1.1
Sept.	23	Ha.		. .	+	0.2
Dec.	26	E.		. .	−	0.8
Mean			−	0.105	−	0.02
Div., Flex., etc. .				. .	−	0.46

δ Ursæ Minoris, S. P.

	h.	m.	s.
Right Ascension . .	18	13	56.963
North Polar Distance .	356°	36′	22″.58

1871.				s.		″
Sept.	8	Ha.		. .	+	0.1
Oct.	3	F.	−	0.20	+	1.1
Nov.	29	E.	+	1.18	+	0.1
Dec.	25	S.	−	0.16		. .
	27	E.	−	0.25	−	0.3
Mean			+	0.142	+	0.25
Div., Flex., etc. .				. .	−	0.16

1 Aquilæ.

	h.	m.	s.
Right Ascension. . .	18	28	11.169
North Polar Distance .	98°	19′	53″.92

1 Aquilæ—Continued.

1871.				s.		″
Aug.	12	S.	+	0.13		. .
	14	E.	+	0.08	−	0.1
	15	F.	+	0.13	+	1.1
	18	E.	+	0.10	+	0.6
	24	E.	+	0.09	+	2.6
Sept.	23	Ha.	+	0.03	+	1.5
Mean			+	0.093	+	1.14
Div., Flex., etc. .				. .	−	0.44

α Lyræ.

	h.	m.	s.
Right Ascension. . .	18	32	34.243
North Polar Distance .	51°	20′	5″.88

1871.				s.		″
Aug.	12	S.	−	0.06	+	1.0
	15	F.	+	0.01	+	0.9
	24	E.	−	0.10	−	0.3
Dec.	9	S.	−	0.04	+	1.5
	13	S.	−	0.02	+	0.3
Mean			−	0.042	+	0.68
Div., Flex., etc. .				. .	−	0.27

β Lyræ.

	h.	m.	s.
Right Ascension. . .	18	45	19.026
North Polar Distance .	56°	47′	7″.99

1871.				s.		″
Aug.	14	E.		. .	−	1.2
	24	F.	+	0.07	+	1.8
Sept.	21	F.	−	0.04		. .
Oct.	19	F.	+	0.05	+	1.0
Dec.	13	S.	+	0.02	+	2.0
Mean			+	0.025	+	0.90
Div., Flex., etc. .				. .	−	0.29

50 Draconis.

	h.	m.	s.
Right Ascension. . .	18	50	31.216
North Polar Distance .	14°	43′	11″.26

1871.				s.		″
Aug.	18	E.	+	0.21	+	0.8
Div., Flex., etc. .				. .	−	0.27

ζ Aquilæ.

	h.	m.	s.
Right Ascension. . .	18	59	28.786
North Polar Distance .	86°	19′	34″.14

1871.				s.		″
Aug.	5	S.	+	0.01		. .
	18	E.	+	0.08	+	2.2
	24	E.	+	0.10	+	1.5
	25	E.	+	0.16	+	1.4
Sept.	21	F.	+	0.12	+	1.2
	22	S.	+	0.16	+	1.2
	23	Ha.	+	0.12	+	0.9
Dec.	13	S.	+	0.12	+	0.8
	21	S.	+	0.19		. .
Mean			+	0.118	+	1.31
Div., Flex., etc. .				. .	−	0.38

d Sagittarii.

	h.	m.	s.
Right Ascension . .	19	10	5.153
	°	′	″
North Polar Distance .	109	10	44.95

1871.				s.		″
Aug.	5	S.	+	0.09	+	3.0
	11	F.	+	0.03	+	3.3
	24	E.	+	0.02	+	3.1
	25	F.	−	0.01	+	3.1
Sept.	21	F.	−	0.01	+	3.1
	23	Ha.	+	0.04	+	3.0
Oct.	19	F.	−	0.04	+	3.6
Mean			+	0.017	+	3.17
Div., Flex., etc. .				. .	−	0.17

δ Draconis.

	h.	m.	s.
Right Ascension. . .	19	12	31.140
	°	′	″
North Polar Distance .	22	33	55.87

1871.				s.		″
Aug.	5	S.	−	0.24		. .
	18	E.	+	0.01	+	0.2
	24	E.	+	0.09	+	1.4
Sept.	21	F.	−	0.01		0.0
Dec.	13	S.	+	0.05	−	1.5
Mean			−	0.020	+	0.02
Div., Flex., etc. .				. .	−	0.19

δ Aquilæ.

	h.	m.	s.
Right Ascension. . .	19	18	59.584
	°	′	″
North Polar Distance .	87	8	24.55

1871.				s.		″
Aug.	12	S.	+	0.03	+	0.9
	18	E.	+	0.06	+	1.2
	24	E.	−	0.09	+	1.5
Mean				0.000	+	1.20
Div., Flex., etc. .				. .	−	0.37

κ Aquilæ,

	h.	m.	s.
Right Ascension. . .	19	29	57.002
	°	′	″
North Polar Distance .	97	18	41.96

1871.				s.		″
Aug.	2	S.	+	0.01	+	0.8
	18	E.	+	0.09	+	2.5
	24	E.	+	0.03	+	2.6
	25	F.	+	0.02	+	2.2
Sept.	21	F.	−	0.02	+	1.6
Oct.	13	Ha.	+	0.02	+	1.1
	19	F.	+	0.10	+	3.3
Mean			+	0.036	+	2.01
Div., Flex., etc. .				. .	−	0.44

γ Aquilæ.

	h.	m.	s.
Right Ascension. . .	19	40	7.586
	°	′	″
North Polar Distance .	79	41	56.95

γ Aquilæ—Continued.

1871.				s.		″
Aug.	2	S.	+	0.06	−	0.5
	16	S.	+	0.06	+	1.1
	18	E.	+	0.01	+	0.3
	24	E.	+	0.04	+	1.5
Aug.	25	F.	+	0.05	+	1.0
Sept.	9	F.	+	0.08	−	0.2
	22	S.	+	0.14	+	0.9
Oct.	13	Ha.	−	0.03	+	1.1
	18	Ha.	+	0.06	+	1.1
	19	F.	−	0.01	+	1.1
Dec.	9	S.	+	0.02		. .
	13	S.	+	0.07	+	0.2
	21	S.	+	0.04		. .
	27	E.	−	0.07		. .
Mean			+	0.032	+	0.69
Div., Flex., etc. .				. .	−	0.15

γ Aquilæ, (Ref.)

1871.				s.		″
Sept.	21	F.	−	0.14	+	0.7

α Aquilæ.

	h.	m.	s.
Right Ascension. . .	19	44	29.315
	°	′	″
North Polar Distance .	81	28	13.41

1871.				s.		″
Aug.	18	E.		0.00		0.0
	19	F.	+	0.02		. .
	24	E.	+	0.04	+	1.7
	25	F.	+	0.03	+	1.1
	30	F.		. .		. .
Sept.	9	F.	−	0.01	+	0.3
Oct.	19	F.	+	0.10	+	1.2
Dec.	9	S.	+	0.06	+	0.9
	13	S.	+	0.06	+	0.4
	21	S.	+	0.01		. .
	27	E.	+	0.03	+	2.3
Mean			+	0.034	+	0.99
Div., Flex., etc. .				. .	−	0.25

ε Draconis.

	h.	m.	s.
Right Ascension. . .	19	48	35.786
	°	′	″
North Polar Distance .	20	3	39.61

1871.				s.		″
Aug.	2	S.	+	0.05	−	3.7
	25	F.	+	0.41	−	0.9
Mean			+	0.230	−	2.30
Div., Flex., etc. .				. .	−	0.24

β Aquilæ.

	h.	m.	s.
Right Ascension. . .	19	48	58.563
	°	′	″
North Polar Distance .	83	54	48.38

1871.				s.		″
Aug.	5	S.	+	0.06	+	1.5
	15	F.	+	0.01	+	1.3
	16	S.	+	0.02		. .
	18	E.	−	0.01	+	0.2
	19	F.	+	0.03	+	1.4
	24	E.	+	0.05	+	2.1
Sept.	22	S.	+	0.06	+	0.2
Oct.	19	F.	+	0.07	+	0.5
Dec.	21	S.	+	0.05		. .
	27	E.	+	0.04	+	0.2
Mean			+	0.038	+	0.92
Div., Flex., etc. .				. .	−	0.32

λ Ursæ Minoris.

	h.	m.	s.
Right Ascension. . .	19	53	17.971
	°	′	″
North Polar Distance .	1	4	46.53

1871.				s.		″
Aug.	2	S.		. .	−	2.2
	15	F.		. .	+	2.0
	18	E.	−	0.02	−	0.9
	19	F.		. .	+	0.6
	25	F.		. .	−	0.1
Sept.	9	Ha.	−	0.58		. .
	26	Ha.		. .	−	0.8
Oct.	13	Ha.		. .	+	0.5
	14	F.		. .	−	1.6
	17	F.		. .	+	0.7
	18	Ha.		. .	+	1.3
	19	F.		. .	−	0.4
	20	Ha.		. .	−	0.2
Mean			−	0.300	−	0.09
Div., Flex., etc. .				. .	−	0.29

λ Ursæ Minoris, S. P.

	h.	m.	s.
Right Ascension . .	19	53	17.971
	°	′	″
North Polar Distance .	358	55	13.47

1871.				s.		″
Nov.	7	Ha.		. .	+	2.2
Div., Flex., etc. .				. .	−	0.16

τ Aquilæ.

	h.	m.	s.
Right Ascension. . .	19	57	50.266
	°	′	″
North Polar Distance .	83	5	2.66

1871.				s.		″
Aug.	24	E.		0.00	+	2.0
Sept.	21	F.	−	0.06	+	1.1
	23	Ha.	+	0.01	+	0.9
Mean			−	0.017	+	1.13
Div., Flex., etc. .				. .	−	0.29

α² Capricorni.

	h.	m.	s.
Right Ascension . .	20	10	53.703
	°	′	″
North Polar Distance .	102	56	33.17

1871.				s.		″
Aug.	18	E.	+	0.06	+	1.6
	24	E.	+	0.10	+	1.9
	25	F.	+	0.03	+	1.4
Sept.	23	Ha.	+	0.04		. .
	26	Ha.	+	0.20	+	0.1
Oct.	13	Ha.	+	0.11	−	0.6
	14	F.	+	0.04	+	1.1
	19	F.	+	0.06	+	0.2
	21	F.	+	0.05	−	0.1
Mean			+	0.077	+	0.70
Div., Flex., etc. .				. .	−	0.28

κ Cephei.

	h.	m.	s.
Right Ascension. . .	20	13	11.217
	°	′	″
North Polar Distance .	12	40	42.87

1871.				s.		″
Aug.	2	S.	+	0.56	−	2.7
	25	F.	+	0.66	+	0.6

κ Cephei—Continued.

1871.			s.	″
Sept.	21	F.	− 0.13	− 1.8
Oct.	18	Ha.	+ 0.05	+ 0.2
	19	F.	+ 0.51	− 0.8
Mean			+ 0.330	− 0.90
Div., Flex., etc. .			. .	− 0.28

π Capricorni.

	h.	m.	s.
Right Ascension . .	20	19	56.100
North Polar Distance .	108°	37′	56″.34

1871.			s.	″
Aug.	15	F.	− 0.10	+ 0.1
	18	E.	+ 0.01	+ 0.7
	19	F.	+ 0.08	. .
	25	F.	− 0.01	+ 1.8
Sept.	21	F.	− 0.10	+ 1.5
Oct.	14	F.	+ 0.05	+ 2.4
	17	F.	− 0.05	+ 1.3
	18	Ha.	+ 0.01	+ 1.4
	19	F.	− 0.06	+ 0.4
	21	F.	− 0.07	+ 1.7
Mean			− 0.006	+ 1.26
Div., Flex., etc. .			. .	− 0.18

ε Delphini.

	h.	m.	s.
Right Ascension. . .	20	27	2.957
North Polar Distance .	79°	8′	0″.36

1871.			s.	″
Aug.	2	S.	+ 0.07	. .
	15	F.	− 0.02	0.0
	18	E.	0.00	+ 0.9
	25	F.	+ 0.09	+ 0.8
Sept.	26	Ha.	+ 0.05	− 0.3
Oct.	14	F.	+ 0.03	− 1.7
	18	Ha.	+ 0.07	+ 0.7
Mean			+ 0.041	+ 0.63
Div., Flex., etc.			. .	− 0.13

ε Delphini, (Ref.)

1871.			s.	″
Sept.	21	F.	− 0.05	+ 2.3
Oct.	17	F.	+ 0.09	+ 2.3
	19	F.	+ 0.08	+ 2.0
Mean			+ 0.040	+ 2.20

Groombridge 3241.

	h.	m.	s.
Right Ascension. . .	20	30	32.725
North Polar Distance .	17°	54′	19″.57

1871.			s.	″
Aug.	18	E.	+ 0.78	+ 1.3
Oct.	18	Ha.	0.00	+ 1.6
Mean			+ 0.039	+ 1.45
Div., Flex., etc. .			. .	− 0.26

Groombridge 3241, S. P.

	h.	m.	s.
Right Ascension . .	20	30	32.725
North Polar Distance .	342°	5′	40″.43

1871.			s.	″
Nov.	7	Ha.	− 0.27	− 2.0
Div., Flex., etc. .			. .	+ 0.34

α Cygni.

	h.	m.	s.
Right Ascension. . .	20	37	2.060
North Polar Distance .	45°	10′	46″.59

1871.			s.	″
Aug.	15	F.	+ 0.01	− 0.1
	18	E.	− 0.07	+ 1.3
	25	F.	+ 0.11	+ 1.4
Dec.	27	E.	− 0.07	+ 0.6
Mean			− 0.007	+ 0.80
Div., Flex., etc. .			. .	− 0.17

α Cygni, (Ref.)

1871.			s.	″
Sept.	21	F.	− 0.15	+ 1.0
Oct.	19	F.	. .	− 4.0
Mean			. .	− 1.50

μ Aquarii.

	h.	m.	s.
Right Ascension. . .	20	45	41.615
North Polar Distance .	99°	27′	55″.11

1871.			s.	″
Aug.	2	S.	+ 0.06	− 0.2
	18	E.	+ 0.06	+ 0.9
	25	F.	+ 0.04	+ 1.4
Sept.	26	Ha.	+ 0.06	+ 0.5
Mean			+ 0.055	+ 0.40
Div., Flex., etc. .			. .	− 0.41

ν Cygni.

	h.	m.	s.
Right Ascension. . .	20	52	21.846
North Polar Distance .	49°	19′	41″.04

1871.			s.	″
Aug.	11	F.	− 0.08	0.0
	25	F.	+ 0.15	+ 1.8
Sept.	22	S.	+ 0.11	+ 0.8
	26	Ha.	− 0.14	− 0.1
Oct.	18	Ha.	+ 0.06	+ 1.7
	19	F.	− 0.15	+ 0.3
Mean			+ 0.042	+ 0.75
Div., Flex., etc. .			. . .	− 0.13

12-Year Cat. 1879.

	h.	m.	s.
Right Ascension. . .	20	53	21.553
North Polar Distance .	9°	55′	59″.32

1871.			s.	″
Oct.	22	Ha.	+ 1.33	− 0.4
Div., Flex., etc. .			. .	− 0.33

12-Year Cat. 1879, S. P.

	h.	m.	s.
Right Ascension . .	20	53	21.553
North Polar Distance .	350°	4′	0″.68

1871.			s.	″
Nov.	2	Ha.	− 0.19	− 0.4
Div., Flex., etc. .			. .	+ 0.12

61¹ Cygni.

	h.	m.	s.
Right Ascension. . .	21	1	6.984
North Polar Distance .	51°	53′	0″.74

1871.			s.	″
Aug.	11	F.	+ 0.09	+ 2.3
Oct.	20	Ha.	− 0.07	+ 1.3
Mean			+ 0.010	+ 1.80
Div., Flex., etc. .			. .	− 0.31

ζ Cygni.

	h.	m.	s.
Right Ascension. . .	21	7	26.777
North Polar Distance .	60°	18′	3″.34

1871.			s.	″
Aug.	2	S.	+ 0.06	− 0.4
	11	F.	− 0.07	− 0.3
Sept.	26	Ha.	− 0.02	− 1.4
Oct.	13	Ha.	+ 0.02	+ 0.1
	18	Ha.	− 0.03	+ 0.7
	20	Ha.	− 0.01	− 0.5
	22	Ha.	+ 0.11	+ 0.6
Nov.	17	F.	+ 0.13	+ 0.6
Mean			+ 0.024	− 0.75
Div., Flex., etc. .			. .	− 0.28

α Cephei.

	h.	m.	s.
Right Ascension. . .	21	15	29.953
North Polar Distance .	27°	57′	38″.90

1871.			s.	″
Oct.	20	Ha.	− 0.27	− 1.9
Div., Flex., etc. .			. .	− 0.27

α Cephei, (Ref.)

1871.			s.	″
Sept.	26	Ha.	− 0.83	+ 1.8

1 Pegasi.

	h.	m.	s.
Right Ascension. . .	21	16	7.313
North Polar Distance .	70°	44′	44″.95

1871.			s.	″
Aug.	11	F.	− 0.09	+ 1.3
	28	F.	− 0.13	+ 1.1
Oct.	13	Ha.	− 0.03	+ 1.7
	18	Ha.	− 0.07	+ 1.6
	21	F.	+ 0.04	+ 1.6
Mean			− 0.056	+ 1.46
Div., Flex., etc. .			. .	+ 0.06

β Aquarii.

	h.	m.	s.
Right Ascension. . .	21	24	45.997
North Polar Distance .	96°	8′	13″.25

1871.			s.	″
Sept.	26	Ha.	+ 0.11	− 0.9
	28	S.	+ 0.01	+ 0.6
Oct.	20	Ha.	+ 0.14	+ 0.3
	22	Ha.	− 0.06	+ 1.1
Nov.	11	Ha.	+ 0.01	+ 2.4
	18	E.	. .	+ 4.2
Mean			+ 0.042	+ 1.28
Div., Flex., etc. .			. .	− 0.47

β Cephei.

	h.	m.	s.
Right Ascension. . .	21	26	59.160
North Polar Distance .	20°	0′	20″.22

1871.				s.		″
Aug.	11	F.	−	0.21	−	0.7
Div., Flex., etc. .				. .	−	0.24

β Cephei, (Ref.)

1871.				s.		″
Oct.	13	Ha.	−	0.14	−	2.4
	17	F.	−	0.19	−	1.2
Mean			−	0.165	−	1.80

ξ Aquarii.

	h.	m.	s.
Right Ascension. . .	21	30	52.965
North Polar Distance .	98°	25′	52″.26

1871.				s.		″
Aug.	11	F.		0.00	+	0.6
Oct.	20	Ha.	−	0.02	−	0.1
	22	Ha.	+	0.02	+	1.0
Nov.	11	Ha.	+	0.03	+	1.4
	18	E.	+	0.09	+	1.5
Mean			+	0.024	+	0.88
Div., Flex., etc. .				. .	−	0.44

ε Pegasi.

	h.	m.	s.
Right Ascension. . .	21	37	51.028
North Polar Distance .	80°	42′	54″.30

1871.				s.		″
Aug.	11	F.	−	0.12	+	1.4
Sept.	28	S.	+	0.03	+	1.1
Oct.	13	Ha.	−	0.01	+	0.6
	17	F.	+	0.08	+	0.8
Mean			−	0.005	+	0.98
Div., Flex., etc. .				. .	−	0.22

ε Pegasi, (Ref.)

1871.				s.		″
Sept.	26	Ha.	−	0.18	+	2.4

11 Cephei.

	h.	m.	s.
Right Ascension. . .	21	40	1.455
North Polar Distance .	19°	16′	56″.97

1871.				s.		″
Oct.	20	Ha.	−	0.39	−	0.2
Div., Flex., etc. .				. .	−	0.25

μ Capricorni.

	h.	m.	s.
Right Ascension . .	21	46	15.656
North Polar Distance .	104°	9′	26″.22

1871.				s.		″
Aug.	15	F.	−	0.02	+	1.0
Sept.	28	S.	−	0.03	+	1.5
Oct.	10	F.	+	0.07	+	1.9
	17	F.	+	0.09	+	0.5
Mean			+	0.028	+	1.22
Div., Flex., etc. .				. .	−	0.27

79 Draconis.

	h.	m.	s.
Right Ascension. . .	21	51	15.703
North Polar Distance .	16°	54′	28″.64

1871.				s.		″
Sept.	28	S.	−	0.10	+	0.4
Oct.	10	F.	+	0.44	−	1.0
Nov.	11	Ha.	+	0.08	+	1.1
	18	E.	+	0.32	+	0.2
Mean			+	0.185	+	0.18
Div., Flex., etc. .				. .	−	0.27

α Aquarii.

	h.	m.	s.
Right Ascension. . .	21	59	9.445
North Polar Distance .	90°	56′	43″.32

1871.				s.		″
Aug.	30	F.	+	0.01		. .
Sept.	22	S.	−	0.02		. .
	27	F.	−	0.02	−	0.2
Oct.	10	F.	−	0.01	+	0.1
	20	Ha.	+	0.06	−	0.6
Nov.	11	Ha.	+	0.03	+	4.1
	17	F.	+	0.16	+	1.9
	18	E.	+	0.05	+	1.8
Mean			+	0.032	+	1.18
Div., Flex., etc. .				. .	−	0.44

α Aquarii, (Ref.)

1871.				s.		″
Oct.	13	Ha.	−	0.07	+	4.7

θ Aquarii.

	h.	m.	s.
Right Ascension. . .	22	10	1.509
North Polar Distance .	98°	25′	28″.20

1871.				s.		″
Aug.	28	F.	+	0.10	+	1.0
	30	F.	+	0.16	−	1.5
Sept.	22	S.	+	0.03	+	1.4
	27	F.	−	0.07	+	0.1
	28	S.	+	0.03	−	0.1
Oct.	20	Ha.		0.00	−	0.2
Dec.	16	F.	+	0.09	+	2.0
Mean			+	0.049	+	0.39
Div., Flex., etc. .				. .	−	0.44

π Aquarii.

	h.	m.	s.
Right Ascension. . .	22	18	41.309
North Polar Distance .	89°	16′	34″.43

1871.				s.		″
Aug.	30	F.	+	0.09	−	1.2
	31	Ha.	−	0.05	+	0.6
Sept.	22	S.	−	0.03	+	1.0
	27	F.	−	0.03	+	0.3
	28	S.	+	0.03	−	0.1
Oct.	20	Ha.	−	0.03	+	0.3
Mean			−	0.003	+	0.15
Div., Flex., etc. .				. .	−	0.35

η Aquarii.

	h.	m.	s.
Right Ascension. . .	22	28	43.603
North Polar Distance .	90°	46′	53″.27

1871.				s.		″
Aug.	31	Ha.	+	0.01	+	0.8
Sept.	22	S.	+	0.07	+	0.1
	28	S.	+	0.06	+	0.3
Oct.	20	Ha.	+	0.06	−	0.6
Nov.	7	Ha.	+	0.06	+	1.6
	17	F.	−	0.03	+	1.5
	18	E.	+	0.07	+	1.9
Dec.	16	F.	+	0.02	+	2.4
Mean			+	0.040	+	1.01
Div., Flex., etc. .				. .	−	0.43

ζ Pegasi.

	h.	m.	s.
Right Ascension. . .	22	35	1.661
North Polar Distance .	79°	50′	27″.84

1871.				s.		″
Aug.	11	F.	−	0.02	+	2.1
	30	F.	+	0.10	−	1.0
	31	Ha.	+	0.09	−	0.6
Sept.	22	S.	+	0.09	+	0.5
	28	S.	+	0.03	+	0.2
Nov.	7	Ha.	+	0.09	+	1.6
	11	Ha.	+	0.10	+	1.7
	17	F.	+	0.08	+	2.4
	18	E.	+	0.05	+	1.6
Dec.	16	F.	+	0.03	+	2.4
Mean			+	0.064	+	1.07
Div., Flex., etc. .				. .	−	0.16

ι Cephei.

	h.	m.	s.
Right Ascension. . .	22	45	5.525
North Polar Distance .	24°	28′	40″.09

1871.				s.		″
Aug.	11	F.	−	0.11	−	0.1
	31	Ha.	+	0.05		0.0
Sept.	28	S.	+	0.12	+	1.0
Mean			+	0.020	+	0.30
Div., Flex., etc. .				. .	−	0.21

λ Aquarii.

	h.	m.	s.
Right Ascension. . .	22	45	52.952
North Polar Distance .	98°	15′	54″.40

1871.				s.		″
Sept.	21	F.	+	0.19	+	0.8
	22	S.	+	0.09	+	0.5
	26	Ha.	+	0.10	+	0.5
Nov.	6	F.	−	0.02	+	0.2
	11	Ha.	+	0.09	+	1.7
Mean			+	0.150	+	0.74
Div., Flex., etc. .				. .	−	0.44

α Piscis Australis.

	h.	m.	s.
Right Ascension. . .	22	50	31.060
North Polar Distance	120°	18′	18″.17

1871.				s.		″
Aug.	31	Ha.		0.00	−	1.8

α Piscis Austraris—Continued.

1871.				s.		″
Sept.	22	S.	−	0.10	−	0.5
	26	Ha.	+	0.09	−	2.5
	28	S.	−	0.07	+	3.2
Nov.	6	F.	−	0.20	+	1.0
	11	Ha.	−	0.11	+	1.0
	18	E.	+	0.02	+	5.6
Mean			−	0.053	+	0.86
Div., Flex., etc. .				. .	−	0.04

α Pegasi.

	h.	m.	s.
Right Ascension. . .	22	58	20.165
	°	′	″
North Polar Distance .	75	29	16.96

1871.				s.		″
Aug.	31	Ha.	+	0.09	+	0.9
Sept.	21	F.	+	0.05	+	1.0
	22	S.	−	0.13	−	0.4
	26	Ha.	−	0.01	−	0.4
	28	S.	+	0.01	+	1.8
Oct.	17	F.	+	0.09	+	0.5
Nov.	6	F.	−	0.02	+	0.4
	7	Ha.	+	0.03	+	2.4
	11	Ha.	+	0.07	+	1.9
	17	F.	+	0.06	+	2.0
	18	E.	+	0.01	+	3.9
Mean			+	0.023	+	1.27
Div., Flex., etc. .				. .	−	0.04

α Pegasi, (Ref.)

1871.				s.		″
Sept.	29	Ha.	−	0.22	+	3.6

ο Cephei.

	h.	m.	s.
Right Ascension. . .	23	13	20.300
	°	′	″
North Polar Distance .	22	35	39.84

1871.				s.		″
Sept.	29	Ha.	+	0.04	−	0.8
Div., Flex., etc. .				. .	−	0.19

θ Piscium.

	h.	m.	s.
Right Ascension. . .	23	21	25.458
	°	′	″
North Polar Distance .	84	19	44.31

1871.				s.		″
Sept.	22	S.	+	0.03	+	0.6
	29	Ha.	−	0.02	+	0.8
	30	F.	+	0.10	+	4.2
Nov.	18	E.	+	0.06	−	1.1
Mean			+	0.042	+	1.12
Div., Flex., etc. .				. .	−	0.33

ι Piscium.

	h.	m.	s.
Right Ascension. . .	23	33	18.989
	°	′	″
North Polar Distance .	85	4	21.06

1871.				s.		″
Sept.	22	S.	−	0.03	−	0.2
Nov.	6	F.	+	0.10	+	0.2
	7	Ha.	−	0.09	+	2.0
	11	Ha.	−	0.01	+	0.3
	17	F.	−	0.04	+	0.8
	18	E.	+	0.03	+	1.0
Mean			−	0.007	+	0.68
Div., Flex., etc. .				. .	−	0.35

γ Cephei, (Ref.)

	h.	m.	s.
Right Ascension. . .	23	34	4.198
	°	′	″
North Polar Distance .	13	5	15.15

1871.				s.		″
Sept.	21	F.	+	0.24	+	2.2
	29	Ha.	−	0.45	+	0.4
Mean			−	0.105	+	1.30

Groombridge 4163.

	h.	m.	s.
Right Ascension. . .	23	48	34.925
	°	′	″
North Polar Distance .	16	18	27.72

1871.				s.		″
Sept.	29	Ha.	+	0.19	−	0.4
	30	F.	+	0.25	+	2.1
Oct.	27	Ha.	+	0.12	+	0.7
Nov.	18	E.	−	0.01	+	0.2
Mean			+	0.138	+	0.65
Div., Flex., etc. .				. .	−	0.27

ω Piscium.

	h.	m.	s.
Right Ascension. . .	23	52	41.284
	°	′	″
North Polar Distance .	83	51	2.43

1871.				s.		″
Sept.	22	S.	+	0.02	−	0.7
	27	F.	−	0.06		. .
	29	Ha.	+	0.02	+	0.3
Oct.	27	Ha.	+	0.04	+	2.4
Nov.	18	E.	+	0.04	+	0.3
Mean			+	0.012	+	0.58
Div., Flex., etc. .				. .	−	0.32

MEAN PLACES
OF
MISCELLANEOUS STARS
GIVEN BY
INDIVIDUAL OBSERVATIONS
WITH
THE TRANSIT CIRCLE.

1871.

MEAN PLACES OF MISCELLANEOUS STARS FOR 1871.0

GIVEN BY

INDIVIDUAL OBSERVATIONS

WITH

THE TRANSIT CIRCLE.

WEISSE 127.

1871.	h. m. s.	° ′ ″
Sept. 21 F.	0 8 51.60	94 22 18.0
Oct. 12 F.	51.50	17.6
Nov. 6 F.	51.59	16.1
10 F.	51.41	20.8
Mean . . .	0 8 51.52	94 22 18.1
Div., Flex., etc.	. .	— 0.6

ANONYMOUS.

1871.	h. m. s.	° ′ ″
Sept. 21 F.	0 14 27.85	93 47 1.8
Nov. 6 F.	27.83	1.4
10 F.	27.73	3.1
11 Ha.	27.78	1.6
Mean . . .	0 14 27.80	93 47 1.7
Div., Flex, etc.	. .	— 0.6

ANONYMOUS.

1871.	h. m. s.	° ′ ″
Oct. 12 F.	1 46 13.18	44 47 33.4
Div., Flex., etc.	. .	— 0.2

ANONYMOUS.

1871.	h. m. s.	° ′ ″
Oct. 12 F.	2 26 1.64	75 14 39.5
Div., Flex., etc.	. .	— 0.1

ANONYMOUS.

1871.	h. m. s.	° ′ ″
Nov. 17 F.	2 30	82 18 19.7
Div., Flex., etc.	. .	— 0.3

ANONYMOUS.

1871.	h. m. s.	° ′ ″
Dec. 8 F.	4 39 20.37	72 29 13.6
Div., Flex., etc.	. .	0.0

ANONYMOUS.

1871.	h. m. s.	° ′ ″
Dec. 5 F.	11 3 26.13	80 11 42.4
Div., Flex., etc.	. .	— 0.2

ANONYMOUS.

1871.	h. m. s.	° ′ ″
Dec. 5 F.	11 12 43.49	124 29 48.9
Div., Flex., etc.	. .	+ 0.1

ANONYMOUS.

1871.	h. m. s.	° ′ ″
Dec. 7 H.	11 19 36.02	126 11 43.0
10 H.	35.87	42.8
Mean . . .	11 19 35.94	126 11 42.9
Div., Flex., etc.	. .	+ 0.1

LACAILLE 4852.

1871.	h. m. s.	° ′ ″
Dec. 10 H.	11 34 59.43	132 22 49.5
Div., Flex., etc.	. .	+ 0.2

B. A. C. 5828.

1871.	h. m. s.	° ′ ″
Aug. 12 S.	17 9 44.07	65 0 29.5
Div., Flex., etc.	. .	— 0.2

B. A. C. 5871.

1871.	h. m. s.	° ′ ″
Aug. 14 E.	17 16 42.64	43 37 52.6
Div., Flex., etc.	. .	— 0.2

B. A. C. 5887.

1871.	h. m. s.	° ′ ″
Aug. 5 S.	17 18 13.85	18 4 26.9
Div., Flex., etc.	. .	— 0.3

B. A. C. 5962.

1871.	h. m. s.	° ′ ″
Aug. 14 E.	17 31 44.28	58 8 0.7
Div., Flex., etc.	. .	— 0.3

B. A. C. 6073.

1871.	h. m. s.	° ′ ″
Aug. 12 S.	17 50 13.01	63 55 41.4
14 E.	12.95	38.9
Mean . . .	17 50 12.98	63 55 40.2
Div., Flex., etc.	. .	— 0.2

B. A. C. 6114.

1871.	h. m. s.	° ′ ″
Aug. 5 S.	17 55 13.43	. . .
14 E.	13.49	13 1 18.3
16 S.	13.60	21.2
Mean . . .	17 55 13.51	13 1 19.8
Div., Flex., etc.	. .	— 0.3

B. A. C. 6150.

1871.	h. m. s.	° ′ ″
Aug. 12 S.	18 2 30.72	61 15 13.0
Div., Flex., etc.	. .	— 0.3

B. A. C. 6185.

1871.	h. m. s.	° ′ ″
Aug. 14 E.	18 7 52.92	35 45 2.4
Div., Flex., etc.	. .	— 0.2

B. A. C. 6206.

1871.	h. m. s.	° ′ ″
Aug. 5 S.	18 9 40.96	10 1 9.9
14 E.	40.96	. .
16 S.	41.26	10.7
Mean . . .	18 9 41.06	10 1 10.3
Div., Flex., etc.	. .	— 0.3

B. A. C. 6208.

1871.	h. m. s.	° ′ ″
Aug. 5 S.	18 9 47.36	10 0 58.2
14 E.	47.20	. .
16 S.	47.55	1 0.1
Mean . . .	18 9 47.37	10 0 59.2
Div., Flex., etc.	. .	— 0.3

B. A. C. 6302.

1871.	h. m. s.	° ′ ″
Aug. 5 S.	18 23 22.85	17 19 25.9
Div., Flex., etc.	. .	— 0.3

ANONYMOUS.

1871.	h. m. s.	° ′ ″
Sept. 9 F.	18 25 12.31	127 48 8.7
Div., Flex., etc.	. .	+ 0.2

ANONYMOUS.

1871.	h. m. s.	° ′ ″
Sept. 21 F.	18 26 33.43	128 0 15.5
Div., Flex., etc.	. .	+ 0.2

ANONYMOUS.

1871.	h. m. s.	° ′ ″
Sept. 9 F.	18 27 3.74	127 59 4.1
Div., Flex., etc.	. .	+ 0.2

B. A. C. 6322.

1871.			h. m. s.	° ′ ″
Aug.	16	S.	18 27 25.68	66 28 40.5
Div., Flex., etc.			. .	0.0

B. A. C. 6375.

1871.			h. m. s.	° ′ ″
Aug.	5	S.	18 36 53.67	12 23 23.0
Div., Flex., etc.			. .	— 0.3

B. A. C. 6393.

1871.			h. m. s.	° ′ ″
Aug.	24	E.	18 39 48.54	27 22 44.5
Sept.	21	F.	48.34	43.9
	23	Ha.	48.41	41.8
Mean . . .			18 39 48.49	27 22 43.4
Div., Flex., etc.			. .	— 0.3

B. A. C. 6417.

1871.			h. m. s.	° ′ ″
Aug.	15	F.	18 41 21.05	6 43 49.9
Div. Flex., etc.			. .	— 0.4

B. A. C. 6410.

1871.			h. m. s	° ′ ″
Aug.	24	E.	18 42 47.01	29 5 18.6
Sept.	23	Ha.	47.08	17.3
Mean . . .			18 42 47.04	29 5 18.0
Div., Flex., etc.			. .	— 0.3

B. A. C. 6469.

1871.			h. m. s.	° ′ ″
Aug.	15	F.	18 48 59 00	16 3 53.0
	16	S.	58.90	54.1
Mean . . .			18 48 58.95	16 3 53.6
Div., Flex., etc.			. .	— 0.3

B. A. C. 6453.

1871.			h. m. s.	° ′ ″
Sept.	23	Ha.	18 49 18.13	67 31 0.0
Div., Flex., etc.			. .	0.0

B. A. C. 6510.

1871.			h. m. s.	° ′ ″
Aug.	11	F.	18 55 58.26	18 52 33.9
Div., Flex., etc.			. .	— 0.3

B. A. C. 6514.

1871.			h. m. s.	° ′ ″
Aug.	16	S.	18 56 12.89	16 5 2.1
Div., Flex., etc.			. .	— 0.3

B. A. C. 6563.

1871.			h. m. s.	° ′ ″
Aug.	16	S.	19 3 20.55	13 8 5.8
Div., Flex., etc.			. .	— 0.3

ANONYMOUS.

1871.			h. m. s.	° ′ ″
Aug.	12	S.	19 13 38.26	13 8 20.0
Div., Flex., etc.			. .	— 0.3

B. A. C. 6625.

1871.			h. m. s.	° ′ ″
Aug.	11	F.	19 13 52.40	13 39 21.0
	12	S.	52.56	20.5
Mean . . .			19 13 52.48	13 39 20.8
Div., Flex., etc.			. .	— 0.3

B. A. C. 6702.

1871.			h. m. s.	° ′ ″
Aug.	5	S.	19 26 6.22	13 41 51.5
	11	F.	6.43	50.4
	12	S.	6.30	51.1
Mean . . .			19 26 6.32	13 41 51.0
Div., Flex., etc.			. .	— 0.3

B. A. C. 6752.

1871.			h. m. s.	° ′ ″
Aug.	5	S.	19 35 42.04	18 40 54.8
	11	F.	42.09	55.3
	12	S.	42.10	53.9
Mean . . .			19 35 42.08	18 40 54.7
Div., Flex., etc.			. .	— 0.3

20 VULPECULÆ.

1871.			h. m. s.	° ′ ″
Aug.	15	F.	20 6 36.17	63 54 17.8
	18	E.	36.08	18.6
Sept.	21	F.	36.19	18.5
	22	S.	36.25	17.7
	23	Ha.	36.15	17.7
Oct.	13	Ha.	36.14	17.4
	17	F.	36.13	19.4
	18	Ha.	36.19	18.2
	19	F.	36.31	18.0
	20	Ha.	36.16	17.7
	21	F.	36.16	19.3
Mean . . .			20 6 36.18	63 54 18.2
Div., Flex., etc.			. .	— 0.2

ANONYMOUS.

1871.			h. m. s.	° ′ ″
Oct.	13	Ha.	20 40 51.83	107 23 42.6
	17	F.	52.14	43.4
	19	F.	52.07	43.8
	20	Ha.	52.16	43.8
	21	F.	52.14	45.5
Mean . . .			20 40 52.07	107 23 43.8
Div., Flex , etc.			. .	— 0.2

ANONYMOUS.

1871.			h. m. s.	° ′ ″
Oct.	13	Ha.	20 41 15.89	107 26 9.2
	17	F.	16.17	12.5
	18	Ha.	15.90	9.9
	19	F.	15.79	10.0
	20	Ha.	15.83	8.5
	21	F.	15.77	11.8
Mean . . .			20 41 15.89	107 26 10.3
Div., Flex., etc.			. .	— 0.2

B. A. C. 7430.

1871.			h. m. s.	° ′ ″
Nov.	17	F	21 17 14.33	29 47 27.7
Div., Flex., etc.			. .	— 0.3

B. A. C. 7524.

1871.			h. m. s.	° ′ ″
Nov.	17	F.	21 32 34.62	51 15 44.7
Div., Flex., etc.			. .	— 0.3

ANONYMOUS.

1871.			h. m. s.	° ′ ″
Nov.	11	Ha.	21 35 47.60	57 12 43.2
	17	F.	47.74	43.3
	18	Ha.	47.71	43.3
Mean . . .			21 35 47.68	57 12 43.3
Div., Flex., etc.			. .	— 0.3

B. A. C. 7602.

1871.			h. m. s.	° ′ ″
Nov.	17	F.	21 42 58.37	51 38 32.5
Div., Flex., etc.			. .	— 0.3

B. A. C. 7757.

1871.			h. m. s.	° ′ ″
Nov.	11	Ha.	22 7 44.15	62 1 48.5
	17	F.	44.33	48.9
	18	E.	44.10	47.4
Mean . . .			22 7 44.19	62 1 48.3
Div., Flex., etc.			. .	— 0.3

ANONYMOUS.

1871.			h. m. s.	° ′ ″
Nov.	10	F.	22 15 57.48	101 53 22.5
	11	Ha.	57.39	24.0
	17	F.	57.42	24.3
	18	E.	57.36	24.7
Mean. . . .			22 15 57.41	101 53 23.9
Div., Flex., etc.			. .	— 0.3

ANONYMOUS.

1871.			h. m. s.	° ′ ″
Nov.	11	Ha.	22 19 10.19	119 0 14.3
	17	F.	10.23	. .
	18	E.	10.34	18.6
Mean . . .			22 19 10.25	119 0 16.5
Div., Flex., etc.			. .	— 0.1

B. A. C. 7937.

1871.			h. m. s.	° ′ ″
Nov.	17	F.	22 39 11.78	71 18 47.7
Div., Flex., etc.			. .	— 0.1

B. A. C. 7953.

1871.			h. m. s.	° ′ ″
Nov.	17	F.	22 42 16.32	32 11 50.5
	18	E.	16.20	49.9
Mean . . .			22 42 16.26	32 11 50.2
Div., Flex., etc.			. .	— 0.3

RADCLIFFE 5999.

1871.			h. m. s.	° ′ ″
Nov.	10	F.	23 6 6.38	33 35 29.2
	17	F.	6.62	29.3
Mean . . .			23 6 6.50	33 35 29.2
Div., Flex., etc.			. .	— 0.3

ANONYMOUS.

1871.	h. m. s.	° ′ ″
Nov. 11 Ha.	23 7 6.05	33 32 37.5
Div., Flex., etc.	. .	— 0.2

O. ARG. S. 22712.

1871.	h. m. s.	° ′ ″
Nov. 10 F.	23 8 50.58	. . .
17 F.	50.49	112 57 54.4
Mean . . .	23 8 50.54	. . .
Div., Flex., etc.	. .	— 0.1

O. ARG. S. 22721.

1871.	h. m. s.	° ′ ″
Nov. 10 F.	23 9 45.49	111 53 14.0
11 Ha.	45.32	13.2
Mean . . .	23 9 45.40	111 53 13.6
Div., Flex., etc.	. .	— 0.1

ANONYMOUS.

1871.	h. m. s.	° ′ ″
Nov. 11 Ha.	23 9 59.35	111 54 18.3
Div., Flex., etc.	. .	— 0.1

ANONYMOUS.

1871.	h. m. s.	° ′ ″
Nov. 10 F.	23 21 35.08	125 57 55.4
11 Ha.	35.12	55.7
17 F.	35.07	56.5
Mean . . .	23 21 35.09	125 57 55.9
Div., Flex., etc.	. .	+ 0.1

WEISSE 853.

1871.	h. m. s.	° ′ ″
Nov. 10 F.	23 42 27.98	88 16 54.1
11 Ha.	28.04	52.1
17 F.	28.07	53.6
Mean . . .	23 42 28.03	88 16 53.3
Div., Flex., etc.	. .	— 0.3

WEISSE 895.

1871.	h. m. s.	° ′ ″
Nov. 6 F.	23 45 7.95	96 23 46.0
10 F.	7.74	50.0
11 Ha.	7.89	46.9
Mean . . .	23 45 7.86	96 23 47.8
Div., Flex., etc.	. .	— 0.5

WEISSE 958.

1871.	h. m. s.	° ′ ″
Nov. 6 F.	23 47 43.84	96 26 14.9
10 F.	43.75	16.1
11 Ha.	43.81	12.7
Mean . . .	23 47 43.80	96 26 14.6
Div., Flex., etc.	. .	— 0.5

WEISSE 1016.

1871.	h. m. s.	° ′ ″
Oct. 12 F.	23 50 32.15	96 10 28.8
Nov. 10 F.	32.31	27.1
11 Ha.	32.30	28.9
Mean . . .	23 50 32.25	96 10 28.3
Div., Flex., etc.	. .	— 0.5

WEISSE 1029.

1871.	h. m. s.	° ′ ″
Oct. 12 F.	23 51 10.54	96 10 35.9
Nov. 6 F.	10.70	36.0
10 F.	10.62	35.4
Mean . . .	23 51 10.62	96 10 35.8
Div., Flex., etc.	. .	— 0.5

CATALOGUE

OF

MISCELLANEOUS STARS

OBSERVED WITH

THE TRANSIT CIRCLE.

1871.

CATALOGUE OF MISCELLANEOUS STARS

OBSERVED IN

THE YEAR 1871

WITH

THE TRANSIT CIRCLE.

Names of Stars.	No. of obs. in R. A.	Mean Right Ascension, 1871.0.			Annual Precession in R. A.	No. of obs. in N. P. D.	Mean N. P. Distance, 1871.0.			Annual Precession in N. P. D.
		h.	m.	s.	s.		°	′	″	″
Weisse 127	4	0	8	51.52	+ 3.068	4	94	22	17.5	− 20.04
Anonymous	4	0	14	27.80	3.066	4	93	47	1.1	20.02
Anonymous	1	1	46	13.18	3.674	1	44	47	33.2	17.94
Anonymous	1	2	26	1.64	3.282	1	75	14	39.5	16.12
Anonymous	.	2	30		. .	.	82	18	19.4	15.91
Anonymous	1	4	39	20.37	+ 3.468	1	72	29	13.6	− 6.91
Anonymous	1	11	3	26.13	3.128	1	80	11	42.1	+ 19.47
Anonymous	1	11	12	43.49	2.883	1	124	29	49.0	19.63
Anonymous	2	11	19	35.94	2.900	2	126	11	43.1	19.74
Lacaille 4852.	1	11	34	59.43	2.939	1	132	22	49.7	19.94
B. A. C. 5828.	1	17	9	44.07	+ 2.464	1	65	0	29.4	+ 4.36
B. A. C. 5871.	1	17	16	42.64	+ 1.695	1	43	37	52.4	3.77
B. A. C. 5887.	1	17	18	13.85	− 0.956	1	18	4	26.6	3.64
B. A. C. 5962.	1	17	31	44.28	+ 2.279	1	59	8	0.4	2.47
B. A. C. 6073.	2	17	50	12.98	+ 2.418	2	63	55	40.0	0.86
B. A. C. 6114.	3	17	55	13.51	− 2.792	2	13	1	19.5	+ 0.42
B. A. C. 6150.	1	18	2	30.72	+ 2.339	1	61	15	12.7	− 0.22
B. A. C. 6185.	1	18	7	52.92	+ 1.216	1	35	45	2.2	0.51
B. A. C. 6206.	3	18	9	41.06	− 4.449	2	10	1	10.0	0.85
B. A. C. 6208.	3	18	9	47.37	4.449	2	10	0	58.9	0.86
B. A. C. 6302.	1	18	23	22.85	− 1.192	1	17	19	25.6	− 2.04
Anonymous	1	18	25	12.31	+ 4.102	1	127	48	8.9	2.20
Anonymous	1	18	26	33.43	4.110	1	128	0	15.7	2.32
Anonymous	1	18	27	3.74	4.109	1	127	59	4.3	2.36
B. A. C. 6322.	1	18	27	25.68	2.494	1	66	28	40.5	2.40
B. A. C. 6375.	1	18	36	53.67	+ 2.936	1	12	23	22.7	− 3.22
B. A. C. 6393.	3	18	39	48.49	+ 0.529	3	27	22	43.1	3.47
B. A. C. 6417.	1	18	41	21.05	− 8.068	1	6	43	49.5	3.60
B. A. C. 6410.	2	18	42	47.04	+ 0.711	2	29	5	17.7	3.72
B. A. C. 6469.	2	18	48	58.95	− 1.464	2	16	3	53.3	4.25

Names of Stars.	No. of obs. in R. A.	Mean Right Ascension, 1871.0.			Annual Precession. in R. A.	No. of obs. in N.P.D.	Mean N. P. Distance, 1871.0.			Annual Precession in N. P. D.
		h.	m.	s.	s.		°	′	″	″
B. A. C. 6453.	1	18	49	18.13	+ 2.531	1	67	31	0.0	− 4.28
B. A. C. 6510.	1	18	55	58.26	− 0.722	1	18	52	33.6	4.85
B. A. C. 6514.	1	18	56	12.89	1.426	1	16	5	1.8	4.87
B. A. C. 6563.	1	19	3	20.55	2.440	1	13	8	5.5	5.47
Anonymous	1	19	13	38.26	2.363	1	13	8	19.7	6.33
B. A. C. 6625.	2	19	13	52.48	− 2.152	2	13	39	20.5	− 6.35
B. A. C. 6702.	3	19	26	6.32	2.029	3	13	41	50.7	7.36
B. A. C. 6752.	3	19	35	42.08	− 0.542	3	18	40	54.4	8.13
20 Vulpeculæ	11	20	6	36.18	+ 2.515	11	63	54	18.0	10.52
Anonymous	5	20	40	52.07	3.392	5	107	23	43.6	12.95
Anonymous	6	20	41	15.89	+ 3.392	6	107	26	10.1	− 12.98
B. A. C. 7430.	1	21	17	14.33	1.549	1	29	47	27.4	15.21
B. A. C. 7524.	1	21	32	34.62	2.429	1	51	15	44.4	16.04
Anonymous	3	21	35	47.68	2.565	3	57	12	43.0	16.31
B. A. C. 7602.	1	21	42	58.37	2.476	1	51	38	32.2	16.58
B. A. C. 7757.	3	22	7	44.19	+ 2.738	3	62	1	48.0	− 17.70
Anonymous	4	22	15	57.41	3.195	4	101	53	23.6	18.02
Anonymous	3	22	19	10.25	3.388	2	119	0	16.4	18.14
B. A. C. 7937.	1	22	39	11.78	2.916	1	71	18	47.6	18.84
B. A. C. 7953.	2	22	42	16.26	2.366	2	32	11	50.0	18.91
Radcliffe 5999	2	23	6	6.50	+ 2.603	2	33	35	29.0	− 19.48
Anonymous	1	23	7	6.05	2.611	1	33	32	37.3	19.50
O. Arg. S. 22712.	2	23	8	50.54	3.198	1	112	57	54.3	19.56
O. Arg. S. 22721.	2	23	9	45.40	3.189	2	111	53	13.5	19.58
Anonymous	1	23	9	59.35	3.189	1	111	54	18.2	19.58
Anonymous	3	23	21	35.09	+ 3.234	3	125	57	56.0	− 19.77
Weisse 853	3	23	42	28.03	3.069	3	88	16	53.0	20.00
Weisse 895	3	23	45	7.86	3.082	3	96	23	47.3	20.01
Weisse 958	3	23	47	43.80	3.082	3	96	26	14.1	20.03
Weisse 1016	3	23	50	32.25	3.078	3	96	10	27.8	20.04
Weisse 1029	3	23	51	10.62	+ 3.078	3	96	10	35.3	− 20.04

MEAN RIGHT ASCENSIONS FOR 1870.0

OF

STARS OBSERVED

WITH

THE TRANSIT INSTRUMENT.

1871.

MEAN RIGHT ASCENSIONS FOR 1870.0.

TRANSIT INSTRUMENT.

α Andromedæ, +28° 23′.

1871.	h. m. s.	Mag.
July 7 . .	0 1 40.27	

γ Pegasi, +14° 28′

July 7 . .	0 6 32.65	

β Ceti, −18° 41′.

July 7 . .	0 37 3.74	

η Piscium, +14° 41′.

Jan. 27 . .	1 24 31.84	

β Arietis, +20° 10′.

Jan. 12 . .	1 47 27.79	
27 . .	27.74	

ξ¹ Ceti, +8° 15′.

Jan. 27 . .	2 6 6.69	

ξ² Ceti, +7° 53′.

Jan. 27 . .	2 21 14.88	

γ Ceti, +2° 42′.

Jan. 27 . .	2 36 33.92	

μ Ceti, +9° 34′.

Jan. 27 . .	2 37 54.99	

ζ Arietis, +20° 34′.

Jan. 12 . .	3 7 25.96	

α Persei, +49° 24′

Mar. 24 . .	3 15 3.11	

η Tauri, +23° 42′.

Jan. 24 . .	3 39 45.63	
Mar. 24 . .	45.64	

27 Tauri, +23° 38′.

Jan. 12 . .	3 41 26.20	6.0

28 Tauri, +23° 38′.

Jan. 12 . .	3 41 27.42	6.0

ζ Persei, +31° 30′.

1871.	h. m. s.	Mag.
Jan. 17 . .	3 45 57.79	
24 . .	57.88	
Mar. 24 . .	57.82	
25 . .	57.88	

γ¹ Eridani, −13° 53′.

Jan. 12 . .	3 51 57.83	
17 . .	57.90	
24 . .	57.82	
Mar. 25 . .	57.90	

(*), −26° 56′.

Jan. 12 . .	4 5 11.64	9.2

B. A. C. 1313, +60° 24′.

Jan. 12 . .	4 10 30.34	
24 . .	31.30	

ε Tauri, +18° 53′.

Jan. 12 . .	4 21 1.69	
16 . .	1.72	
24 . .	1.67	

α Tauri, +16° 15′.

Mar. 24 . .	4 28 27.81	
July 12 . .	27.87	

Lacaille 1537, −38° 7′.

Jan. 12 . .	4 31 52.15	8.5

Weisse (2) IV, 676, +41° 52′.

Jan. 17 . .	4 32 24.30	
24 . .	24.53	

Lalande 9012, +45° 37′.

Jan. 12 . .	4 42 10.22	

ι Aurigæ, +32° 58′.

Jan. 12 . .	4 48 31.93	
16 . .	31.81	
24 . .	31.83	
Feb. 9 . .	31.77	

11 Orionis, +15° 13′.

Feb. 9 . .	4 57 8.57	

B. A. C. 1565, +79° 4′.

1871.	h. m. s.	Mag.
Jan. 17 . .	5 1 11.15	
Feb. 16 . .	10.72	

β Orionis, −8° 21′.

July 12 . .	5 8 17.48	

Lalande 9884, +78° 16′.

Jan. 12 . .	5 17 27.15	
21 . .	26.64	
24 . .	26.99	

β Tauri, +28° 30′.

Jan. 16 . .	5 18 4.50	
27 . .	4.50	
July 12 . .	4.51	

(*), +38° 58′.

Mar. 2 . .	5 18 30.19	

(*), +38° 58′.

Mar. 2 . .	5 18 46.02	

Σ Cat. Gen. 577, (1st *), +54° 34′.

Jan. 21 . .	5 20 48.46	

Σ Cat. Gen. 577, (2d *), +54° 34′.

Jan. 21 . .	5 20 49.39	7.0
24 . .	49.79	
27 . .	49.73	

(*), +38° 58′.

Jan. 12 . .	5 20 55.94	9.2
Mar. 2 . .	55.45	

δ Orionis, −0° 24′.

Jan. 16 . .	5 25 21.91	
17 . .	22.03	
27 . .	21.98	
Mar. 2 . .	22.02	

Groombridge 990, +51° 34′.

Jan. 21 . .	5 28 3.75	
Feb. 16 . .	3.84	

θ¹ Orionis, −5° 30′.

1871.	h. m. s.	Mag.
Jan. 12 . .	5 28 52.81	
16 . .	52.86	
Feb. 9 . .	52.94	

θ² Orionis, −5° 30′.

Jan. 12 . .	5 28 53.15	
16 . .	53.02	
Feb. 9 . .	53.25	

θ³ Orionis, −5° 30′.

Jan. 12 . .	5 28 53.41	
16 . .	53.39	
Feb. 9 . .	53.55	

θ⁴ Orionis, −5° 30′.

Jan. 12 . .	5 28 53.87	
Feb. 9 . .	54.22	

ε Orionis, −1° 17′.

Jan. 17 . .	5 29 37.07	
Feb. 28 . .	37.14	
Mar. 2 . .	37.10	
July 12 . .	37.04	

O. Arg. N. 6082, +70° 12′.

Feb. 16 . .	5 32 50.92	

Lacaille 1924, −34° 46′.

Jan. 24 . .	5 33 8.27	

Lalande 10797, +57° 16′.

Jan. 12 . .	5 37 5.59	

α Orionis, +7° 23′.

Jan. 17 . .	5 48 8.04	
27 . .	8.08	
Feb. 28 . .	8.03	
July 12 . .	8.00	

O. Arg. S. 4457, −29° 10′.

Jan. 21 . .	5 50 36.66	

Rumker 1680, +26° 21′.

Feb. 6 . .	5 55 46 89	

1871.	h.	m.	s.	Mag.
η Geminorum, +22° 32′.				
Feb. 28	6	7	1.81	
Weisse (2) VI, 328, +32° 0′.				
Feb. 16	6	13	22.93	
μ Geminorum, +22° 35′.				
Feb. 16	6	15	5.81	
18			5.75	
28			5.76	
(*), +25° 35′.				
Feb. 9	6	17	39.41	9.0
Lalande 12237, +25° 35′.				
Jan. 24	6	18	4.96	
Feb. 9			4.85	8.8
(*), −25° 48′.				
Jan. 21	6	23	50.65	
(*), −25° 48′.				
Jan. 21	6	23	51.31	
B. A. C. 2095, +79° 42′.				
Jan. 24	6	23	59.64	
Feb. 9			59.75	
Lalande 12173, +38° 7′.				
Jan. 12	6	26	48.12	8.8
O. Arg. N. 6864, +76° 28′.				
Jan. 12	6	29	57.10	9.0
γ Geminorum, +16° 30′.				
Feb. 28	6	30	12.13	
Mar. 2			12.12	
14			12.10	
16			12.13	
28			12.17	
May 25			12.04	
(*), +23° 49′.				
Feb. 9	6	37	28.59	8.0
(*), +23° 49′.				
Jan. 12	6	37	47.95	9.0
51 Cephei, S. P., +87° 14′.				
June 5	6	38	41.72	
Weisse (2) VI, 1163, +23° 58′.				
Feb. 9	6	38	45.35	8.7
(*), +13° 4′.				
Jan. 21	6	39	9.65	8.8

1871.	h.	m.	s.	Mag.
α Canis Majoris, −16° 22′.				
May 25	6	39	25.24	
O. Arg. S. 5718, −27° 15′.				
Jan. 12	6	43	23.32	8.0
Mar. 14			23.27	8.8
B. A. C. 2244, −27° 15′.				
Mar. 14	6	44	54.15	8.0
Lacaille 2480, −33° 42′.				
Jan. 21	6	45	25.39	7.8
(*), −30° 21′.				
Feb. 14	6	45	42.30	9.5
B. A. C. 2266, −28° 21′.				
Jan. 12	6	48	23.50	
Feb. 14			23.43	
Lalande 13427, +48° 35′.				
Jan. 21	6	51	41.78	8.0
24			42.16	
ε Canis Majoris, −28° 48′.				
Feb. 16	6	53	31.07	
18			31.08	
Mar. 14			31.02	
21			31.05	
25			31.12	
ζ Geminorum, +20° 45′.				
Mar. 1	6	56	23.89	
δ Canis Majoris, −26° 12′.				
Feb. 9	7	3	6.49	
18			6.27	
28			6.31	
Mar. 2			6.35	
14			6.31	
21			6.44	
25			6.42	
28			6.35	
May 25			6.53	
Lacaille 2641, −24° 59′.				
Jan. 12	7	4	21.64	7.2
O. Arg. S. 6317, −24° 59′.				
Jan. 12	7	4	23.53	8.8
Weisse (2) VII, 135, +25° 14′.				
Jan. 24	7	5	60.10	
Feb. 9			59.88	8.5
O. Arg. S. 6442, − 27° 3′.				
Feb. 16	7	8	38.92	8.8

1871.	h.	m.	s.	Mag.
B. A. C. 2383, +26° 56′.				
Jan. 24	7	9	0.01	
B. A. C. 2393, −26° 47′.				
Jan. 12	7	9	35.97	
(*), −28° 1′.				
Feb. 9	7	11	24.58	9.2
Weisse VII, 320, +12° 6′.				
Feb. 18	7	11	43.78	
28			43.52	
(*), −29° 28′.				
Mar. 2	7	11	53.41	
O. Arg. S. 6552, −28° 21′.				
Mar. 21	7	11	57.26	8.0
δ Geminorum, +22° 13′.				
Jan. 21	7	12	21.43	
24			21.52	
Feb. 2			21.55	
16			21.53	
21			21.42	
Mar. 24			21.48	
May 25			21.44	
(*), +41° 56′.				
Mar. 15	7	12	32.46	
(*), −30° 33′.				
Feb. 28	7	13	1.24	8.5
(*), −30° 36′.				
Mar. 14	7	13	19.03	
B. A. C. 2420, −30° 33′.				
Feb. 28	7	13	31.41	
Mar. 1			31.63	
14			31.50	
O. Arg. S. 6600, −26° 18′.				
Mar. 24	7	13	33.67	7.0
25			33.82	6.0
(*), −30° 58′.				
Mar. 28	7	13	44.06	8.0
(*), −26° 18′.				
Mar. 24	7	14	5.55	8.5
O. Arg. S. 6623, −26° 26′.				
Mar. 25	7	14	22.36	8.8

1871.	h.	m.	s.	Mag.
B. A. C. 2428, −33° 29′.				
Mar. 21	7	14	23.65	7.8
(*), −14° 26′.				
Feb. 16	7	14	40.86	8.8
Lacaille 2741, −26° 25′.				
Feb. 9	7	15	15.42	
Weisse VII, 569, +10° 24′.				
Feb. 9	7	20	0.05	
ρ Geminorum, +32° 3′.				
Feb. 18	7	20	44.86	
(*), +15° 37′.				
Feb. 16	7	21	9.52	8.8
Weisse (2) VII, 594, +40° 33′.				
Feb. 28	7	22	6.60	8.5
(*), −20° 24′.				
Feb. 14	7	23	2.91	
(*), −18° 37′.				
Feb. 21	7	23	21.39	
Lacaille 2824, −37° 31′.				
Feb. 9	7	23	48.51	
(*), −24° 0′.				
Mar. 14	7	24	56.31	9.8
(*), −24° 0′.				
Mar. 14	7	25	7.86	9.8
α^1 Geminorum, +32° 10′.				
Jan. 12	7	26	17.72	
Mar. 24			17.71	
α^2 Geminorum, +32° 10′.				
Jan. 12	7	26	18.15	
Mar. 1			18.15	
24			18.08	
(*), −30° 59′.				
Feb. 14	7	31	30.66	
(*), −30° 59′.				
Feb. 16	7	31	31.10	8.2
(*), −30° 59′.				
Feb. 16	7	31	50.22	8.8

WEISSE (2) VII, 915, +20° 57′.

1871.	h.	m.	s.	Mag.
Feb. 21	7	32	0.54	9.5

α CANIS MINORIS, +5° 23′.

Jan. 21	7	32	29.75	
Feb. 2			29.80	

O. ARG. S. 7167, −31° 8′.

Mar. 1	7	33	7.96	
21			8.03	

(*), +10° 25′.

Mar. 14	7	33	57.14	9.5

(*), −23° 56′.

Mar. 24	7	34	0.77	

B. A. C. 2521, +80° 35′.

Jan. 24	7	34	39.84	
Feb. 18			39.78	

LACAILLE 2908, −29° 46′.

Feb. 14	7	35	18.06	7.5

O. ARG. S. 7237, −29° 44′.

Feb. 14	7	35	20.71	8.2

WEISSE (2) VII, 1022, +21° 18′.

Feb. 9	7	35	31.32	
21			31.52	9.2

(*), +21° 18′.

Feb. 9	7	35	36.54	
21			36.45	9.2

β GEMINORUM, +28° 20′.

Jan. 21	7	37	21.48	
Feb. 2			21.44	
16			21.42	
Mar. 15			21.48	
21			21.47	

O. ARG. S. 7443, −23° 54′.

Feb. 18	7	42	29.54	

O. ARG. S. 7445, −27° 16′.

Feb. 28	7	42	29.23	

O. ARG. S. 7458, −23° 54′.

Feb. 16	7	43	2.31	

(*), −23° 54′.

Feb. 14	7	43	20.66	9.0

O. ARG. S. 7473, −29° 55′.

1871.	h.	m.	s.	Mag.
Feb. 9	7	43	35.74	
21			35.74	8.0

O. ARG. S. 7476, −23° 29′.

Mar. 1	7	43	47.08	

(*), −30° 12′.

Mar. 28	7	43	50.35	9.2

O. ARG. S. 7505, −30° 12′.

Mar. 28	7	44	15.62	8.2

LACAILLE 2998, −23° 29′.

Mar. 21	7	44	28.26	8.0

LACAILLE 3006, −32° 55′.

Mar. 24	7	44	37.63	7.0

WEISSE (2) VII, 1263, +31° 2′.

Mar. 22	7	45	14.52	

LALANDE 15323, +20° 31′.

Mar. 2	7	45	28.20	

φ GEMINORUM, +27° 6′.

Jan. 21	7	45	32.41	
24			32.32	
Feb. 2			32.31	
3			32.33	
9			32.34	
21			32.32	
Mar. 15			32.29	

(*), +38° 39′.

Mar. 21	7	47	8.87	8.0

(*), −26° 8′.

Feb. 18	7	49	37.13	8.2
Mar. 21			37.10	8.8

(*), +20° 32′.

Feb. 20	7	50	39.11	

(*), −30° 28′.

Feb. 27	7	50	58.14	

(*), −30° 28′.

Feb. 27	7	50	58.68	

(*), −30° 32′.

Feb. 28	7	51	15.88	
Mar. 2			15.97	

8 CANCRI, +13° 30′.

1871.	h.	m.	s.	Mag.
Feb. 18	7	57	50.02	6.0

B. A. C. 2703, +22° 51′.

Feb. 14	7	58	53.78	

LACAILLE 3127, −25° 18′.

Feb. 28	7	59	4.78	

WEISSE (2) VII, 1601, +37° 50′.

Mar. 1	7	59	14.96	9.0
2			14.81	9.2

O. ARG. S. 7938, −29° 32′.

Feb. 18	7	59	25.22	8.0
21			25.04	

(*), +14° 46′.

Feb. 27	8	0	17.40	

WEISSE VII, 1752, +14° 45′.

Feb. 27	8	0	26.56	

Ψ² CANCRI, +25° 54′.

Mar. 21	8	2	37.28	7.5
Apr. 4			37.31	

O. ARG. S. 8072, −23° 59′.

Feb. 14	8	3	7.97	8.2

(*), −33° 10′.

Feb. 21	8	3	52.10	7.5

O. ARG. N. 8698, +63° 7′.

Feb. 28	8	4	29.43	8.0

(*), +31° 4′.

Mar. 1	8	9	32.13	

WEISSE (2) VIII, 181, +31° 4′.

Feb. 2	8	10	7.89	
Mar. 21			7.80	9.0

WEISSE VIII, 294, −12° 10′.

Feb. 2	8	12	13.87	
27			13.94	

WEISSE VIII, 415, +13° 56′.

Feb. 18	8	17	5.89	8.7

WEISSE (2) VIII, 370, +19° 37′.

Feb. 20	8	17	20.26	

WEISSE (2) VIII, 381, +40° 24′.

1871.	h.	m.	s.	Mag.
Feb. 28	8	18	8.28	

WEISSE (2) VIII, 382, +40° 20′.

Feb. 14	8	18	8.47	7.0

RUMKER 2508, +57° 7′.

Feb. 21	8	18	40.46	

(*), +40° 20′.

Feb. 28	8	19	20.43	9.0

LACAILLE 3312, −31° 25′.

Feb. 18	8	19	58.93	6.5
Mar. 2			58.74	8.0

B. A. C. 2883, −31° 4′.

Feb. 2	8	27	47.16	
Mar. 21			47.04	

B. A. C. 2885, −34° 9′.

Feb. 20	8	27	53.63	
Mar. 1			53.57	

(*), −9° 14′.

Feb. 21	8	30	22.57	8.0

δ HYDRÆ, +6° 9′.

Feb. 2	8	30	46.54	
27			46.48	

LACAILLE 3422, −31° 47′.

Feb. 14	8	31	8.14	

(*), +20° 29′.

Feb. 18	8	31	8.99	8.5

WEISSE (2) VIII, 756, +20° 29′.

Feb. 18	8	31	34.66	8.3

O. ARG. S. 8776, −23° 49′.

Feb. 28	8	31	41.05	8.2

(*), +20° 39′.

Mar. 4	8	32	4.05	
24			4.07	

(*), +19° 46′.

Mar. 1	8	32	17.86	

(*), +20° 40′.

Mar. 4	8	32	29.13	
15			29.18	
16			29.16	
21			28.98	
24			29.28	

1871.	h.	m.	s.	Mag.
(*), +20° 39′.				
Mar. 24	8	32	32.15	9.0
(*), +20° 40′.				
Mar. 14	8	32	57.59	
15			57.56	
16			57.49	
21			57.47	
24			57.64	
25			57.60	7.8
(*), +19° 45′.				
Feb. 21	8	33	51.88	8.3
WEISSE (2) VIII, 841, +20° 9′.				
Feb. 14	8	34	7.16	8.8
18			7.24	
(*), +20° 9′.				
Feb. 14	8	34	14.83	9.0
20			14.67	
(*), +20° 39′.				
Mar. 4	8	34	24.15	8.8
15			24.32	
16			24.23	
21			24.20	
24			24.44	
LACAILLE 3459, −33° 33′.				
Feb. 28	8	34	40.56	7.6
Mar. 2			40.66	7.5
WEISSE (2) VIII, 866, +20° 39′.				
Mar. 4	8	34	52.66	9.0
16			52.66	
21			52.72	
(*), +20° 40′.				
Mar. 24	8	34	53.02	
(*), −33° 33′.				
Feb. 28	8	34	53.46	
Mar. 2			53.49	7.5
44 CANCRI, +18° 39′.				
Feb. 18	8	35	44.73	7.0
Mar. 25			44.70	
(*), +23° 2′.				
Mar. 28	8	35	45.82	9.5
(*), +37° 33′.				
Apr. 11	8	36	29.64	8.5
O. ARG. S. 2887, −23° 42′.				
Apr. 4	8	36	53.12	8.8

1871.	h.	m.	s.	Mag.
(*), +43° 12′.				
Mar. 22	8	37	1.70	
(*), +14° 10′.				
Feb. 21	8	37	7.75	9.0
(*), −32° 39′.				
Mar. 28	8	38	21.55	9.0
a MALI, −32° 39′.				
Mar. 28	8	38	22.24	5.0
LACAILLE 3500, −30° 28′.				
Mar. 21	8	39	39.87	
ε HYDRÆ, +6° 53′.				
Feb. 2	8	39	53.51	
3			53.46	
18			53.59	
21			53.47	
28			53.48	
Mar. 4			53.36	
14			53.53	
22			53.40	
24			53.44	
Apr. 11			53.46	
Σ CAT. GEN. 1044, (1st *), +11° 40′.				
Mar. 23	8	40	5.15	
Σ CAT. GEN. 1044, (2d *), +11° 40.				
Mar. 23	8	40	5.25	
WEISSE (2) VIII, 1013, +40° 6′.				
Mar. 2	8	41	31.08	
21			31.21	8.8
O. ARG. N. 9342, (1st *), +71° 20′.				
Feb. 2	8	43	6.07	
Apr. 4			5.65	
O. ARG. N. 9342, (2d *), +71° 20′.				
Feb. 2	8	43	7.06	
Apr. 4			6.83	
O. ARG. N. 9350, +63° 7′.				
Feb. 28	8	43	11.04	
35 LYNCIS, +44° 14′.				
Mar. 15	8	43	12.75	
52 CANCRI, +16° 31′.				
Feb. 14	8	43	54.00	
Mar. 16			53.99	8.5

1871.	h.	m.	s.	Mag.
LACAILLE 3552, −29° 54′.				
Feb. 21	8	44	50.97	7.8
(*), −29° 52′.				
Mar. 4	8	45	57.86	9.2
(*), −42° 40′.				
Mar. 28	8	46	3.65	10.0
(*), −29° 52′.				
Mar. 16	8	46	30.68	9.5
(*), −30° 42′.				
Feb. 21	8	47	47.67	8.2
LACAILLE 3595, −32° 52′.				
Feb. 14	8	50	8.69	7.5
(*), −33° 34′.				
Mar. 28	8	50	9.69	9.3
ι URSÆ MAJORIS, +48° 33′.				
Feb. 2	8	50	17.63	
(*), −31° 39′.				
Mar. 2	8	50	22.13	9.2
WEISSE (2) VIII, 1255, +23° 17′				
Feb. 20	8	51	30.00	
Mar. 4			30.26	8.8
15			30.09	9.0
16			30.10	9.3
WEISSE (2) VIII, 1258, +23° 15′.				
Feb. 20	8	51	35.67	
21			35.82	8.0
28			35.88	8.2
Mar. 4			35.95	8.0
16			35.88	8.8
κ CANCRI, +11° 11′.				
Feb. 3	9	0	42.33	
21			42.31	
Mar. 2			42.30	
4			42.30	
22			42.19	
28			42.26	
Apr. 4			42.24	
CARRINGTON 1325, +81° 56′.				
Mar. 2	9	1	30.01	
23			28.47	
25			30.62	9.7
28			29.36	9.8
LACAILLE 3704, −25° 23′.				
Mar. 4	9	4	47.10	

1871.	h.	m.	s.	Mag.
LALANDE 18122, (1st *), +53° 15′.				
Apr. 4	9	5	29.94	
LALANDE 18122, (2d *), +53° 15′.				
Apr. 4	9	5	31.64	
(*), −27° 41′.				
Feb. 6	9	10	15.55	
28			15.58	
Mar. 2			15.52	8.5
16			15.37	9.0
(*), −38° 53′.				
Feb. 28	9	13	46.33	8.2
(*), −28° 26′.				
Feb. 6	9	17	21.51	
28			21.53	8.3
(*), −28° 26′.				
Feb. 6	9	17	41.53	
(*), −28° 26′.				
Feb. 6	9	17	52.17	
LACAILLE 3815, −38° 49′.				
Mar. 4	9	19	6.68	
a HYDRÆ, −8° 6′.				
Feb. 6	9	21	11.98	
28			11.94	
Mar. 2			12.00	
15			11.97	
21			11.96	
22			11.98	
24			11.97	
28			11.89	
Apr. 4			11.97	
8			12.00	
11			11.95	
May 25			12.00	
h LEONIS, +10° 16′.				
Mar. 4	9	24	59.42	
ζ^1 ANTLIÆ, (1st *), −31° 15′.				
Feb. 6	9	25	11.92	
28			12.03	
ζ^1 ANTLIÆ, (2d *), −31° 15′.				
Feb. 28	9	25	12.30	
B. A. C. 3255, +28° 56′.				
Mar. 25	9	25	41.30	
Apr. 4			41.22	
(*), −36° 8′.				
Mar. 24	9	26	10.10	8.5

O. ARG. S. 9824, −27° 39′.

1871.	h. m. s.	Mag.
Mar. 21	9 26 16.65	9.2
28	16.77	9.3

(*), −36° 21′.

Feb. 6	9 32 33.58	
28	33.80	8.0

o LEONIS, +10° 29′.

Mar. 4	9 34 12.62	

LALANDE 19022, +43° 19′.

Mar. 21	9 35 12.48	8.8
Apr. 4	12.50	

ε LEONIS, +24° 22′.

Feb. 6	9 38 28.07	
28	28.16	
Mar. 4	28.18	
25	28.07	
28	28.11	
Apr. 4	28.11	
8	28.03	
11	28.09	
18	28.07	
20	28.04	
May 25	28.03	

(*), +12° 4′.

Mar. 21	9 40 16.37	9.0

(*), +12° 4′.

Mar. 21	9 40 20.84	9.3

B. A. C. 3345, +12° 4′.

Mar. 4	9 40 33.87	6.0

(*), −37° 42′.

Mar. 28	9 42 3.13	8.8
Apr. 4	3.08	
11	3.06	9.0

LACAILLE 4031, −34° 22′.

Feb. 6	9 43 12.63	
Mar. 25	12.51	

μ LEONIS, +26° 37′.

Feb. 6	9 45 21.94	
Mar. 4	21.93	
15	22.01	
22	21.98	
25	21.95	
28	22.01	
Apr. 11	21.99	
18	21.95	
20	21.94	
29	21.93	

O. ARG. S. 10241, −27° 52′.

Mar. 25	9 51 4.39	9.8

(*), −38° 54′.

1871.	h. m. s.	Mag.
Mar. 21	9 52 31.68	9.3

(*), −38° 45′.

Mar. 4	9 55 40.68	8.8

LACAILLE 4107, −38° 45′

Feb. 6	9 55 46.99	
Mar. 4	46.92	7.8

(*), −38° 45′.

Feb. 6	9 57 36.73	
Mar. 4	36.84	

(*), +69° 5′.

Apr. 3	9 57 46.94	9.0

LALANDE 19627, +69° 5′.

Apr. 3	9 58 21.72	8.0
4	21.47	8.8
29	21.81	

Differs 8s from Lalande.

(*), +69° 5′.

Apr. 4	9 59 9.45	9.2
11	9.33	9.8
20	9.10	9.2

B. A. C. 3456, +20° 30′.

Mar. 25	10 0 44.88	
Apr. 4	44.90	

α LEONIS, +12° 36′.

Mar. 21	10 1 26.82	
Apr. 24	26.81	

GROOMBRIDGE 1618, +50° 7′.

Feb. 6	10 3 23.81	
Apr. 20	23.71	6.5

O. ARG. S. 10488, −30° 30′.

Feb. 6	10 9 51.43	
Mar. 4	51.31	8.2

O. ARG. S. 10533, −28° 19′.

Feb. 6	10 13 9.48	
Mar. 4	9.20	

γ^1 LEONIS, +20° 30′.

Mar. 25	10 12 48.15	
Apr. 24	48.11	
29	48.08	

O. ARG. S. 10540, −28° 16′.

Feb. 6	10 13 49.18	
Mar. 4	49.26	

B. A. C. 3528, +83° 14′.

1871.	h. m. s.	Mag.
Apr. 3	10 14 59.14	
18	58.72	

B. A. C. 3562, +9° 29′.

Feb. 6	10 18 44.35	
Mar. 4	44.27	8.2

WEISSE (2) X, 373, +17° 56′.

Mar. 6	10 19 51.37	
25	51.54	

(*), +37° 45′.

Mar. 25	10 23 3.53	

(*), +37° 45′.

Mar. 25	10 23 42.90	

ρ LEONIS, +9° 58′.

Mar. 6	10 25 57.92	
Apr. 18	57.89	
20	57.89	

(*), −3° 53′.

Mar. 4	10 29 11.12	8.8

(*), −37° 24′.

Apr. 4	10 28 44.01	8.8

WEISSE X, 520, —11° 29′.

Apr. 18	10 30 4.14	
20	4.04	7.0
24	4.07	7.0

B. A. C. 3649, +9° 34′.

Mar. 4	10 32 53.61	

34 SEXTANTIS, +4° 15′.

Feb. 6	10 35 54.71	

l LEONIS, +11° 13′.

Feb. 6	10 42 25.38	
Mar. 6	25.31	
Apr. 15	25.30	
20	25.36	
24	25.42	
29	25.39	

(*), −29° 21′.

Apr. 11	10 43 28.12	8.3

WEISSE X, 781, +12° 19′.

Mar. 4	10 44 18.33	

LALANDE 20849, +70° 34′.

Apr. 3	10 44 34.27	
18	34.17	

WEISSE X, 803, +12° 6′.

1871.	h. m. s.	Mag.
Mar. 4	10 45 8.89	

44 URSÆ MAJORIS, +55° 15′.

Mar. 25	10 45 41.15	

O. ARG. S. 10952, −29° 21′.

Apr. 4	10 47 5.86	

(*), −23° 30′.

Apr. 20	10 47 34.10	9.0

(*), −33° 49′.

Mar. 6	10 47 52.14	
Apr. 15	52.33	

WEISSE (2) X, 963, +23° 54′.

Apr. 18	10 48 28.49	

(*), −31° 4′.

Apr. 24	10 50 2.27	9.0

(*), +37° 0′.

Apr. 11	10 55 25.09	8.3

(*), +9° 22′.

Apr. 4	10 55 34.44	9.3

LALANDE 21947, +36° 57′.

Apr. 20	10 56 13.49	7.8

(*), +0° 42′.

Apr. 8	10 57 21.89	
15	21.82	

χ LEONIS, +8° 2′.

Feb. 6	10 58 18.63	

B. A. C. 3792, −35° 3′.

Apr. 4	10 58 46.04	

O. ARG. S. 11114, −29° 47′.

Apr. 11	10 58 58.28	8.0
24	58.42	

(*), −29° 47′.

Apr. 11	10 59 4.12	10.0
29	4.39	

F. LALANDE 1831, (1st *), +74° 11′.

Mar. 6	11 6 37.69	
Apr. 14	37.27	
24	37.24	

1871.	h.	m.	s.	Mag.
F. LALANDE 1831, (2d *), +74° 11′.				
Mar. 6	11	6	39.39	
Apr. 14			39.19	
24			39.01	
δ LEONIS, +21° 13′.				
Feb. 6	11	7	11.48	
Mar. 4			11.45	
Apr. 4			11.51	
8			11.51	
11			11.56	
18			11.52	
20			11.51	
δ CRATERIS, −14° 4′.				
Feb. 6	11	12	50.65	
Mar. 4			50.53	
Apr. 14			50.66	
15			50.68	
18			50.71	
20			50.62	
24			50.55	
29			50.56	
(*), +38° 17′.				
Apr. 8	11	14	36.14	
τ LEONIS, +3° 34′.				
Feb. 6	11	21	15.07	
Apr. 8			15.20	
14			15.13	
15			15.04	
18			15.11	
20			15.22	
29			15.13	
WEISSE XI, 349, +3° 33′.				
Apr. 8	11	21	16.11	
B. A. C. 3929, −39° 49′.				
Mar. 6	11	27	17.46	
Apr. 8			17.58	
LACAILLE 4805, −33° 53′.				
Apr. 4	11	30	14.04	
υ LEONIS, −0° 7′.				
Mar. 6	11	30	17.58	
Apr. 3			17.57	
14			17.60	
18			17.61	
20			17.58	
May 1			17.54	
24			17.63	
WEISSE XI, 558, +11° 2′.				
Apr. 24	11	32	53.17	
29			53.24	
May 13			53.24	
(*), +15° 17′.				
Apr. 20	11	41	45.83	10.0

1871.	h.	m.	s.	Mag.
(*), +15° 17′.				
Apr. 20	11	42	1.08	9.8
(*), +15° 17′.				
Apr. 24	11	42	17.26	8.5
β LEONIS, +15° 18′.				
Mar. 6	11	42	25.73	
Apr. 14			25.59	
18			25.61	
24			25.63	
May 13			25.63	
B. A. C. 4010, +38° 43′.				
Apr. 4	11	45	29.23	
15			29.03	
18			29.08	
32 CAMELOPARD., (H.), foll., +84° 6′.				
Mar. 4	11	48	8.50	
LALANDE 22585, −9° 42′.				
Mar. 6	11	54	4.31	
Apr. 14			4.43	
15			4.32	
67 URSÆ MAJORIS, +43° 47′.				
Apr. 18	11	55	30.23	6.0
24			30.25	6.0
WEISSE (2) XI, 1079, +43° 50′.				
Apr. 4	11	55	40.75	8.3
18			40.81	9.5
24			40.55	9.0
WEISSE (2) XI, 1086, +43° 51′.				
Apr. 18	11	55	52.85	8.5
24			52.74	8.0
WEISSE XI, 963, +4° 5′.				
Mar. 6	11	57	18.63	
13			18.59	
18			18.53	9.3
WEISSE XI, 966, +4° 5′.				
Mar. 6	11	57	25.80	
May 13			25.63	
18			25.63	9.3
(*), +4° 5′.				
May 18	11	58	25.91	8.2
ο VIRGINIS, +9° 27′.				
May 1	11	58	35.19	
LACAILLE 5066, −33° 1′.				
Apr. 8	12	6	52.28	

1871.	h.	m.	s.	Mag.
LACAILLE 5071, −31° 36′.				
Apr. 4	12	7	18.29	
GROOMBRIDGE 1860, −84° 13′.				
Apr. 15	12	7	27.93	
20			28.76	
WEISSE XII, 107, −9° 33′.				
Mar. 6	12	8	29.15	
Apr. 3			29.17	6.5
24			29.17	
η VIRGINIS, +0° 3′.				
Apr. 4	12	13	15.36	
24			15.36	
May 13			15.34	
18			15.30	
29			15.35	
3 CANUM VENATICORUM, +49° 46′.				
Apr. 8	12	13	23.93	
14			23.85	
15			23.82	
12 COMÆ, +26° 34′.				
Apr. 4	12	15	58.15	
8			58.06	
WEISSE XII, 360, +7 35′.				
Mar. 6	12	22	28.28	
Apr. 4			28.10	
14			28.37	
(*), +5° 27′.				
Apr. 4	12	24	37.80	9.0
20			37.83	8.6
(*), +5° 27′.				
Apr. 4	12	24	43.38	
20			43.35	8.0
LACAILLE 5193, −31° 41′.				
Mar. 6	12	25	41.75	
(*), −31° 41′.				
May 13	12	26	35.81	9.0
(*), −32° 53′.				
May 18	12	26	49.14	9.0
20			49.13	8.8
q VIRGINIS, −8° 44′.				
May 29	12	27	4.26	
(*), −31° 41′.				
May 13	12	27	11.62	8.7

1871.	h.	m.	s.	Mag.
β CORVI, −22° 41′.				
May 1	12	27	33.74	
23			38.86	
O. ARG. S. 12254, −22° 42′.				
Apr. 29	12	27	59.44	8.7
f VIRGINIS, −5° 7′.				
May 29	12	30	5.67	
γ VIRGINIS, (1st *), −0° 41′.				
May 29	12	35	4.29	
γ VIRGINIS, (2d *), −0° 41′.				
May 29	12	35	4.39	
O. ARG. S. 12455, −23° 46′.				
May 13	12	42	45.32	
WEISSE XII, 764, +0° 57′.				
Apr. 29	12	45	48.45	8.8
38 VIRGINIS, −2° 51′.				
Apr. 4	12	46	31.86	
May 29			31.74	
(*), −26° 39′.				
May 13	12	48	32.29	9.8
O. ARG. S. 12523, −26° 39′.				
May 13	12	48	44.18	9.5
20			44.18	9.2
O. ARG. S. 12533, −26° 39′.				
May 13	12	49	45.82	8.0
WEISSE (2) XII, 880, −9° 8′.				
Feb. 9	12	52	22.29	
Apr. 25			22.33	
k VIRGINIS, −3° 7′.				
Apr. 4	12	52	57.84	
May 29			57.76	
GROOMBRIDGE 1947, +69° 28′.				
Feb. 9	12	54	8.23	
Mar. 6			8.74	
May 20			7.99	
48 VIRGINIS, −2° 58′.				
Apr. 4	12	57	12.69	
May 29			12.58	
WEISSE XII, 1063, +5° 56′.				
May 20	13	2	15.55	
23			15.71	8.0

θ VIRGINIS, −4° 51'.

1871.	h. m. s.	Mag.
Feb. 19	13 3 13.26	
Mar. 6	13.23	
Apr. 4	13.29	
24	13.26	
May 1	13.35	
16	13.33	
20	13.35	
29	13.21	

O. ARG. S. 12691, −23° 7'.

May 13	13 3 20.19	8.9

O. ARG. S. 12694, −23° 7'.

May 13	13 3 29.12	9.0

(*), +13° 5'.

May 18	13 3 36.73	9.9

62 VIRGINIS, −10° 34'.

May 18	13 13 30.51	8.2

WEISSE (2) XIII, 241, +35° 50'.

May 23	13 13 30.71	9.6

WEISSE (2) XIII, 265, +43° 47'.

June 10	13 14 46.99	

α VIRGINIS, −10° 29'.

Feb. 9	13 18 20.77	
May 13	20.83	
17	20.87	
23	20.85	
29	20.86	
June 3	20.83	

i VIRGINIS, −11° 59'.

May 13	13 19 51.37	
18	51.30	

WEISSE XIII, 318, +0° 18'.

May 20	13 20 49.92	9.8

l² VIRGINIS, −4° 31'.

Feb. 9	13 25 12.53	5.0

O. ARG. S. 12959, −26° 34'.

May 13	13 27 35.32	
18	35.23	10.0

ζ VIRGINIS, +0° 4'.

Feb. 10	13 28 4.26	
May 10	4.22	
16	4.19	
17	4.16	
29	4.24	
June 15	4.25	

(*), −31° 41'.

1871.	h. m. s.	Mag.
June 3	13 29 24.16	9.8
6	24.11	8.2

(*), −38° 19'.

May 20	13 30 17.54	8.0

(*), −12° 9'.

May 23	13 33 18.56	9.5

(*), −12° 9'.

May 23	13 33 38.03	9.8

(*), −12° 9'.

Feb. 10	13 34 4.47	7.0
May 10	4.20	8.0
16	4.32	8.5

(*), +18° 35'.

May 13	13 34 4.74	8.7

(*), +22° 43'.

May 16	13 37 20.08	9.0
20	19.98	8.0

(*), +15° 37'.

May 10	13 39 9.00	9.0

WEISSE (2) XIII, 899, +18° 40'.

Feb. 10	13 43 11.66	
May 13	11.71	8.5

WEISSE XIII, 731, −12° 24'.

Feb. 9	13 43 23.89	8.0

(*), −22° 20'.

May 13	13 46 12.26	7.8

(*), +77° 52'.

May 16	13 46 37.42	10.0
20	37.24	9.2

LACAILLE 5739, −28° 3'.

May 17	13 46 53.23	6.0
23	53.41	6.0

O. ARG. S. 13227, −28° 8'.

May 23	13 47 27.03	9.0

η BOOTIS, +19° 3'.

Feb. 9	13 48 29.80	
10	29.70	
May 16	29.75	
17	29.68	
18	29.64	
24	29.64	
June 6	29.73	
27	29.72	

LALANDE 25635, −22° 20'.

1871.	h. m. s.	Mag.
May 13	13 50 13.99	6.0

(*), −22° 20'.

May 10	13 50 43.83	

(*), −37° 27'

May 20	13 53 0.25	9.0
23	0.25	8.9

(*), −36° 39'.

June 3	13 53 38.42	8.7
6	38.37	8.7

WEISSE (2) XIII, 1167, +23° 37'.

Feb. 10	13 53 38.53	
May 13	38.52	
19	38.48	

(*), +77° 11'.

May 16	13 54 29.54	9.0
18	28.54	8.0

(*), +77° 5'.

May 24	13 54 30.06	8.3
June 15	29.18	8.3

(*), −26° 4'.

Feb. 10	14 1 46.94	

κ VIRGINIS, −9° 40'.

June 27	14 6 57.83	

ι VIRGINIS, −5° 20'.

Feb. 10	14 9 12.11	
May 10	12.00	

α BOOTIS, +19° 51'.

May 16	14 9 43.98	
17	43.99	
18	44.04	
20	43.90	
23	43.88	
24	44.04	
June 3	43.94	
6	43.95	
15	43.87	
23	43.96	

λ VIRGINIS, −12° 46'.

Feb. 10	14 12 4.72	

2 LIBRÆ, −11° 7'.

Feb. 10	14 16 26.15	
June 27	26.08	

ε BOOTIS, +27° 37'.

1871.	h. m. s.	Mag.
Feb. 10	14 39 18.57	
May 10	18.58	
13	18.58	
18	18.61	
19	18.54	
20	18.51	
23	18.55	
24	18.63	
June 3	18.63	
6	18.57	
15	18.63	
23	18.50	
27	18.54	
28	18.68	

α² LIBRÆ, −15° 30'.

Feb. 10	14 43 41.42	
May 10	41.42	
13	41.42	
20	41.43	
23	41.41	
24	41.44	
June 23	41.53	
27	41.43	
28	41.29	

LACAILLE 6135, −33° 24'.

May 20	14 46 26.90	

B. A. C. 4923, (1st *), −20° 48'.

June 6	14 49 51.85	

B. A. C. 4923, (2d *), −20° 48'.

May 24	14 49 52.79	
June 6	52.85	

O. ARG. N. 15005, +59° 7'.

May 19	14 53 59.82	8.0

δ LIBRÆ, −7° 58'.

May 16	14 54 1.82	

β BOOTIS, +40° 54'.

May 19	14 57 2.95	
June 28	2.93	

WEISSE XIV, 1091, −10° 42'.

May 16	14 59 2.34	
June 3	2.45	8.8

(*), −26° 17'.

May 23	14 59 9.51	7.5

c BOOTIS, +25° 23'.

May 19	15 1 35.63	
23	35.50	

(*), −36° 56'.

June 6	15 1 59.09	9.2

1871.	h.	m.	s.	Mag.
ι^1 Libræ, −19° 18′.				
June 1	15	4	48.83	
(*), −25° 5′.				
May 16	15	5	4.22	9.0
(*), −37° 1′.				
June 3	15	5	24.56	
6			24.53	9.0
Weisse XV, 99, −0° 51′.				
May 24	15	7	19.85	
June 23			19.87	
β Libræ, −8° 54′.				
Apr. 7	15	10	0.83	
May 16			0.86	
19			0.93	
24			0.78	
June 3			0.84	
6			0.85	
15			0.89	
28			0.89	
29			0.85	
(*), −37° 6′.				
May 23	15	12	58.09	
Lacaille 6337, −37° 6′.				
May 16	15	13	50.87	7.0
June 3			50.97	8.0
Lacaille 6343, −34° 15′.				
June 6	15	14	14.61	8.7
15			14.69	8.7
23			14.65	
(*), −36° 6′.				
May 23	15	17	59.23	8.0
μ^1 Bootis, +37° 50′.				
May 19	15	19	34.79	
June 3			34.81	
23			34.78	
ζ^1 Libræ, −16° 15′.				
June 28	15	20	55.68	
γ^2 Ursæ Minoris, +72° 18′.				
July 12	15	20	57.10	
(*), −31° 49′.				
May 17	15	22	22.16	
23			21.89	9.0
O. Arg. S. 14648, −24° 28′.				
May 19	15	26	11.87	
23			12.02	

1871.	h.	m.	s.	Mag.
O. Arg. S. 14665, −24° 38′.				
May 19	15	27	23.10	
23			23.15	
O. Arg. S, 14669, −27° 44′.				
June 15	15	27	50.66	9.8
23			50.71	8.9
γ Libræ, −14° 21′.				
Apr. 7	15	28	(15.74)	
June 28			15.37	
a Coronæ Borealis, +27° 9′.				
May 19	15	29	11.07	
(*), +43° 11′.				
May 16	15	33	28.53	9.0
(*), +43° 11′.				
May 16	15	33	37.94	8.0
(*), +43° 11′.				
May 23	15	36	27.65	
a Serpentis, +6° 50.				
May 16	15	37	51.95	
19			51.98	
23			52.00	
24			51.93	
June 15			52.03	
19			52.07	
28			51.93	
29			51.90	
July 8			51.93	
Weisse (2) XV, 1035, +28° 50′.				
June 15	15	42	20.76	
23			20.75	
ε Serpentis, +4° 52′.				
Apr. 7	15	44	20.22	
May 16			20.20	
19			20.16	
24			20.26	
June 28			20.27	
July 8			20.18	
θ Libræ, −16° 21′.				
June 29	15	46	25.56	
ζ Ursæ Minoris, +78° 11′.				
Apr. 7	15	48	45.18	
ε Coronæ Borealis, +27° 15′.				
May 24	15	52	12.49	
June 23			12.56	

1871.	h.	m.	s.	Mag.
δ Scorpii, −22° 15′.				
Apr. 7	15	52	39.00	
June 29			38.96	
Var. in Cor. Borealis, +26° 18′.				
June 15	15	54	3.90	9.6
Weisse XV, 1081, +6° 22′.				
June 15	15	57	47.18	8.0
β^1 Scorpii, −19° 27′.				
Apr. 7	15	57	52.87	
June 29			52.90	
Weisse XV, 1086, +6° 22′.				
June 15	15	57	56.24	6.5
(*), −38° 44′.				
June 15	15	59	51.83	7.0
Lacaille 6695, −38° 44′.				
June 15	15	59	52.09	6.0
ν^1 Scorpii, −19° 7′.				
June 29	16	4	25.38	
ν^2 Scorpii, −19° 7′.				
June 29	16	4	26.49	
δ Ophiuchi, −3° 22′.				
May 24	16	7	32.10	
June 15			31.98	
Ψ Ophiuchi, −19° 44′.				
June 29	16	16	29.87	
χ Ophiuchi, −18° 10′.				
June 29	16	19	29.45	
Weisse XVIII, 439, +4° 31′.				
July 8	16	24	4.93	7.7
O. Arg. S. 15734, −15° 15′.				
June 5	16	26	38.62	9.0
23			38.72	9.0
29			38.62	9.0
ζ Ophiuchi, —10° 18′.				
June 5	16	30	0.10	
27			0.13	
29			0.11	
(*), −26° 11′.				
June 5	16	31	18.29	9.0

1871.	h.	m.	s.	Mag.
η Herculis, +39° 10′.				
May 23	16	38	26.35	
June 19			26.39	
23			26.41	
(*), −31° 23′.				
June 5	16	42	19.01	8.5
20 Ophiuchi, −10° 34′.				
June 2	16	42	38.56	
Weisse XVI, 873, +0° 15′.				
July 8	16	46	25.78	7.5
(*), −37° 3′.				
June 29	16	47	24.29	8.5
(*), −30° 7′.				
June 5	16	48	52.29	9.5
23			52.30	9.6
κ Ophiuchi, +9° 35′.				
May 23	16	51	30.95	
June 5			30.99	
19			30.93	
27			30.96	
Lacaille 7091, −39° 54′.				
June 19	16	54	22.22	
23			22.16	
July 8			22.00	7.0
Weisse XVI, 1033, −9° 5′.				
July 8	16	55	24.16	9.0
Weisse XVI, 1048, −9° 5′.				
July 8	16	56	9.22	9.5
d Herculis, +33° 45′.				
May 23	16	56	48.28	
June 19			48.45	
ε Ursæ Minoris, +82° 15′.				
June 9	16	59	21.73	
Weisse XVII, 107, +14° 43′.				
June 5	17	7	52.68	7.7
(*), −35° 20′.				
June 23	17	8	39.83	
July 8			40.06	8.5
a^1 Herculis, +14° 32′.				
May 23	17	8	43.17	
June 16			43.17	
19			43.20	
27			43.17	
July 4			43.21	

(*), −35° 20′.

1871.	h. m. s.	Mag.
June 23	17 8 45.68	
July 8	46.13	8.8

(*), −30° 24′.

June 5	17 16 21.47	

(*), −30° 24′.

June 5	17 16 27.33	

b Ophiuchi, −24° 3′.

June 3	17 18 25.98	
23	25.82	

Weisse XVII, 322, +2° 17′.

July 8	17 19 17.28	7.5

(*), −38° 33′.

June 5	17 26 44.15	

α Ophiuchi, +12° 39′.

June 16	17 28 54.03	
19	54.07	
27	54.05	
July 8	54.12	

(*), −37° 21′.

July 4	17 28 59.72	8.3

ξ Serpentis, −15° 18′.

June 3	17 30 8.67	

o Serpentis, −12° 48′.

June 3	17 34 6.54	

O. Arg. N. 17415, +68° 27′.

July 8	17 37 10.83	8.5

O. Arg. N. 17420, +68° 27′.

July 8	17 37 19.14	8.0

(*), −34° 37′.

June 5	17 38 42.07	8.0

(*), −34° 20′.

June 29	17 39 9.64	7.5
July 8	9.73	7.2

μ Herculis, +27° 48′.

June 3	17 41 22.26	
16	22.26	
19	22.22	
27	22.28	

(*), −34° 43′.

1871.	h. m. s.	Mag.
July 8	17 45 3.91	7.8

(*), −34° 43′.

July 8	17 45 5.39	7.5

B. A. C. 6043, −34° 45′.

July 8	17 45 14.73	8.0

4 Sagittarii, −23° 48′.

June 3	17 51 51.31	

(*), −24° 11′.

July 8	17 56 17.58	7.2

(*), −24° 12′.

July 8	17 56 35.40	8.8

(*), −21° 3′.

July 8	18 5 56.53	9.7

μ¹ Sagittarii, −21° 5′.

June 3	18 5 59.37	
5	59.25	
29	59.34	
July 3	59.30	7.2

(*), −21° 3′.

July 8	18 6 2.73	9.3

O. Arg. S. 18074, −17° 49′.

July 6	18 13 3.71	

(*), −26° 26′.

July 6	18 15 43.40	

(*), −28° 51′.

July 6	18 20 13.50	

(*), −33° 7′.

July 6	18 23 51.99	7.8

ι Aquilæ, −8° 20′.

June 16	18 28 7.92	
27	7.95	
July 4	7.96	

α Lyræ, +38° 40′.

May 24	18 32 32.14	
June 16	32.23	
27	32.13	

O. Arg. S. 18526, −25° 9′.

July 6	18 32 47.53	8.5
8	47.53	9.0

O. Arg. S. 18536, −25° 6′.

1871.	h. m. s.	Mag.
July 6	18 33 37.09	7.5

Weisse XVIII, 971, −12° 25′.

July 6	18 39 37.72	
8	37.56	

β¹ Lyræ, +33° 13′.

May 24	18 45 16.79	
June 16	16.89	
29	16.77	
July 8	16.81	

(*), −8° 21′.

July 8	18 51 43.08	8.3

(*), −8° 20′.

July 8	18 51 54.02	9.0

Weisse XVIII, 1293, −8° 21′.

July 8	18 51 59.29	8.5

ζ Aquilæ, +13° 40′.

Mar. 14	18 59 26.10	
June 5	26.07	
29	26.10	

π Sagittarii, −21° 14′.

July 2	19 2 1.93	

d Sagittarii, −19° 10′.

July 2	19 10 1.62	

ρ¹ Sagittarii, −18° 5′.

July 2	19 14 7.90	

δ Aquilæ, +2° 52′.

May 19	19 18 56.62	
23	56.62	
July 2	56.58	

κ Aquilæ, −7° 19′.

May 19	19 29 53.79	
July 8	53.72	

γ Aquilæ, +10° 18′.

Apr. 11	19 40 4.69	
May 19	4.71	
23	4.75	
July 3	4.74	

α Aquilæ, +8° 32′.

Mar. 14	19 44 26.38	
Apr. 11	26.39	
May 19	26.38	
23	26.38	
July 3	26.39	

β Aquilæ, +6° 5′.

1871.	h. m. s.	Mag.
May 19	19 48 55.57	
23	55.68	
July 2	55.58	

τ Aquilæ, +6° 55′.

May 23	19 57 47.22	
June 5	47.29	

α² Capricorni, −12° 57′.

Apr. 11	20 10 50.39	
May 10	50.44	
July 3	50.30	

π Capricorni, −18° 37′.

June 5	20 19 52.70	
July 3	52.62	

ρ Capricorni, −18° 14′.

June 5	20 21 26.64	

B. A. C. 7044, −18° 14′.

June 5	20 21 35.11	

ε Delphini, +10° 52′.

July 3	20 27 0.17	

(*), +27° 30′.

July 6	20 31 20.90	

Weisse XX, 841, −7° 15′.

July 6	20 33 49.55	

Weisse XX, 846, −7° 14′.

July 6	20 33 58.78	

(*), +34° 54′.

July 6	20 37 4.64	

Lalande 40043, +34° 54′.

July 6	20 37 16.62	

(*), +34° 54′.

July 6	20 38 23.89	

(*), +34° 54′.

July 6	20 38 41.79	

ε Aquarii, −9° 58′.

July 3	20 40 38.23	

Weisse (2) XX, 1357, +33° 54′.

July 6	20 41 36.12	

1871.	h. m. s.	Mag.
Weisse (2) XX, 1373, +33° 54'.		
July 6	20 41 59.41	
μ Aquarii, −9° 28'.		
July 3	20 45 38.38	
ν Cygni, +40° 40'.		
July 3	20 52 19.34	
G. 12-Year Cat. 1879, +79° 53'.		
Mar. 23	20 53 33.45	
(*), −30° 3'.		
July 6	21 0 54.89	
ζ Cygni, +29° 42'.		
May 10	21 7 24.28	
June 16	24.27	

1871.	h. m. s.	Mag.
1 Pegasi, +19° 15'.		
June 16	21 16 4.50	
β Aquarii, −6° 8'.		
May 10	21 24 42.81	
June 16	42.80	
ξ Aquarii, −8° 26'.		
June 8	21 30 49.78	
16	49.82	
July 4	49.77	
ε Pegasi, +9° 17'.		
May 10	21 37 47.98	
June 8	48.08	
16	48.08	
μ Capricorni, −14° 9'.		
June 8	21 46 12.34	
July 4	12.34	
α Aquarii, −0° 57'.		
Jan. 12	21 59 6.33	
June 6	6.32	
July 4	6.39	

1871.	h. m. s.	Mag.
θ Aquarii, −8° 25'.		
June 8	22 10 58.35	
July 5	58.39	
π Aquarii, +0° 44'.		
July 5	22 18 38.23	
η Aquarii, −0° 47'.		
June 8	22 28 40.49	
July 5	40.48	
κ Aquarii, −4° 54'.		
July 5	22 31 1.17	
ζ Pegasi, +10° 9'.		
Jan. 12	22 34 58.71	
λ Aquarii, −8° 16'.		
June 8	22 45 49.89	
July 5	49.80	

1871.	h. m. s.	Mag.
78 Aquarii, −7° 53'.		
July 5	22 47 47.83	
α Piscis Australis, −30° 19'.		
June 12	22 50 27.67	
β Piscium, +3° 7'.		
July 5	22 57 15.59	
α Pegasi, +14° 31'.		
Jan. 12	22 58 17.20	
July 5	17.17	
θ Piscium, +5° 40'.		
July 5	23 21 22.42	
ι Piscium, +4° 56'.		
July 6	23 33 15.83	
ω Piscium, +6° 9'.		
July 6	23 52 38.28	

MEAN DECLINATIONS OF STARS

FOR 1870.0,

GIVEN BY INDIVIDUAL OBSERVATIONS

WITH

THE MURAL CIRCLE.

1871.

20

MEAN DECLINATIONS FOR 1870.0.

MURAL CIRCIE.

Star	1871.		° ′ ″
Polaris, S. P., $1^h\ 11^m\ 44^s$.	April	15	+88 36 57.5
12 Eridani, $3^h\ 6^m\ 35^s$.	January	3	−29 30 3.9
δ Persei, $3^h\ 33^m\ 45^s$.	January	17	+47 22 9.4
Lalande 6888, (1st *), $3^h\ 37^m\ 50^s$.	January	3	+41 3 51.1
Lalande 6888, (2d *), $3^h\ 37^m\ 50^s$.	January	3	+41 3 57.4
Weisse III, 751, $3^h\ 40^m\ 17^s$.	January	17	+12 2 51.7
24 Tauri, $3^h\ 39^m\ 49^s$.	January	7	+23 42 43.0
28 Tauri, $3^h\ 41^m\ 38^s$.	January	7	+23 44 14.7
Groombridge 745, $3^h\ 44^m\ 39^s$.	January	3	+75 47 52.6
Groombridge 748, $3^h\ 47^m\ 19^s$.	January	3	+75 47 30.0
Groombridge 751, 3h $47^m\ 54^s$.	January	3	+75 46 26.0
Weisse V, $56^h\ 4^m\ 52^s$.	January	3	+ 4 10 36.1
Σ Cat. Gen. 577, $5^h\ 21^m\ 43^s$.	January	3	+54 33 41.8
Groombridge 990, $5^h\ 28^m\ 11^s$.	January	3	+51 21 23.8
Lacaille 1918, $5^h\ 32^m\ 5^s$.	January	6	−27 17 16.3
Weisse (2) V, 79, $6^h\ 5^m\ 7^s$	March	8	+31 26 29.9
Weisse (2) V, 136, $6^h\ 6^m\ 52^s$.	March	8	+31 30 28.1
O. Arg. S. 5522, $6^h\ 36^m\ 35^s$.	March	14	−27 37 8.0
O. Arg. S. 5718, $6^h\ 43^m\ 27^s$.	March	14	−27 14 11.9
(*), $6^h\ 44^m\ 22^s$.	March	8	−28 30 19.5
B. A. C. 2244, $6^h\ 44^m\ 58^s$.	March	14	−27 11 4.0
B. A. C. 2266, $6^h\ 48^m\ 26^s$.	March	21	−28 21 52.4
		25	51.5
Lalande 13427, $6^h\ 51^m\ 54^s$.	March	8	+48 34 16.7
		15	17.5
Weisse VI, 1579, $6^h\ 51^m\ 57^s$.	March	6	−14 46 11.4
Weisse VI, 1587, $6^h\ 52^m\ 7^s$.	M2rch	6	−14 46 43.6
Weisse VI, 1618, $6^h\ 53^m\ 10^s$.	March	14	−14 47 8.8
Lacaille 2641, $7^h\ 4^m\ 24^s$.	March	15	−25 1 21.1
(*), $7^h\ 4^m\ 26^s$.	March	15	−24 59 58.7
Weisse VII, 93, $7^h\ 4^m\ 28^s$.	March	6	−14 33 21.8
		8	23.0
Weisse (2) VII, 135, $7^h\ 6^m\ 4^s$.	March	21	+25 13 57.3
		28	56.8
B. A. C. 2363, $7^h\ 6^m\ 33^s$.	March	25	+24 55 51.4
O. Arg. S. 6430, $7^h\ 8^m\ 24^s$.	March	25	−27 8 9.0
(*), $7^h\ 12^m\ 0^s$.	March	6	−29 29 54.7
(*), $7^h\ 13^m\ 20^s$.	March	21	+26 16 57.8
(*), $7^h\ 13^m\ 46^s$.	March	28	−30 59 21.6
Lacaille 2767, (1st *), $7^h\ 17^m\ 33^s$.	March	15	−35 40 22.0
		24	20.6
Lacaille 2767, (2d *), $7^h\ 17^m\ 33^s$.	March	24	−35 40 27.6
(*), $7^h\ 17^m\ 44^s$.	March	8	--14 57 47.8
(*), $7^h\ 19^m\ 31^s$.	March	8	−14 58 58.8
(*), $7^h\ 20^m\ 3^s$.	March	25	+10 27 43.5
63 Geminorum, $7^h\ 20^m\ 5^s$.	March	6	+21 42 29.7
β Canis Minoris, $7^h\ 20^m\ 9^s$.	March	21	+ 8 32 57.5
(*), $7^h\ 24^m\ 39^s$.	March	28	−24 3 6.2
Weisse VII, 756, $7^h\ 25^m\ 32^s$.	March	24	+10 41 49.5
68 Geminorum, $7^h\ 26^m\ 14^s$.	March	8	+16 6 13.3
Weisse (2) VII, 728, $7^h\ 26^m\ 23^s$.	March	25	+40 47 8.0
(*), $7^h\ 30^m\ 29^s$.	March	6	−29 42 52.4
(*), $7^h\ 30^m\ 40^s$.	March	6	−29 46 20.7
(*), $7^h\ 33^m\ 59^s$.	March	28	+10 25 38.6
(*), $7^h\ 34^m\ 26^s$.	March	24	−34 31 31.0
B. A. C. 2521, $7^h\ 34^m\ 52^s$.	March	21	+80 35 5.2
		22	4.0
(*), $7^h\ 35^m\ 8^s$.	March	24	−34 29 53.6
(*), $7^h\ 43^m\ 8^s$.	March	25	+38 7 52.0
		28	51.0
O. Arg. S. 7476, $7^h\ 43^m\ 31^s$.	March	24	−23 28 28.9
Weisse (2) VII, 1263, $7^h\ 45^m\ 17^s$.	March	21	+31 0 12.7
		22	13.2
Weisse VII, 1477, $7^h\ 50^m\ 52^s$.	March	8	+12 22 41.1
B. A. C. 2651, $7^h\ 51^m\ 16^s$.	March	15	−29 56 20.3

B. A. C. 2655, 7^h 52^m 31^s.

1871.		°	′	″
March	15	−29	59	10.3

ψ^2 Cancri, 8^h 2^m 40^s.

March	8	+25	53	57.2
	21			58.9
	22			58.8
April	4			60.4

(*), 8^h 10^m 10^s.

March	8	+30	59	14.5

(*), 8^h 10^m 10^s.

March	21	+31	1	51.4

Weisse VIII, 294, 8^h 12^m 15^s.

March	8	−12	11	35.7
	24			37.7
April	4			37.1

Weisse VIII, 415, 8^h 17^m 10^s.

March	15	+13	55	23.2

Weisse (2) VIII, 381, 8^h 18^m 11^s.

March	28	+40	22	12.4

ϕ^2 Cancri, (1st *), 8^h 18^m 59^s.

March	21	+27	21	28.9
	22			26.0

ϕ^2 Cancri, (2d *), 8^h 18^m 59^s.

March	21	+27	21	31.8
	22			29.0

(*), 8^h 19^m 13^s.

March	6	−27	24	55.1

B. A. C. 2827, 8^h 19^m 30^s.

March	14	−23	37	32.7

B. A. C. 2846, 8^h 22^m 23^s.

March	25	−25	42	12.5

υ^3 Cancri, 8^h 23^m 49^s.

March	22	+24	31	3.3

O. Arg. S. 8610, 8^h 23^m 59^s.

March	24	−29	56	4.1

Weisse VIII, 618, 8^h 25^m 3^s.

March	25	+13	14	26.8

B. A. C. 2883, 8^h 27^m 51^s.

March	21	−31	5	11.1
	28			8.4

B. A. C. 2885, 8^h 27^m 56^s.

1871.		°	′	″
April	11	−34	11	35.7

(*), 8^h 28^m 30^s.

March	6	+10	8	4.0

δ Hydræ, 8^h 30^m 47^s.

March	22	+ 6	9	19.4

g Mali, 8^h 32^m 22^s.

March	15	−25	48	4.4

O. Arg. S. 8806, 8^h 32^m 51^s.

March	15	−25	58	42.9

Weisse VIII, 851, 8^h 33^m 26^s.

March	25	+ 4	51	27.6

Lacaille 3459, 8^h 34^m 45^s.

March	24	−33	33	1.1

(*), 8^h 34^m 58^s.

March	24	−33	33	40.4

O. Arg. S. 8852, 8^h 34^m 59^s.

March	6	−26	47	49.5

Weisse (2) VIII, 856), 8^h 35^m 2^s.

March	21	+43	8	48.2
	28			49.5

O. Arg. N. 9342, (1st *), 8^h 43^m 14^s.

March	6	+71	17	46.9
	21			44.1

O. Arg. N. 9342, (2d *), 8^h 43^m 14^s.

March	6	+71	18	12.3

Weisse VIII, 1146, 8^h 45^m 16^s.

March	25	+13	43	24.4

ρ^3 Cancri, 8^h 47^m 56^s.

April	11	+28	25	20.2

(*), 8^h 49^m 47^s.

March	24	−32	56	2.8

(*), 8^h 50^m 10^h.

March	28	−31	34	38.5

Weisse VIII, 1274, 8^h 50^m 10^s.

April	4	− 7	27	21.2

(*), 8^h 50^m 11^s.

1871.		°	′	″
March	15	−32	55	47.1

(*), 8^h 50^m 32^s.

March	21	−37	49	59.9

(*), 8^h 51^m 46^s.

April	11	+53	11	3.3

(*), 8^h 57^m 11^s.

March	25	+53	45	46.3
April	11			48.8

κ Cancri, 9^h 0^m 46^s.

April	18	+11	11	24.9

l Mali, 9^h 4^m 29^s.

April	11	−29	50	10.4

Lalande 18122, (1st *), 9^h 5^m 32^s.

March	24	+53	14	26.6
	28			28.2
April	4			27.3

Lalande 18122, (2d *), 9^h 5^m 32^s.

March	24	+53	14	37.3
	28			39.7
April	4			38.8

(*), 9^h 12^m 13^s.

March	21	−28	35	27.6

Dorpat 1343, (1st *), 9^h 13^m 9^s.

March	15	+ 5	40	26.9

Dorpat 1343, (2d *), 9^h 13^m 11^s.

March	15	+ 5	40	49.6

(*), 9^h 13^m 24^s.

April	20	−33	32	58.9

B. A. C. 3190, 9^h 14^m 28^s.

April	20	−33	33	14.9

B. A. C. 3202, 9^h 16^m 37^s.

March	25	+ 8	16	13.7
	28			12.8

Lacaille 3834, 9^h 21^m 9^s.

April	11	−33	20	1.0

λ Leonis, 9^h 24^m 18^s.

March	24	+23	32	23.9

ζ^1 Antliæ, (1st *), 9^h 25^m 16^s.

1871.		°	′	″
March	21	−31	19	12.8
April	20			12.3

ζ^1 Antliæ, (2d *), 9^h 25^m 16^s.

March	21	−31	19	4.1
April	20			5.0

B. A. C. 3255, 9^h 25^m 45^s.

April	4	+28	56	34.3
	18			34.1

Lacaille 3920, 9^h 30^m 18^s.

March	22	−26	56	32.0

Lacaille 3928, 9^h 31^m 11^s.

March	25	−24	42	56.5

Weisse (2) IX, 650, 9^h 31^m 24^s.

April	4	+21	44	13.9
	11			13.7

(*), 9^h 32^m 37^s.

March	21	−36	20	40.2
April	20			37.5

Lalande 19022, 9^h 35^m 18^s.

March	28	+43	18	48.3
April	18			46.7

(*), 9^h 37^m 0^s.

March	24	−34	59	6.4

(*), 9^h 37^m 41^s.

April	4	−29	12	38.0

(*), 9^h 39^m 51^s.

April	11	+10	59	12.3

(*), 9^h 40^m 18^s.

March	25	+12	1	43.9

Weisse IX, 867, 9^h 40^m 30^s.

March	28	−11	18	17.8

(*), 9^h 41^m 29^s.

March	21	−29	40	19.1

O. Arg. S. 10122, 9^h 42^m 29^s.

March	4	−24	36	19.2

(*), 9^h 42^m 50^s.

April	18	+25	9	55.6

Lacaille 4031, $9^h\ 43^m\ 14^s$.

1871.		° ′ ″
March	24 . .	−34 24 59.5

21 Leonis, $9^h\ 43^m\ 52^s$.

March	6 . .	+12 26 52.2

23 Leonis, $9^h\ 44^m\ 0^s$.

March	22 . .	+13 40 20.6
April	7 . .	22.0

(*), $9^h\ 46^m\ 15^s$.

April	20 . .	−37 34 47.7

Lacaille 4052, $9^h\ 46^m\ 21^s$.

March	15 . .	−32 23 14.1

(*), $9^h\ 46^m\ 26^s$.

April	11 . .	+15 19 39.5

Weisse (2) IV, 1003, $9^h\ 48^m\ 30^s$.

March	21 . .	+44 35 45.2
April	4 . .	45.5

(*), $9^h\ 50^m\ 43^s$.

March	24 . .	−40 12 27.1
April	29 . .	27.3

π Leonis, $9^h\ 53^m\ 26^s$.

April	18 . .	+ 8 40 3.6

Lalande 19627, $9^h\ 58^m\ 25^s$.

March	24 . .	+69 4 (26.2)
	28 . .	30.1
April	4 . .	33.0
	11 . .	33.1

B. A. C. 3456, $10^h\ 0^m\ 48^s$.

March	25 . .	+32 14 29.8
April	4 . .	29.6

A Leonis, $10^h\ 1^m\ 7^s$.

March	4 . .	+10 38 2.3

(*), $10^h\ 1^m\ 29^s$.

March	21 . .	−24 18 4.4

(*), $10^h\ 2^m\ 3^s$.

March	21 . .	−24 19 44.8

Lacaille 4162, $10^h\ 3^m\ 3^s$.

April	8 . .	−34 22 42.7

Groombridge 1618, $10^h\ 3^m\ 25^s$.

March	24 . .	+50 6 38.0
April	10 . .	36.0

Weisse X, 76, $10^h\ 6^m\ 34^s$.

1871.		° ′ ″
March	28 . .	+11 58 55.9
April	20 . .	50.6

(*), $10^h\ 6^m\ 41^s$.

April	11 . .	−37 31 30.8

(*), $10^h\ 7^m\ 1^s$.

April	20 . .	+11 59 45.4

Weisse X, 94, $10^h\ 7^m\ 9^s$.

April	18 . .	+12 19 57.4

Weisse X, 115, $10^h\ 8^m\ 17^s$.

April	4 . .	+12 31 38.8

(*), $10^h\ 8^m\ 40^s$.

March	21 . .	−38 41 58.8
April	29 . .	58.9

(*), $10^h\ 8^m\ 49^s$.

March	24 . .	−30 10 21.6

Σ Cat. Gen. 1198, (1st *), $10^h\ 14^m\ 11^s$.

April	8 . .	+44 33 26.9

B. A. C. 3528, $10^h\ 15^m\ 6^s$.

March	24 . .	+83 13 2.6
	28 . .	5.2
April	10 . .	3.3

(*), $10^h\ 16^m\ 53^s$.

March	21 . .	−27 21 32.2

Rumker 3171, $10^h\ 17^m\ 54^s$.

April	4 . .	+12 0 54.6

O. Arg. S. 10594, $10^h\ 17^m\ 56^s$.

April	20 . .	−29 37 33.3

44 Leonis, $10^h\ 18^m\ 28^s$.

April	24 . .	+ 9 26 41.9

B. A. C. 3562, $10^h\ 18^m\ 49^s$.

April	24 . .	+ 9 26 8.7

α Antliæ, $10^h\ 21^m\ 17^s$.

April	18 . .	−30 24 23.8

Rumker 3203, $10^h\ 21^m\ 31^s$.

April	8 . .	+16 25 7.2

Rumker 3211, $10^h\ 23^m\ 35^s$.

1871.		° ′ ″
April	4 . .	+12 17 45.5
	7 . .	45.4

δ Antliæ, $10^h\ 23^m\ 36^s$.

March	24 . .	−29 56 32 2

B. A. C. 3603, $10^h\ 24^m\ 31^s$.

March	25 . .	− 6 58 16.1
	28 . .	15.1

Weisse X, 425, $10^h\ 25^m\ 21^s$.

March	21 . .	+10 5 26.1
April	20 . .	26.0

Lacaille 4324, $10^h\ 25^m\ 48^s$.

March	6 . .	−27 34 9.9

Weisse (2) X, 513, $10^h\ 26^m\ 46^s$.

April	8 . .	+15 33 54.9

Lalande 20482, $10^h\ 28^m\ 11^s$.

March	6 . .	−10 26 55.5

Weisse X, 520, $10^h\ 30^m\ 9^s$.

April	18 . .	−11 31 58.8

Lacaille 4363, $10^h\ 30^m\ 34^s$.

April	4 . .	−28 5 55.2

Lacaille 4393, $10^h\ 34^m\ 39^s$.

April	11 . .	−26 6 28.9

(*), $10^h\ 36^m\ 5^s$.

March	21 . .	−35 44 10.8
	28 . .	9.3

Lacaille 4412, $10^h\ 36^m\ 13^s$.

April	20 . .	−40 0 48.5

(*), $10^h\ 36^m\ 33^2$.

April	8 . .	+ 4 58 58.5
	12 . .	59.6

(*), $10^h\ 36^m\ 44^s$.

April	8 . .	+ 4 55 52.8
	12 . .	52.5

Lacaille 4438, $10^h\ 38^m\ 47^s$.

March	28 . .	−37 27 35.3

Weisse (2) X, 776, $10^h\ 38^m\ 58^s$.

April	4 . .	+36 19 18.0

Lacaille 4450, $10^h\ 40^m\ 4^s$.

1871.		° ′ ″
April	29 . .	−40 17 23.0

Weisse X, 702, $10^h\ 40^m\ 33^s$.

April	15 . .	+14 3 50.3

Weisse X, 703, $10^h\ 40^m\ 39^s$.

April	18 . .	+ 7 1 53.7

(*), $10^h\ 41^m\ 4^s$.

March	24 . .	−35 24 42.0

(*), $10^h\ 41^m\ 6^s$.

April	24 . .	−35 39 46.0

(*), $10^h\ 41^m\ 6^s$.

April	24 . .	−35 41 31.4

(*), $10^h\ 41^m\ 36^s$.

March	24 . .	−35 26 25.8

Weisse X, 757, $10^h\ 43^m\ 8^s$.

April	11 . .	+10 30 41.9

(*), $10^h\ 43^m\ 32^s$.

April	20 . .	−29 18 23.8

Σ Cat. Gen. 1248, $10^h\ 44^m\ 6^s$.

April	8 . .	+25 8 24.6

O. Arg. N. 11176, $10^h\ 44^m\ 28^s$.

March	21 . .	+62 49 54.9

O. Arg. S. 10944, $10^h\ 46^m\ 32^s$.

March	6 . .	−25 53 21.9

Lalande 20849, $10^h\ 46^m\ 39^s$.

April	7 . .	+70 32 44.7
	10 . .	46.0

(*), $10^h\ 47^m\ 56^s$.

April	29 . .	−33 49 23.3

Lacaille 4508, $10^h\ 47^m\ 57^s$.

March	28 . .	−42 25 30.3

(*), $10^h\ 48^m\ 8^s$.

April	4 . .	−30 27 19.3

Radcliffe 2582, $10^h\ 48^m\ 34^s$.

April	18 . .	+58 11 49.8

(*), $10^{h}\,52^{m}\,48^{s}$.

1871.		°	′	″
April	8 . .	−22	33	27.1
	20 . .			28.2

(*), $10^{h}\,53^{m}\,1^{s}$.

April	11 . .	−34	10	55.0

(*), $10^{h}\,53^{m}\,18^{s}$.

March	21 . .	−35	48	26.1

(*), $19^{h}\,53^{m}\,36^{s}$.

March	24 . .	−12	37	53.6

Lacaille 4553, $10^{h}\,54^{m}\,21^{s}$.

March	28 . .	−42	33	13.7

Weisse (2) X, 1112, $10^{h}\,56^{m}\,17^{s}$.

April	7 . .	+36	50	19.7
	15 . .			20.8

p^{2} Leonis, $10^{h}\,56^{m}\,59^{s}$.

March	24 . .	+ 0	41	56.9

Weisse X, 1025, $10^{h}\,57^{m}\,49^{s}$.

April	18 . .	+13	22	4.2
	24 . .			3.2

Weisse (2) X, 1174, $10^{h}\,59^{m}\,3^{s}$.

April	12 . .	+44	11	38.8

(*), $11^{h}\,0^{m}\,59^{s}$.

April	11 . .	+10	55	16.7

(*), $11^{h}\,1^{m}\,4^{s}$.

April	4 . .	−32	51	5.5

(*), $11^{h}\,1^{m}\,7^{s}$.

April	11 . .	+10	53	55.3

(*), $11^{h}\,1^{m}\,52^{s}$.

March	28 . .	−40	13	58.9

Lacaille 4624, $11^{h}\,3^{m}\,45^{s}$.

March	6 . .	−28	53	43.4

Weisse (2) XI, 58, $11^{h}\,5^{m}\,10^{s}$.

March	24 . .	+33	19	18.8

F. Lalande 1831, $11^{h}\,6^{m}\,41^{s}$.

April	12 . .	+74	10	42.8
	15 . .			44.8

(*), $11^{h}\,9^{m}\,2^{s}$.

1871.		°	′	″
April	6 . .	+59	23	38.3

Lacaille 4669, $11^{h}\,9^{m}\,30^{s}$.

May	5 . .	−37	32	59.3

Weisse XI, 137, $11^{h}\,10^{m}\,0^{s}$.

April	29 . .	− 2	55	53.2
May	13 . .			55.0

Lamont 3284, $11^{h}\,12^{m}\,54^{s}$.

April	11 . .	+ 0	31	41.7

Lacaille 4703, $11^{h}\,13^{m}\,0^{s}$,

March	24 . .	−39	47	23.2

O. Arg. S. 11311, $11^{h}\,13^{m}\,21^{s}$.

April	20 . .	−29	44	8.9

Rumker 3539, $11^{h}\,15^{m}\,8^{s}$.

March	6 . .	+ 9	52	54.2

Lacaille 4714, $11^{h}\,15^{m}\,8^{s}$.

April	24 . .	−28	52	58.0

Lacaille 4732, $11^{h}\,17^{m}\,32^{s}$.

April	12 . .	−26	14	45.8
	24 . .			44.9
May	5 . .			42.9

O. Arg. S. 11370, $11^{h}\,17^{m}\,57^{s}$.

April	24 . .	−26	9	21.8
May	5 . .			24.2

Lacaille 4735, $11^{h}\,18^{m}\,15^{s}$.

May	17 . .	−33	34	18.9

Rumker 3575, $11^{h}\,19^{m}\,44^{s}$.

April	6 . .	+18	34	17.8

Lacaille 4746, $11^{h}\,20^{m}\,25^{s}$.

March	24 . .	−37	26	35.6

O. Arg. S. 11394, $11^{h}\,20^{m}\,55^{s}$.

May	11 . .	−23	6	2.9

Weisse XI, 349, $11^{h}\,21^{m}\,20^{s}$.

April	8 . .	+ 3	32	47.1
	15 . .			47.7

B. A. C. 3909, $11^{h}\,22^{m}\,50^{s}$.

May	18 . .	− 0	7	59.6

B. A. C. 3911, $11^{h}\,23^{m}\,2^{s}$.

1871.		°	′	″
April	18 . .	+ 8	19	0.6

Weisse XI, 390, $11^{h}\,23^{m}\,23^{s}$.

May	17 . .	+ 3	55	24.0

O. Arg. S. 11446, $11^{h}\,24^{m}\,43^{s}$.

April	7 . .	−28	4	45.4

B. A. C. 3920, $11^{h}\,25^{m}\,23^{s}$.

April	20 . .	− 5	45	1.2

Weisse XI, 421, $11^{h}\,25^{m}\,36^{s}$.

May	15 . .	− 6	53	56.8

B. A. C. 3925, $11^{h}\,26^{m}\,13^{s}$.

March	6 . .	− 7	6	32.7

B. A. C. 3926, $11^{h}\,26^{m}\,33^{s}$.

May	5 . .	−30	22	12.5

Weisse XI, 446, $11^{h}\,26^{m}\,55^{s}$.

April	6 . .	+ 8	41	52.1

(*), $11^{h}\,29^{m}\,28^{s}$.

May	17 . .	+ 8	1	25.8

Weisse (2) XI, 540, $11^{h}\,29^{m}\,43^{s}$.

April	8 . .	+25	44	56.7

(*), $11^{h}\,30^{m}\,46^{s}$.

April	29 . .	−34	51	57.7

Lacaille 4814, $11^{h}\,31^{m}\,12^{s}$.

April	7 . .	−38	38	22.8

Weisse (2) XI, 600, $11^{h}\,31^{m}\,59^{s}$.

March	6 . .	+24	2	58.5

Lacaille 4825, $11^{h}\,32^{m}\,27^{s}$.

April	24 . .	−39	34	59.0

(*), $11^{h}\,32^{m}\,41^{s}$.

April	26 . .	+ 1	41	39.9

Weisse XI, 558, $11^{h}\,32^{m}\,54^{s}$.

May	13 . .	+11	2	54.6
	18 . .			53.5

O. Arg. S. 11557, $11^{h}\,33^{m}\,35^{s}$.

April	3 . .	−29	45	32.2

Lacaille 4849, $11^{h}\,35^{m}\,0^{s}$.

1871.		°	′	″
April	20 . .	−34	52	58.5
May	5 . .			58.5

Weisse XI, 592, $11^{h}\,35^{m}\,2^{s}$.

April	6 . .	+ 1	40	24.6

(*), $11^{h}\,37^{m}\,33^{s}$.

May	20 . .	−29	0	37.3

(*), $11^{h}\,37^{m}\,34^{s}$.

M2y	20 . .	−29	7	16.7

Weisse XI, 673, $11^{h}\,39^{m}\,36^{s}$.

April	24 . .	− 5	55	1.8
May	5 . .			0.6

(*), $11^{h}\,40^{m}\,40^{s}$,

April	15 . .	−35	11	1.0

(*), $11^{h}\,40^{m}\,51^{s}$.

May	15 . .	−13	18	4.7

(*), $11^{h}\,41^{m}\,0^{s}$.

May	17 . .	+15	18	6.1

(*), $11^{h}\,41^{m}\,32^{s}$.

April	29 . .	− 7	24	26.7
May	10 . .			37.5
	13 . .			22.4

Very faint.

B. A. C. 3992, $11^{h}\,42^{m}\,1^{s}$.

April	8 . .	+15	0	24.8

(*), $11^{h}\,42^{m}\,22^{s}$.

May	15 . .	+13	13	41.9

Groombridge 1830, $11^{h}\,45^{m}\,33^{s}$.

April	8 . .	+38	38	58.8
	15 . .			58.4
	18 . .			58.7
	24 . .			56.9
May	5 . .			55.2
	18 . .			56.9

(*), $11^{h}\,45^{m}\,38^{s}$.

May	15 . .	− 5	33	35.3

Weisse XI, 773, $11^{h}\,45^{m}\,42^{s}$.

April	6 . .	+14	12	38.3
	12 . .			37.8

(*), $11^{h}\,49^{m}\,12^{s}$.

April	29 . .	+36	9	42.7

Weisse (2) XI, 937, $11^{h}\,49^{m}\,21^{s}$.

May	11 . .	+36	3	55.2

Lalande 22585, 11^{h} 54^{m} 8^{s}.

1871.		° ′ ″
April	8	− 9 42 18.8
	15	17.3
	18	17.1

Weisse (2) XI, 1086, 11^{h} 55^{m} 37^{s}.

April	24	+43 45 62.0
May	1	58.0

Weisse XI, 947, 11^{h} 56^{m} 14^{s}.

April	6	+ 8 32 53.5

Weisse XI, 963, 11^{h} 57^{m} 21^{s}.

April	29	+ 4 4 57.4

(*), 12^{h} 1^{m} 53^{s}.

April	3	−27 17 52.7
	8	51.9

O. Arg. S. 11944, 12^{h} 2^{m} 42^{s}.

April	20	−27 15 32.6

(*), 12^{h} 6^{m} 58^{s}.

April	24	−33 4 10.0

Groombridge 1860, 12^{h} 7^{m} 33^{s}.

April	6	+84 13 35.3
	29	35.1
May	18	33.5
	20	34.6

Weisse XII, 107, 12^{h} 8^{m} 33^{s}.

April	8	− 9 33 10.6
	15	10.5

Weisse XII, 114, 12^{h} 9^{m} 3^{s}.

April	8	− 9 32 58.8

(*), 12^{h} 12^{m} 1^{s}.

May	20	−25 50 38.8

Lacaille 5102, 12^{h} 13^{m} 22^{s}.

May	17	−37 4 35.9

Rumker 3911, 12^{h} 13^{m} 22^{s}.

May	13	+ 6 23 36.4

Lacaille 5109, 14^{h} 14^{m} 20^{s}.

May	18	−41 50 22.7

(*), 12^{h} 14^{m} 42^{s}.

May	10	−29 0 7.4
	11	3.0

Lacaille 5117, 12^{h} 15^{m} 28^{s}.

1871.		° ′ ″
April	20	−37 43 44.5
	29	43.9

O. Arg. S. 12116, 12^{h} 15^{m} 46^{s}.

May	19	−23 30 53.8

Lacaille 5126, 12^{h} 16^{m} 26^{s}.

April	24	−36 46 6.1

O. Arg. S. 12134, 12^{h} 17^{m} 26^{s}.

May	23	−23 31 20.7

4 Canum Venat., 12^{h} 17^{m} 27^{s}.

April	6	+43 15 48.7
	15	47.0

Lalande 23219, 12^{h} 18^{m} 9^{s}.

April	8	− 4 55 39.4
May	23	35.5

Weisse XII, 311, 12^{h} 20^{m} 23^{s}.

May	17	+14 45 55.3

B. A. C. 4200, 12^{h} 21^{m} 11^{s}.

April	12	− 3 53 43.2
	22	41.9

Weisse XII, 345, 12^{h} 21^{m} 49^{s}.

May	13	+13 3 59.7

(*), 12^{h} 24^{m} 44^{s}.

April	14	−32 57 5.7

Lacaille 5189, 12^{h} 25^{m} 6^{s}.

April	14	−40 20 7.2

Lacaille 5192, 12^{h} 25^{m} 24^{s}.

April	20	−26 50 52.9
May	11	52.6

(*), 12^{h} 26^{m} 17^{s}.

April	29	−30 55 37.1

(*), 12^{h} 27^{m} 21^{s}.

April	6	−31 46 9.9

O. Arg. S. 12254, 12^{h} 28^{m} 6^{s}.

April	24	−22 45 31.5

O. Arg. S. 12258, 12^{h} 28^{m} 15^{s}.

May	20	−25 59 42.0

Weisse XII, 463, 12^{h} 28^{m} 43^{s}.

1871.		° ′ ″
April	22	+ 2 58 34.8
May	18	34.9
	19	34.8

Weisse XII, 515, 12^{h} 31^{m} 58^{s}.

April	8	+ 0 55 59.0

B. A. C. 4255, 12^{h} 32^{m} 5^{s}.

April	12	− 3 39 27.6

B. A. C. 4256, 12^{h} 32^{m} 10^{s}.

April	12	−29 42 24.4

(*), 12^{h} 32^{m} 17^{s}.

May	23	+13 34 29.7

Weisse XII, 526, 12^{h} 32^{m} 35^{s}.

April	20	+14 30 12.9

B. A. C. 4262, 12^{h} 32^{m} 56^{s}.

April	29	−39 16 16.7

Lacaille 5232, 12^{h} 33^{m} 1^{s}.

May	10	−28 56 25.4

O. Arg. S. 12332, 12^{h} 33^{m} 55^{s}.

May	17	−26 6 54.9

Weisse XII, 549, 12^{h} 34^{m} 3^{s}.

April	6	− 7 43 43.1
	15	41.3

Lacaille 5239, 12^{h} 34^{m} 3^{s}.

May	16	−27 0 2.0

Lacaille 5238, 12^{h} 34^{m} 6^{s}.

May	13	−43 23 15.9

Lacaille 5244, 12^{h} 34^{m} 26^{s}.

May	11	−27 11 37.7

O. Arg. S. 12342, 12^{h} 34^{m} 41^{s}.

April	22	−24 16 46.5

γ^{2} Virginis, 12^{h} 35^{m} 9^{s}.

April	24	− 0 44 11.1

Lacaille 5256, 12^{h} 36^{m} 25^{s}.

April	22	−24 16 36.4

(*), 12^{h} 36^{m} 30^{s}.

April	14	−40 36 34.0
May	18	33.5

(*), 12^{h} 37^{m} 18^{s}.

1871.		° ′ ″
May	20	−36 31 22.2

Lacaille 5283, 12^{h} 41^{m} 5^{s}.

April	6	−24 8 32.6
	8	32.0

Lacaille 5281, 12^{h} 41^{m} 9^{s}.

April	29	−44 0 28.8

O. Arg. N. 12996, 12^{h} 41^{m} 16^{s}.

May	17	+78 1 0.0

35 Virginis, 12^{h} 41^{m} 17^{s}.

April	12	+ 4 17 0.7
May	15	0.9

Lacaille 5284, 12^{h} 41^{m} 23^{s}.

April	20	−31 36 51.6

B. A. C. 4297, 12^{h} 41^{m} 35^{s}.

May	11	−26 53 5.4

O. Arg. S. 12444, 12^{h} 42^{m} 15^{s}.

May	23	−25 9 2.4

Lacaille 5291, 12^{h} 42^{m} 34^{s}.

May	13	−34 4 54.5
June	3	55.3

Weisse XII, 764, 12^{h} 45^{m} 54^{s}.

May	20	+ 0 56 16.5

(*), 12^{h} 47^{m} 22^{s}.

April	29	−38 46 16.9

(*), 12^{h} 47^{m} 42^{s}.

May	18	−38 47 59.2
	24	60.9

Lacaille 5320, 12^{h} 47^{m} 58^{s}.

April	22	−41 35 2.8
	24	6.3

O. Arg. S. 12529, 12^{h} 49^{m} 32^{s}.

April	12	−26 39 52.8

O. Arg. S. 12533, 12^{h} 49^{m} 42^{s}.

April	12	−26 40 41.0

O. Arg. S. 12538, 12^{h} 50^{m} 19^{s}.

April	14	−21 27 59.8
May	11	59.0

(*), $12^h\,51^m\,18^s$.

1871.		° ′ ″
June	3	−14 16 51.5

Lacaille 5347, $12^h\,51^m\,54^s$.

April	20	−43 0 7.5

Weisse XII, 880, $12^h\,52^m\,26^s$.

April	15	− 9 8 15.5
May	13	17.4

O. Arg. S. 12564, $12^h\,52^m\,34^s$.

April	14	−21 25 29.1

κ Virginis, $12^h\,53^m\,2^s$.

April	24	− 3 6 33.9

(*), $12^h\,53^m\,25^s$.

May	16	+69 24 32.2

Groombridge 1947, $12^h\,54^m\,13^s$.

May	15	+69 28 42.3
	19	37.5

Lacaille 5374, $12^h\,56^m\,24^s$.

May	20	−28 57 51.8

Lacaille 5379, $12^h\,57^m\,2^s$.

May	18	−23 49 9.0
	23	8.3

O. Arg. S. 12620, $12^h\,57^m\,26^s$.

April	29	−25 59 7.9

Lacaille 5387, $12^h\,58^m\,12^s$.

April	14	−27 49 6.7

(*), $12^h\,58^m\,40^s$.

April	20	−34 24 52.1
May	13	52.3

Weisse XII, 1063, $13^h\,2^m\,18^s$.

April	12	+ 5 55 34.3
	15	35.1

Weisse XIII, 87, $13^h\,7^m\,6^s$.

April	14	−10 51 47.0
	22	47.0

Lacaille 5457, $13^h\,7^m\,55^s$.

June	3	−35 40 53.9

Weisse XIII, 104, $13^h\,8^m\,7^s$.

May	29	+12 1 23.4

Σ Cat. Gen. 1510, (1st *), $13^h\,8^m\,12^s$.

1871.		° ′ ″
May	5	−10 40 8.0

Σ Cat. Gen. 1510, (2d *), $13^h\,8^m\,16^s$.

May	5	−10 39 31.9

O. Arg. S. 12733, $13^h\,8^m\,59^s$.

April	14	−29 29 28.8
	20	30.5

(*), $13^h\,9^m\,46^s$.

April	29	−30 49 0.8
May	11	1.4

Weisse XIII, 169, $13^h\,11^m\,36^s$.

April	12	− 5 6 8.0

O. Arg. S. 12802, $13^h\,13^m\,27^s$.

April	22	−26 43 31.1

Weisse (2) XIII, 241, $13^h\,13^m\,36^s$.

May	13	+35 49 17.8
	18	20.2
	23	22.7

O. Arg. S. 12811, $13^h\,14^m\,5^s$.

April	20	−21 41 58.2

Lacaille 5502, $13^h\,14^m\,34^s$.

May	24	−38 10 14.4

Weisse (2) XIII, 265, $13^h\,14^m\,52^s$.

May	16	+43 47 50.4
	20	50.2

(*), $13^h\,21^m\,18^s$.

April	14	−32 48 25.8

B. A. C. 4496, $13^h\,21^m\,40^s$.

April	12	− 0 9 2.2
May	15	1.0

Weisse (2) XIII, 419, $13^h\,22^m\,27^s$.

May	11	+27 53 19.1

O. Arg. S. 12908, $13^h\,23^m\,28^s$.

April	29	−22 58 30.3

Lamont 4065, $13^h\,24^m\,6^s$.

May	16	− 1 36 12.8

Lamont 4068, $13^h\,24^m\,33^s$.

May	16	− 1 35 28.5
	20	26.8

O. Arg. S. 12920, $13^h\,24^m\,36^s$.

1871.		° ′ ″
May	13	−30 23 2.1

Lacaille 5580, $13^h\,25^m\,27^s$.

May	15	−28 1 21.6

Lacaille 5582, $13^h\,25^m\,47^s$.

May	17	−25 55 2.5

(*), $13^h\,27^m\,41^s$.

May	18	−26 37 23.5

Lacaille 5621, $13^h\,31^m\,27^s$.

June	3	−32 26 50.5

(*), $13^h\,32^m\,10^s$.

May	20	−30 13 24.8
	29	24.7

(*), $13^h\,32^m\,17^s$.

May	15	+76 57 39.0

Lacaille 5635, $13^h\,32^m\,55^s$.

April	29	−26 54 54.3

B. A. C. 4560, $13^h\,34^m\,9^s$.

May	11	−12 7 19.8
	16	20.9

Lacaille 5646, $13^h\,34^m\,16^s$.

April	14	−25 52 20.0
May	17	19.2

Lacaille 5649, (N. *), $13^h\,34^m\,55^s$.

June	9	−33 19 21.0

Lacaille 5649, (S. *), $13^h\,34^m\,55^s$.

June	9	−33 19 24.1

(*), $13^h\,35^m\,31^s$.

May	23	−37 40 36.4

Lacaille 5655, $13^h\,35^m\,44^s$.

May	13	−29 31 31.3

Weisse XIII, 630, $13^h\,37^m\,24^s$.

May	24	−12 17 25.4

85 Virginis, $13^h\,38^m\,40^s$.

May	15	−15 6 45.0

Weisse XIII, 654, $13^h\,38^m\,59^s$.

May	24	−12 18 40.6

(*), $13^h\,39^m\,7^s$.

1871.		° ′ ″
May	10	+15 35 44.7
June	3	49.3

(*), $13^h\,40^m\,42^s$.

May	18	−37 36 41.5
	20	40.0

B. A. C. 4595, $13^h\,40^m\,45^s$.

June	15	+39 9 20.2

B. A. C. 4593, $13^h\,40^m\,46^s$.

May	16	− 6 3 13.6

Lacaille 5680, $13^h\,41^m\,11^s$.

May	19	−36 28 37.8

Weisse XIII, 694, $13^h\,41^m\,18^s$.

May	24	− 7 22 14.1

Weisse XIII, 708, $13^h\,41^m\,24^s$.

May	24	− 7 32 25.0

Lacaille 5682, $13^h\,41^m\,31^s$.

April	14	−35 2 53.6

(*), $13^h\,42^m\,11^s$.

May	13	−35 57 30.3

O. Arg. S. 13167, $13^h\,42^m\,39^s$.

May	29	−27 32 19.3
June	9	17.7

O. Arg. S. 13169, $13^h\,42^m\,46^s$.

May	29	−27 32 11.7

Weisse (2) XII, 900, $13^h\,43^m\,3^s$.

June	12	+40 53 38.9

(*), $13^h\,43^m\,18^s$.

May	11	+18 31 36.4

k Centauri, (1st *), $13^h\,43^m\,25^s$.

June	19	−32 20 48.5

k Centauri, (2d *), $13^h\,43^m\,25^s$.

June	19	−32 20 50.9

O. Arg. S. 13177, $13^h\,43^m\,28^s$.

May	15	−27 39 42.4

Weisse (2) XIII, 910, $13^h\,43^m\,37^s$.

June	15	+34 23 23.9

O. Arg. S. 13182, 13^h 43^m 49^s.

1871. ° ′ ″
May 15 . . −27 36 37.3

Lalande 25494, 13^h 44^m 33^s.

May 23 . . +21 54 5.0

(*), 13^h 44^m 51^s.

May 23 . . +21 54 21.5

O. Arg. S. 13215, 13^h 46^m 28^s.

May 19 . . −26 3 52.7

Weisse (2) XIII, 994, 13^h 46^m 48^s.

June 12 . . +23 58 37.1

Rumker 4501, 13^h 47^m 0^s.

May 17 . . +13 23 6.8

Lacaille 5743, 13^h 47^m 11^s.

May 10 . . −33 57 18.6

Weisse (2) XIII, 997, 13^h 47^m 56^s.

June 3 . . +36 19 22.6

(*), 13^h 51^m 38^s.

May 13 . . −36 57 38.7

(*), 13^h 51^m 42^s.

May 10 . . −36 45 55.3

(*), 13^h 52^m 44^s.

May 11 . . +23 30 36.5

Σ Cat. Gen. 1570, (1st *), 13^h 53^m 12^s.

May 29 . . +26 26 53.5
June 19 . . 53.9

Brisbane 4727, 13^h 53^m 33^s.

May 18 . . −36 50 12.4
June 9 . . 13.9

(*), 13^h 54^m 0^s.

May 24 . . −38 48 25.7

(*), 13^h 54^m 39^s.

June 12 . . +75 21 24.9

(*), 13^h 55^m 27^s.

June 12 . . +75 20 8.7

Weisse XIII, 931, 13^h 54^m 57^s.

May 23 . . + 2 10 59.9

Weisse XIII, 942, 13^h 55^m 25^r.

1871. ° ′ ″
May 23 . . + 2 11 0.8

Lacaille 5798, (1st *), 13^h 56^m 25^s.

April 14 . . −36 39 21.8

Lacaille 5798, (2d *), 13^h 56^m 25^s.

April 14 . . −36 38 11.0

(*), 13^h 58^m 14^s.

June 15 . . −33 8 53.4

(*), 13^h 58^m 17^s.

June 3 . . −33 4 18.3

(*), 13^h 59^m 40^s.

May 20 . . −14 54 7.4

O. Arg. S. 13394, 14^h 0^m 40^s.

May 15 . . −26 43 29.0

Lacaille 5843, 14^h 3^m 54^s.

June 12 . . −31 33 15.0

O. Arg. S. 13438, 14^h 3^m 59^s.

May 23 . . −25 43 46.5
29 . . 46.3

(*), 14^h 15^m 22^s.

May 18 . . −35 23 3.1

Weisse XIV, 254, 14^h 15^m 29^s.

May 20 . . − 4 37 25.2
23 . . 27.3

(*), 14^h 16^m 16^s.

May 10 . . −26 45 16.7
13 . . 15.0

Lacaille 5922, 14^h 16^m 23^s.

June 12 . . −29 4 59.8

(*), 14^h 16^m 24^s.

May 29 . . −27 33 29.2

Lacaille 5926, 14^h 17^m 5^s.

June 12 . . −29 1 35.1

Lacaille 5925, 14^h 17^m 10^s.

April 14 . . −36 51 15.2

Weisse XIV, 293, 14^h 17^m 37^s.

May 29 . . −14 29 23.5

Lacaille 5932, 14^h 17^m 53^s.

1871. ° ′ ″
May 19 . . −32 22 52.3

(*), 14^h 18^m 11^s.

June 9 . . −26 8 38.0

Lacaille 6020, 14^h 30^m 34^s.

April 14 . . −34 42 30.2

Lamont 4482, 14^h 39^m 3^s.

June 3 . . + 0 11 10.9
9 . . 10.0

(*), 14^h 40^m 52^s.

June 16 . . −37 5 17.1

(*), 14^h 42^m 6^s.

May 23 . . −36 51 8.8

B. A. C. 4923, (1st *), 14^h 49^m 59^s.

May 20 . . −20 49 38.4
23 . . 37.8

B. A. C. 4923, (2d *), 14^h 49^m 59.^{s}

May 20 . . −20 49 33.5
23 . . 36.0

O. Arg. N. 14971, 14^h 51^m 17^s.

June 16 . . +49 39 35.0

Lalande 27298, 14^h 51^m 32^s.

June 9 . . +54 11 22.4
12 . . 20.5

O. Arg. N. 14975, 14^h 51^m 44^s.

June 16 . . +49 36 33.7

Weisse (2) XIV, 1127, 14^h 52^m 37^s.

May 18 . . +40 41 7.8

Weisse (2) XIV, 1130, 14^h 52^m 37^s.

May 18 . . +40 41 22.7

Weisse (2) XIV, 1139, 14^h 53^m 0^s.

May 24 . . +40 41 54.3

Weisse (2) XIV, 1146, 14^h 53^m 8^s.

May 24 . . +40 44 40.1

Weisse (2) XIV, 1154, 14^h 53^m 17^s.

June 27 . . +43 56 5.3

O. Arg. N. 14996, 14^h 53^m 19^s.

June 19 . . +59 54 12.5

Weisse (2) XIV, 1162, 14^h 53^m 41^s.

1871. ° ′ ″
June 19 . . +43 54 16.6

Weisse (2) XIV, 1183, 14^h 54^m 19^s.

June 27 . . +43 51 23.8

60 Hydræ, 14^h 54^m 27^s.

June 14 . . −27 32 35.5

Groombridge 2210, 14^h 55^m 9^s.

June 13 . . +86 29 9.1
15 . . 6.1

O. Arg. S. 14230, 14^h 58^m 15^s.

June 19 . . −25 16 51.1

O. Arg. S. 14246, 14^h 59^m 2^s.

May 26 . . −21 31 26.2

Weisse XIV, 1091, 14^h 59^m 6^s.

May 16 . . −10 41 26.8
20 . . 26.1

ν^1 Libræ, 14^h 59^m 27^s.

June 14 . . −15 45 0.0

Lacaille 6239, 15^h 0^m 50^s.

May 18 . . −38 1 55.6

O. Arg. S. 14279, 15^h 0^m 54^s.

May 23 . . −21 35 43.0
June 12 . . 41.8

O. Arg. S. 14289, 15^h 1^m 20^s.

June 3 . . −25 59 47.7
8 . . 43.7
9 . . 47.7

Weisse XIV, 1144, 15^h 1^m 32^s.

June 27 . . −11 13 33.4
29 . . 30.4

O. Arg. S. 14294, 15^h 1^m 35^s.

June 21 . . −21 44 24.8

O. Arg. S. 14297, 15^h 1^m 38^s.

June 21 . . −21 42 58.6

Dorpat 1914, (1st *), 15^h 4^m 56^s.

June 16 . . − 4 58 51.2

Dorpat 1914, (2d *), 15^h 4^m 56^s.

June 9 . . − 4 59 22.2
16 . . 20.2

WEISSE XV, 99, 15^{h} 7^{m} 25^{s}.

1871.		°	′	″
May	16	− 0	50	44.0
	20			44.3

LACAILLE 6351, 15^{h} 14^{m} 58^{s}.

May	20	−28	52	22.9
	23			21.6

(*), 15^{h} 15^{m} 22^{s}.

May	18	−31	50	46.3

(*), 15^{h} 15^{m} 52^{s}.

June	19	+41	36	20.4

RUMKER 5048, 15^{h} 16^{m} 4^{s}.

June	15	+41	42	57.3
	21			54.8

(*), 15^{h} 16^{m} 41^{s}.

May	23	−37	2	11.9

O. ARG. S. 14513, 15^{h} 16^{m} 41^{s}.

June	3	−22	15	32.0

O. ARG. S. 14548, 15^{h} 19^{m} 3^{s}.

June	9	−27	30	53.1

RUMKER 5072, 15^{h} 19^{m} 29^{s}.

June	8	+38	39	9.3

(*), 15^{h} 22^{m} 29^{s}.

May	18	−31	51	6.9

(*), 15^{h} 23^{m} 45^{s}.

June	19	−32	10	42.9

O. ARG. S. 14648, 15^{h} 26^{m} 17^{s}.

May	26	−24	40	8.7

ν^1 BOOTIS, 15^{h} 26^{m} 18^{s}.

May	23	+41	16	39.3

LALANDE 28391, 15^{h} 28^{m} 27^{s}.

May	29	+27	8	51.8

LACAILLE 6473, 15^{h} 32^{m} 17^{s}.

June	9	−30	47	14.6

(*), 15^{h} 33^{m} 17^{s}.

June	9	−15	34	19.1

SCHWERD 919, 15^{h} 33^{m} 35^{s}.

1871.		°	′	″
June	12	+80	12	14.8
	15			17.0
	19			16.0

(*), 15^{h} 37^{m} 14^{s}.

May	29	−15	59	16.7

WEISSE (2) XV, 1035, 15^{h} 42^{m} 24^{s}.

June	3	+28	52	13.1
	13			14.8
	15			11.0

B. A. C. 5266, 15^{h} 47^{m} 54^{s}.

May	26	−26	21	37.9
	29			36.9

(*), 15^{h} 48^{m} 9^{s}.

June	12	−16	52	12.6

Var. in CORONA BOREALIS, 15^{h} 54^{m} 8^{s}.

June	15	+26	17	30.0

LACAILLE 6695, 15^{h} 59^{m} 57^{s}.

May	29	−38	44	26.9
June	3			30.0

(*), 15^{h} 59^{m} 57^{s}.

May	29	−38	45	12.8
June	3			14.7

B. A. C. 5357, 16^{h} 1^{m} 29^{s}.

July	8	−39	46	56.4

O. ARG. S. 15303, 16^{h} 2^{m} 10^{s}.

June	23	−16	50	17.4
	28			18.1

(*), 16^{h} 3^{m} 1^{s}.

June	12	−21	18	11.3
	21			18.0

(*), 16^{h} 3^{m} 35^{s}.

June	27	−26	48	32.2

(*), 16^{h} 3^{m} 36^{s}.

June	27	−26	44	15.8

(*), 16^{h} 3^{m} 52^{s}.

June	12	−21	14	38.5

ν^1 SCORPII, 16^{h} 4^{m} 30^{s}.

June	19	−19	6	33.6
July	8			34.1

(*), 16^{h} 4^{m} 39^{s}.

1871.		°	′	″
June	16	−17	53	31.9

GROOMBRIDGE 2319, 16^{h} 5^{m} 20^{s}.

June	23	+70	36	31.8

WEISSE XVI, 439, 16^{h} 24^{m} 9^{s}.

June	3	+ 4	30	48.1
	15			48.0

O. ARG. S. 15734, 16^{h} 26^{m} 44^{s}.

June	3	−15	15	4.2
	16			2.6

B. A. C. 5583, 16^{h} 34^{m} 51^{s}.

June	15	−40	52	5.4

B. A. C. 5584, 16^{h} 34^{m} 59^{s}.

June	15	−40	51	45.2

WEISSE XVI, 780, 16^{h} 41^{m} 42^{s}.

June	9	+ 1	19	27.6

(*), 16^{h} 44^{m} 34^{s}.

June	16	− 5	57	0.4

WEISSE XVI, 854, 16^{h} 45^{m} 23^{s}.

June	16	− 5	34	0.0

WEISSE XVI, 873, 16^{h} 46^{m} 30^{s}.

June	3	+ 0	14	43.4
	8			43.9

(*), 16^{h} 47^{m} 30^{s}.

June	27	−36	58	25.5

O. ARG. S. 16213, 16^{h} 53^{m} 38^{s}.

June	28	−20	14	26.8
July	5			27.6

LACAILLE 7091, 16^{h} 54^{m} 30^{s}.

June	19	−39	53	42.7
	23			46.0
	27			44.5
	29			45.2

WEISSE XVI, 1046, 16^{h} 56^{m} 15^{s}.

June	15	− 9	4	40.1

WEISSE XVI, 1048, 16^{h} 56^{m} 16^{s}.

June	16	− 9	4	54.7
	29			51.9

B. A. C. 5746, 16^{h} 57^{m} 27^{s}.

June	8	−20	18	32.6
July	5			33.0

(*), 17^{h} 8^{m} 46^{s}.

1871.		°	′	″
June	3	−35	24	3.7
	8			3.5
	29			4.6

(*), 17^{h} 8^{m} 52^{s}.

June	3	−35	23	21.4
	8			21.4
	29			21.1

DORPAT 2147, 17^{h} 13^{m} 7^{s}.

June	27	− 6	17	27.7

(*), 17^{h} 13^{m} 46^{s}.

June	23	−35	24	7.2

(*), 17^{h} 13^{m} 52^{s}.

June	23	−35	23	27.1

LACAILLE 7259, 17^{h} 15^{m} 36^{s}.

June	29	−34	39	54.5
July	4			54.8
	5			55.6

WEISSE XVII, 322, 17^{h} 19^{m} 42^{s}.

June	3	+ 2	12	2.4
	8			0.7

B. A. C. 5919, 17^{h} 24^{m} 55^{s}.

June	21	+ 2	49	29.7
	27			28.3

(*), 17^{h} 28^{m} 11^{s}.

June	3	−37	21	11.2
	8			9.1

B. A. C. 5960, 17^{h} 31^{m} 39^{s}.

July	5	−32	7	25.9

κ SCORPII, 17^{h} 33^{m} 35^{s}.

June	27	−38	57	35.2
July	6			34.8

O. ARG. N. 17415, 17^{h} 37^{m} 22^{s}.

June	3	+68	27	10.3
	8			10.6

(*), 17^{h} 39^{m} 14^{s}.

July	5	−32	15	7.8

LACAILLE 7430, 17^{h} 39^{m} 16^{s}.

July	4	−34	15	27.5

B. A. C. 6027, 17^{h} 43^{m} 20^{s}.

June	29	−22	52	37.9

B. A. C. 6042 (1st *), 17^{h} 45^{m} 9^{s}.

1871.		°	′	″
July	6 . .	−34	45	39.5

B. A. C. 6042, (2d *), 17^{h} 45^{m} 10^{s}.

July	6 . .	−34	45	8.5

B. A. C. 6043, 17^{h} ^{m}45 19^{s}.

July	6 . .	−34	43	9.7

(*), 17^{h} 45^{m} 35^{s}.

July	4 . .	−36	20	28.9

(*), 17^{h} 45^{m} 36^{s}.

July	5 . .	−34	41	41.4

(*), 17^{h} 47^{m} 47^{s}.

June	27 . .	−40	21	37.8

LACAILLE 7490, 17^{h} 47^{m} 52^{s}.

June	8 . .	−40	16	54.3

(*), 17^{h} 50^{m} 18^{s}.

July	6 . .	−38	33	21.2

ν OPHIUCHI, 17^{h} 51^{m} 57^{s}.

1871.		°	′	″
June	29 . .	− 9	45	18.1

(*), 17^{h} 56^{m} 22^{s}.

June	8 . .	−24	11	2.4
July	5 . .			1.9

(*), 17^{h} 56^{m} 59^{s}.

July	4 . .	−23	36	(5.7)
	6 . .			0.1

O. ARG. S. 17610, 17^{h} 58^{m} 38^{s}.

June	29 . .	−25	28	55.7

73 OPAIUCHI, 18^{h} 3^{m} 11^{s}.

July	5 . .	+ 3	58	28.1

μ SAGITTARII, 18^{h} 6^{m} 5^{s}.

July	6 . .	−21	5	23.8

18 SAGITTARII, 18^{h} 12^{m} 57^{s}.

June	8 . .	−30	59	40.0

B. A. C. 6256, 18^{h} 19^{m} 12^{s}.

1871.		°	′	″
June	27 . .	−31	36	(19.8)
	29 . .			14.6
July	8 . .			17.4:

B. A. C. 6309, 18^{h} 25^{m} 38^{s}.

July	5 . .	−18	27	36.7

B. A. C. 6319, 18^{h} 27^{m} 29^{s}.

July	5 . .	−30	2	11.1

O. ARG. S. 18674, 18^{h} 40^{m} 36^{s}.

July	5 . .	−18	22	1.7

B. A. C. 6400, 18^{h} 42^{m} 28^{s}.

June	29 . .	−22	59	33.8

LACAILLE 7901, 18^{h} 45^{m} 8^{s}.

June	29 . .	−26	26	28.2

O. ARG. S. 18953, 18^{h} 53^{m} 31^{s}.

July	5 . .	−19	31	36.2

(*), 18^{h} 58^{m} 47^{s}.

July	6 . .	−23	26	55.8

LACAILLE 7998, (1st *), 19^{h} 0^{m} 19^{s}.

1871.		°	′	″
July	5 . .	−33	59	32.7

LACAILLE 7998, (2d *), 19^{h} 0^{m} 21^{s}.

July	5 . .	−33	59	28.1

B. A. C. 6604, 19^{h} 12^{m} 52^{s}.

July	5 . .	−24	26	34.8

DORPAT 2501, 19^{h} 15^{m} 16^{s}.

July	6 . .	− 4	58	48.8

LACAILLE 8197, 19^{h} 35^{m} 34^{s}.

July	6 . .	−41	54	54.1

λ URSÆ MINORIS, S. P., 19^{h} 53^{m} 4^{s}.

Mar.	28 . .	+88	55	4.3

(*), 20^{h} 6^{m} 38^{s}.

July	6 . .	+26	5	33.6

34 VULPECULÆ, 21^{h} 15^{m} 15^{s}.

July	6 . .	+23	18	35.1

RIGHT ASCENSIONS, NORTH POLAR DISTANCES, AND SEMI-DIAMETERS

OF THE

SUN, MOON, AND PLANETS;

DEDUCED FROM

OBSERVATIONS WITH THE TRANSIT CIRCLE,

AND

COMPARED WITH THE TABLES.

1871.

RIGHT ASCENSIONS, NORTH POLAR DISTANCES, AND SEMI-DIAMETERS

OF THE

SUN, MOON, AND PLANETS.

SUN.

Date.	Observer.	Limb.	Apparent Right Ascension of Center.	Corr'n to Am. Eph.	Sidereal Time of Transit of Semi-diameter.	Corr'n to Am. Eph.	Limb.	Geocentric N. P. Distance of Center.	Corr'n to Am. Eph.	Vertical Semi-diameter.	Corr'n to Am. Eph.
1871.			h. m. s.	s.	m. s.	s.		° ′ ″	″	′ ″	″
Aug. 2	S.	. .	8 49 24.98	— 0.02	1 6.53	— 0.03					
7	E.	. .	. . . .	. .	. .	. .	. .	73 33 48.6	— 0.8	15 49.5	+ 0.6
9	E.	I.	9 16 17.32	. .	. .	. .	N.	74 7 56.9	+ 1.3		
11	F.	. .	9 23 53.06	+ 0.26	5.64	— 0.16	. .	74 43 5.0	+ 1.2	46.1	— 3.4
14	E.	. .	9 35 11.96	0.00	5.49	— 0.07	. .	75 37 32.1	— 2.3	50.4	+ 0.4
15	F.	. .	9 38 57.38	+ 0.11	5.44	— 0.04	. .	75 56 12.6	— 0.3	49.8	— 0.4
16	S.	. .	9 42 42.10	+ 0.05	5.34	— 0.06	N.	76 15 7.0	+ 2.1		
19	F.	I.	9 53 53.35	+ 0.10	. .	. .	. .	77 12 56.6	— 1.5	49.2	— 1.7
21	F.	. .	10 1 18.34	+ 0.13	5.00	— 0.03	. .	77 52 35.7	+ 0.9	50.6	— 0.7
25	F.	. .	10 16 2.50	+ 0.04	4.76	— 0.02	N.	79 14 6.0	+ 2.7		
Sept. 22	S.	. .	11 57 9.99	+ 0.04	4.06	— 0.03	. .	89 41 34.5	+ 1.2	56.8	— 2.2
27	F.	I.	12 15 9.51	+ 0.11	. .	. .	. .	91 38 30.5	— 3.0	15 58.4	— 2.0
30	F.	. .	12 25 59.38	+ 0.05	4.20	— 0.12	N.	92 48 36.6	— 3.0		
Dec. 9	S.	II	17 4 30.17	— 0.02	. .	. .	S.	112 50 35.7	+ 1.5		
13	E.	. .	17 22 8.14	— 0.15	11.27	— 0.21	. .	113 10 11.4	— 2.9	16 15.2	— 2.3
21	S.	. .	17 56 36.76	— 0.30	1 11.30	+ 0.04					
27	E.	II.	18 24 15.88	— 0.01	. .	. .	. .	113 19 58.1	—21.4	16 19.6	+ 1.2

MOON.

Date.	Mean Time of Transit of Center.	Observer.	Limb.	Apparent Right Ascension of Center.	Correction to Tables of—		Limb.	Geocentric North Polar Distance of Center.	Correction to Tables of—	
					Peirce.	Hansen.			Peirce.	Hansen.
1871.	h. m. s.			h. m. s.	s.	s.		° ′ ″	″	″
Aug. 5	16 35 23.9	S.	II.	1 33 21.02	— 0.24	— 0.71				
8	18 46 41.8	S.	II.	3 56 50.21	— 0.36	— 0.73				
24	7 12 2.9	E.	I.	17 23 21.85	— 0.05	— 0.18	N.	112 32 12.7	+ 4.7	+ 0.1
25	8 12 46.1	F.	I.	18 28 11.73	+ 0.04	— 0.34	S.	113 58 13.8	+ 4.0	+ 0.3
28	11 11 52.6	F.	I.	21 39 37.32	+ 0.08	— 0.49	S.	108 15 18.3	+ 7.4	+ 6.3
30	12 55 23.5	F.	II.	23 31 18.38	— 0.24	— 0.40				
31	13 42 27.2	Ha.	II.	0 22 26.35	— 0.44	— 0.53	N.	93 2 0.2	+ 1.3	+ 1.9
Sept. 2	15 11 39.4	Ha.	II.	1 59 46.34	— 0.25	— 0.48	N.	82 18 26.0	— 0.7	+ 3.2
3	15 55 40.1	F.	II.	2 47 50.75	— 0.11	— 0.40	N.	77 31 40.9	— 1.8	+ 3.0
4	16 40 20.6	Ha.	II.	3 36 35.12	— 0.21	— 0.54	N.	73 22 26.7	— 1.2	+ 3.5
5	17 26 15.1	F.	II.	4 26 33.77	— 0.23	— 0.56	N.	69 59 47.5	— 3.5	+ 0.6
6	18 13 41.4	Ha.	II.	5 18 4.35	— 0.44	— 0.67				
7	19 2 37.5	F.	II.	6 11 5.07	— 0.23	— 0.53	S.	66 7 34.4 ?	— 24.4 ?	— 22.5 ?
8	19 52 40.5	Ha.	II.	7 5 12.87	— 0.29	— 0.61	S.	65 52 37.2	— 4.7	— 4.0
9	20 43 12.8	F.	II.	7 59 50.05	— 0.14	— 0.48				
21	6 6 20.6	F.	I.	18 7 53.48	+ 0.41	— 0.18	N.	113 56 39.3	+ 5.8	+ 1.4
22	7 6 43.9	S.	I.	19 12 22.23	+ 0.23	— 0.36	S.	114 11 1.0	+ 3.5	+ 0.5
23	8 6 9.1	Ha.	I.	20 15 53.67	+ 0.18	— 0.38	S.	112 45 20.3	+ 3.2	+ 1.3
26	10 46 52.8	Ha.	I.	23 8 53.46	— 0.05	— 0.52	S.	100 48 31.4	+ 0.7	+ 4.1
28	12 19 51.0	S.	II.	0 50 0.09	— 0.52	— 0.62				
29	13 4 17.5	Ha.	II.	1 38 30.41	— 0.48	— 0.55	N.	84 25 37.3	+ 0.7	+ 0.8
30	13 48 30.8	F.	II.	2 26 47.53	— 0.27	— 0.37	N.	79 21 11.1	+ 2.3	+ 4.2
Oct. 2	15 19 0.7	Ha.	II.	4 5 25.35	— 0.17	— 0.45	N.	71 3 27.8	— 2.3	+ 1.4
3	16 6 8.1	F.	II.	4 56 37.11	— 0.06	— 0.41	N.	68 10 15.6	— 3.1	+ 0.4
6	18 34 9.0	F.	II.	7 36 52.00	— 0.25	— 0.53				
8	20 13 25.6	F.	II.	9 24 17.94	— 0.33	— 0.38				
17	2 59 46.1	F.	I.	16 43 17.62	— 0.43	— 0.29				
18	4 0 6.0	Ha.	I.	17 47 44.04	— 0.30	— 0.36				
19	5 1 21.1	F.	I.	18 53 5.69	— 0.25	— 0.52	S.	114 32 19.4	+ 1.0	— 0.8
20	6 1 32.4	Ha.	I.	19 57 23.45	+ 0.04	— 0.37	S.	113 35 7.6	+ 1.6	+ 0.9
21	6 58 58.2	F.	I.	20 58 55.24	+ 0.11	— 0.35	S.	111 4 48.8	+ 1.6	+ 1.5
22	7 52 47.5	Ha.	I.	21 56 49.91	— 0.05	— 0.49	S.	107 19 41.9	— 0.5	— 0.2
27	11 43 8.3	Ha.	I.	2 7 31.37	— 0.33	— 0.52	S.	81 15 58.8	+ 1.4	+ 0.4
Nov. 2	16 26 33.0	Ha.	II.	7 15 21.97	— 0.07	— 0.47	S.	65 29 13.0	— 0.1	+ 0.8
7	20 26 26.9	Ha.	II.	11 35 38.03	— 0.60	— 0.50				
17	4 53 24.3	F.	.	. . .	. .	. .	S.	112 13 39.2	— 4.0	— 6.0
18	5 49 28.6	E.	I.	21 39 37.52	— 0.60	— 0.44	S.	108 46 3.6	+ 5.1	+ 3.7
Dec. 5	19 3 45.7	F.	II.	12 3 6.84	+ 0.05	— 0.35	S.	84 36 7.2	— 2.0	— 5.1
6	19 49 48.2	E.	II.	12 53 13.27	— 0.17	— 0.57	S.	90 19 14.7	+ 0.3	— 2.7
16	4 34 56.6	F.	I.	22 15 17.12	— 0.71	— 0.49	S.	106 6 29.5	+ 5.7	+ 2.4
18	6 12 36.4	F.	I.	0 1 6.11	— 0.25	— 0.32				
20	7 40 13.0	F.	I.	1 36 50.20	— 0.34	— 0.58				
21	8 23 12.0	S.	I.	2 23 52.82	— 0.01	— 0.28	S.	79 38 38.5	— 5.2	— 6.0
25	11 27 14.2	S.	I.	5 44 11.52	— 0.13	— 0.34				
27	13 6 39.1	E.	II.	7 31 45.86	— 0.50	— 0.58	N.	65 37 19.6	— 4.2	— 2.7

MERCURY.

Date.	Observer.	Part observed.	Apparent Right Ascension of Center.	Corr'n to Am. Eph.	Sidereal Time of Transit of Semi-diameter.	Corr'n to Am. Eph.	Part observed.	Geocentric N. P. Distance of Center.	Corr'n to Am. Eph.	Vertical Semi-diameter.	Corr'n to Am. Eph.
1871.			h. m. s.	s.	s.	s.		° ′ ″	″	″	″
Aug. 9	E.	.	. . .	. .	. . .	. .	N.	82 46 3.8	+ 0.1		
11	F.	I.	11 0 16.68	+ 0.16	. .	. .	N.	84 5 15.8	− 1.8		
15	F.	I.	11 17 58.29	+ 0.08	. .	. .	N.	86 38 27.8	+ 0.8		
25	F.	I.	11 51 53.20	− 0.04							
Sept. 27	S.	II.	11 18 57.26	+ 0.21	. .	. .	C.	85 13 51.6	+ 2.1		
29	F.	II.	11 23 7.67	+ 0.08	. .	. .	S.	85 8 12.1	− 1.0		
Dec. 21	S.	.	19 19 23.57	+ 0.04	. .	. .	C.				
27	E.	.	19 14 24.96	+ 0.27	. .	. .	C.	111 19 16.2	+ 3.5		

VENUS.

Date.	Observer.	Part obs'd.	Apparent Right Ascension of Center.	Corr'n to Am. Eph.	Correction to Le Verrier's Tables.	Sid. Time of Transit of Semi-diam.	Corr'n to Am. Eph.	Part obs'd.	Geocentric N. P. Distance of Center.	Corr'n to Am. Eph.	Correction to Le Verrier's Tables.	Vertical Semi-diameter.	Corr'n to Am. Eph.
1871.			h. m. s.	s.	s.	s.	s.		° ′ ″	″	″	″	″
Aug. 9	E.	I.	11 55 43.70	− 0.07	− 0.07	. .	. .	N.	92 16 37.6	+ 7.3	+ 2.9		
11	F.	I.	12 0 21.35	+ 0.21	+ 0.15	. .	. .	N.	93 6 20.7	+ 6.6	+ 2.8		
15	F.	I.	12 8 47.67	+ 0.22	+ 0.11	. .	. .	N.	94 42 11.4	+ 8.8	+ 4.6		
19	F.	I.	12 21 1.58	+ 0.15	+ 0.07	. .	. .	N.	96 11 53.1	+ 2.4	− 1.3		
21	F.	I.	12 19 7.70	+ 0.16	+ 0.05	. .	. .	N.	96 54 4.8	+ 5.6	+ 2.0		
Sept. 26	F.	II.	11 54 32.07	+ 0.56	+ 0.31								
27	S.	.	. . .	. .	. .	. .	. .	N.	98 10 14.4	+ 0.9	+ 2.1		
29	F.	II.	11 48 27.87	+ 0.62	+ 0.42	. .	. .	N.	97 29 6.5	− 3.8	− 1.5		
Dec. 6	E.	II.	13 48 35.81	+ 0.19	− 0.01	. .	. .	S.	98 34 29.0	− 1.9	+ 0.1		
27	F.	II.	15 17 1.15	+ 0.17	0.00	. .	. .						

JUPITER.

Date.	Observer.	Limb.	Apparent Right Ascension of Center.	Corr'n to Am. Eph.	Sidereal Time of Transit of Semi-diameter.	Corr'n to Am. Eph.	Limb.	Geocentric N. P. Distance of Center.	Corr'n to Am. Eph.	Vertical Semi-diameter.	Corr'n to Am. Eph.
1871.			h. m. s.	s.	s.	s.		° ′ ″	″	″	″
Aug. 8	E.	.	7 14 40.30	+ 0.67	1.08	− 0.12	.	67 36 9.5	+ 5.5	13.9	− 1.7
14	F.	.	7 20 1.22	+ 0.63	1.08	− 0.12	.	67 45 24.1	+ 4.9	13.9	− 1.8
SATURN.											
Aug. 12	S.	I.	18 16 26.00	− 1.00	0.60	− 0.05	.	112 43 23.4	− 6.2	10.3	+ 1.9
15	F.	.	18 15 57.17	− 0.85	0.71	+ 0.07	.	112 43 57.8	− 7.2	10.0	+ 1.6
25	F.	.	18 14 44.92	− 1.12	0.66	+ 0.03	.	112 45 49.9	− 4.2	8.2	0.0
NEPTUNE.											
Sept. 4	Ha.	.	1 30 16.52	+ 0.04	. .	. .	.	82 24 56.9	+ 0.2		
5	F.	.	1 30 12.27	+ 0.08	. .	. .	.	82 25 24.1	− 0.6		
29	Ha.	.	1 28 6.76	0.00	. .	. .	.	82 38 32.9	− 0.6		
Oct. 12	F.	.	1 26 47.20	− 0.03	. .	. .	.	82 46 34.6	− 0.8		
27	Ha.	.	1 25 13.83	− 0.02	. .	. .	.	82 55 48.2	+ 0.1		
Nov. 17	F.	.	1 23 15.17	− 0.03	. .	. .	.	83 7 5.7	− 0.9		
Dec. 8	F.	.	1 21 49.55	− 0.02	. .	. .	.	83 14 45.8	− 1.1		
16	F.	.	1 21 29.01	− 0.01	. .	. .	.	83 16 22.0	− 0.3		

SMALL PLANETS.

Date.	Observer.	Washington Mean Time.	Berlin Mean Time corrected for Aberration.	Apparent Right Ascension of Center.	Corr'n to Ephem.	Geocentric N. P. Distance of Center.	Corr'n to Ephem.	NOTES.
EGERIA, ⑬.								
1871.		h. m.	h. m.	h. m. s.	s.	° ′ ″	″	
Dec. 8	F.	11 11.5	17 1.3	4 21 15.49	+ 0.89	54 29 47.7	— 5.3	
9	S.	11 6.2	16 56.0	4 19 58.33	+ 0.92	54 26 25.3	— 20.8	Probably 1 rev.=15″.3 wrong in N. P. D.
15	E.	10 35.2	16 25.0	. . .	. .	54 12 0.7	— 7.9	
CALLIOPE, ㉒. ?								
Sept. 21	F.	11 2.6	16 48.7	23 4 55.98	— 7.54	118 6 11.2	+ 11.8	
EUPHROSYNE, ㉛.								
Nov. 17	F.	9 57.7	15 45.3	1 44 36.23	+ 5.36	72 35 12.4	—3 48.0	
POMONA, ㉜.								
Dec. 8	F.	11 29.5	17 17.2	4 39 21.88	— 0.22	72 29 3.3	+ 5.6	
9	S.	11 24.5	17 12.2	4 38 23.48	+ 0.19	72 32 25.9	+ 3.1	
DAPHNE, ㊶.								
Sept. 21	F.	10 49.3	16 33.8	22 51 36.11	— 0.24	92 23 27.6	+ 6.0	
DANAË, (61). ?								
Dec. 8	F.	10 4.1	15 49.6	. . .	. .	43 56 44.4	— 7.8	
CYBELE, (68). ?								
Dec. 8	F.	12 27.3	18 5.5	5 37 15.86	+ 10.43	71 10 40.7	— 0.5	
THISBE, (88).								
Sept. 21	F.	11 45.3	17 35.1	23 47 43.04	— 0.48	81 45 9.6	— 6.1	
22	S.	11 49.5	17 39.3	23 46 53.82	— 0.03			

RIGHT ASCENSIONS, DECLINATIONS, AND SEMI-DIAMETERS

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1871.

RIGHT ASCENSIONS, DECLINATIONS, AND SEMI-DIAMETERS

OF THE

MOON AND PLANETS.

MOON.

Date.	Mean Time of Transit of Center.	Observer.	Limb.	Apparent Right Ascension of Center.	Correction to Tables of—		Observer.	Limb.	Geocentric Declination of Center.	Correction to Tables of—	
					Peirce.	Hansen.				Peirce.	Hansen.
1871.	h. m. s.			h. m. s.	s.	s.			° ′ ″	″	″
Jan. 3	9 52 46.8	.	.	. . . .	. .	. .	Y.	S.	+ 19 54 1.7	− 3.0	− 2.8
16	20 52 28.0	S.	II.	16 38 39.76	+ 0.21	− 0.82					
27	5 35 14.4	Y.	I.	2 2 17.55	− 0.56	− 0.49					
Feb. 2	10 14 46.2	Sk.	I.	7 6 14.57	− 0.34	− 0.26					
3	11 7 10.4	S.	I.	8 2 43.96	− 0.17	− 0.24					
6	13 41 37.9	S.	II.	10 49 26.51	− 0.04	− 0.52					
9	16 8 38.9	Sk.	II.	13 28 41.30	+ 0.32	− 0.30					
10	16 58 42.1	S.	II.	14 22 49.31	+ 0.28	− 0.58					
28	7 13 57.6	Sk.	I.	5 47 26.72	− 0.40	− 0.18					
Mar. 1	8 4 14.2	S.	I.	6 41 48.13	− 0.54	− 0.32					
2	8 55 53.9	Sk.	I.	7 37 32.86	− 0.42	− 0.35					
4	10 40 20.6	Sk.	I.	9 30 9.78	− 0.02	− 0.37	Y.	N.	+ 18 18 0.46	+ 5.6	+ 7.0
6	12 22 30.2	S.	II.	11 20 29.28	− 0.07	− 0.57	F.	N.	+ 9 23 47.6	+ 6.0	+ 6.8
14	19 35 27.2	Sk.	II.	19 6 9.83	− 0.11	− 1.06					
24	2 48 50.5	Y.	I.	2 56 13.30	− 0.40	− 0.30					
25	3 32 59.8	Sk.	I.	3 44 26.41	− 0.27	− 0.18					
28	5 55 8.0	Sk.	I.	6 18 47.65	− 0.04	+ 0.17					
Apr. 4	11 50 59.6	Sk.	I, II.	12 43 13.56	+ 0.29	− 0.41	Y.	N., S.	+ 0 46 38.0	+ 2.6	+ 6.7
6	13 36 6.9	Sk.	II.	14 36 31.28	+ 0.14	− 0.58	Y.	S.	− 11 2 50.2	− 0.2	− 1.4
7	14 31 52.7	S.	II.	15 36 22.75	+ 0.13	− 0.70					
11	18 29 2.4	Sk.	II.	19 49 57.58	− 0.12	− 1.09					
24	3 48 51.7	Y.	I.	5 58 37.53	− 0.53	− 0.33					
29	7 58 28.3	Sk.	I.	10 28 37.94	− 0.24	− 0.25	Y.	N.	+ 14 23 45.4	+ 5.5	+ 6.1
May 1	9 37 10.6	S.	I.	12 15 29.57	+ 0.33	− 0.27	F.	N.	+ 3 54 11.3	− 0.2	+ 4.4
10	18 14 22.6	S.	II.	21 29 35.52	− 0.14	− 0.99	F.	N.	− 18 49 45.5	− 3.1	− 3.9
24	4 13 56.1	Y.	I.	8 22 2.77	− 0.43	− 0.31					
25	5 3 14.3	Sk.	I.	9 15 25.57	− 0.50	− 0.30					
29	8 15 26.2	Y.	I.	12 43 55.27	+ 0.11	− 0.20					
30	9 5 27.3	Sk.	I.	13 38 1.16	+ 0.24	− 0.25	Y.	N.	− 5 1 57.8	+ 4.7	+ 7.7
June 2	11 55 12.6	F.	I, II.	16 40 4.01	+ 0.01	− 0.61					
3	12 58 44.6	Sk.	II.	17 47 43.00	+ 0.03	− 0.72	Y.	N., S.	− 23 5 14.1	− 1.7	+ 2.8
5	15 6 4.3	F.	II.	20 3 16.71	+ 0.11	− 0.67					
8	17 48 56.9	Y.	II.	22 58 25.74	+ 0.07	− 0.63	Y.	N.	− 11 57 29.5	+ 0.4	− 0.6
9	18 35 1.4	F.	II.	23 48 34.43	− 0.07	− 0.76					
20	2 10 51.8	Y.	I.	8 5 5.29	− 0.33	− 0.47					
21	3 0 22.4	Y.	I.	8 58 40.58	− 0.33	− 0.44					
23	4 36 4.1	Y.	I.	10 42 31.10	− 0.26	− 0.30					
27	7 46 9.1	Y.	I.	14 8 53.52	− 0.02	− 0.34	Y.	N.	− 8 15 23.1	+ 2.0	+ 4.2
28	8 38 59.9	Sk.	I.	15 5 49.62	+ 0.07	− 0.36	F.	N.	− 13 42 5.8	+ 3.3	+ 5.2
29	9 35 57.1	Y.	I.	16 6 52.68	− 0.17	− 0.54	Y.	N.	− 18 24 36.8	+ 4.5	+ 6.2
July 2	12 45 52.1	Y.	II.	19 29 8.57	− 0.39	− 0.82	Y.	S.	− 23 39 48.8	− 3.9	− 1.1
3	13 48 17.0	Sk.	II.	20 35 40.28	− 0.27	− 0.72					
4	14 46 29.0	Y.	II.	21 37 58.43	− 0.42	− 0.90					
5	15 39 52.1	Sk.	II.	22 35 26.88	− 0.32	− 0.75	F.	N.	− 14 1 33.2	− 3.2	− 2.4
7	17 14 35.2	Sk.	II.	0 18 18.59	0.00	− 0.63					
9	18 40 35.0	Y.	II.	1 52 25.61	− 0.39	− 0.90					
12	20 51 17.8	Sk.	II.	4 15 19.63	− 0.16	− 0.62					

JUPITER.

Date.	Observer.	Limb.	Apparent Right Ascension of Center.	Corr'n to Am. Eph.	Sidereal Time of Transit of Semi-diameter.	Corr'n to Am. Eph.	Observer.	Limb.	Geocentric Declination of Center.	Corr'n to Am. Eph.	Vertical Semi-diam.	Corr'n to Am. Eph.
1871.			h. m. s.	s.	s.	s.			° ′ ″	″	″	″
Jan. 3	.	.	. . .	. .	. .	. .	Y.	.	+ 22 32 2.4	− 0.9	26.1	+ 3.7
6	.	.	. . .	. .	. .	. .	F.	.	+ 22 30 50.9	− 4.2	24.5	+ 2.2

MARS.

Date.	Observer.	Limb.	Apparent Right Ascension of Center.	Corr'n to Am. Eph.	Sidereal Time of Transit of Semi-diameter.	Corr'n to Am. Eph.	Observer.	Limb.	Geocentric Declination of Center.	Corr'n to Am. Eph.	Vertical Semi-diam.	Corr'n to Am. Eph.
April 3	S.	.	11 41 15.93	− 0.30	0.51	0.00	F.	.	+ 5 24 17.8	+ 6.3	11.8	+ 4.2
4	Sk.	.	11 40 2.07	− 0.10	0.52	+ 0.02	Y.	.	+ 5 29 42.2	+ 3.5	11.5	+ 4.0
12	.	.	. . . .	. .	. .	. .	F.	.	+ 6 3 4.3	+ 4.5	9.1	+ 1.8
15	Sk.	.	11 28 58.88	− 0.19	0.50	+ 0.02	Y.	.	+ 6 10 36.7	+ 5.9	11.3	+ 4.2
18	Sk.	.	11 26 53.72	− 0.13	0.44	− 0.03	Y.	.	+ 6 15 18.7	+ 5.8	10.7	+ 3.6
20	.	.	. . . .	. .	. .	. .	Y.	.	+ 6 16 50.7	+ 3.8	10.4	+ 3.5
24	S.	.	11 24 1.86	− 0.23	0.34	− 0.11	F.	.	+ 6 16 15.9	+ 4.0	7.8	+ 1.0
29	Sk.	.	11 22 59.22	− 0.13	0.39	− 0.05	Y.	.	+ 6 8 50.1	+ 6.5	11.1	+ 4.6
May 1	S.	.	11 22 53.92	− 0.12	0.38	− 0.05	F.	.	+ 6 3 49.7	+ 5.0	6.8	+ 0.4
13	Sk.	.	11 26 3.10	− 0.15	0.34	− 0.05	Y.	.	+ 5 12 24.8	+ 5.0	9.2	+ 3.3

CONSTANTS FOR THE REDUCTION OF THE FIXED STARS.

These constants have been prepared from the logarithms A, B, C, and D of the American Ephemeris and Nautical Almanac for the year 1871. The epoch to which the observations are reduced by them is 1870.0, which is assumed to be January 0^d—.165, expressed in fractional parts of a tropical year, that being the instant when the sun's mean longitude was 280°.

The notation and form of publication are similar to that employed in volume III of the Washington Observations, and the auxiliary tables used in the reductions are also similar to those of that volume.

CONSTANTS FOR THE REDUCTION OF FIXED STARS.

EPOCH MEAN MIDNIGHT, WASHINGTON.

Date.	Sid. T.	G.	H.		Log. *g*.	Log. *h*.	Log. *i*.	*f*.	*t*.	*p*.	☽	☽—P¹.
1871.	h.	h. m. s.	h. m. s.					s.	y.			
Jan. 1	6.76	12 34 7	11 18 0	228	1.1365	1.3092	0.2074	− 2.074	− 1.004			
2		33 40	14 12	222	1.1387	1.3090	0.2440	2.085	1.007			
3		33 13	10 30	228	1.1408	1.3087	0.2772	2.096	1.009			
4		32 5	6 42	228	1.1429	1.3084	0.3083	2.107	1.012			
5		32 17	11 2 54	228	1.1450	1.3081	0.3371	2.118	1.015			
6	7.09	31 49	10 59 6	228	1.1471	1.3078	0.3641	2.129	1.018			
7		31 21	55 18	228	1.1492	1.3074	0.3896	2.140	1.020			
8		30 53	51 30	228	1.1512	1.3071	0.4133	2.151	1.023			
9		30 25	47 42	228	1.1532	1.3067	0.4357	2.161	1.026			
10		29 56	43 54	228	1.1552	1.3063	0.4568	2.171	1.028			
11	7.42	29 27	40 6	228	1.1572	1.3458	0.4768	2.181	1.031			
12		28 58	36 18	228	1.1592	1.3054	0.4958	2.192	1.034			
13		28 29	32 30	234	1.1611	1.3050	0.5139	2.203	1.037			
14		27 59	28 36	234	1.1630	1.3045	0.5311	2.213	1.040			
15		27 29	24 42	228	1.1649	1.3040	0.5475	2.223	1.042			
16	7.75	26 59	20 54	234	1.1667	1.3035	0.5632	2.233	1.045			
17		26 29	17 0	234	1.1685	1.3030	0.5782	2.243	1.048			
18		25 59	13 6	228	1.1703	1.3025	0.5926	2.253	1.050			
19		25 29	9 18	234	1.1721	1.3019	0.6063	2.263	1.053			
20		24 59	5 24	234	1.1739	1.3014	0.6196	2.273	1.056			
21	8.07	24 29	10 1 30	234	1.1756	1.3008	0.6322	2.282	1.059			
22		23 59	9 57 36	234	1.1773	1.3002	0.6444	2.292	1.061			
23		23 29	53 42	240	1.1790	1.2996	0.6562	2.302	1.064			
24		22 59	49 42	234	1.1807	1.2991	0.6675	2.311	1.067			
25		22 29	45 48	234	1.1824	1.2984	0.6783	2.320	1.070			
26	8.40	21 59	41 54	240	1.1840	1.2978	0.6888	2.329	1.072			
27		21 29	37 54	240	1.1856	1.2973	0.6989	2.338	1.075			
28		20 59	33 54	240	1.1872	1.2966	0.7086	2.347	1.078			
29		20 30	29 54	240	1.1888	1.2959	0.7179	2.356	1.081			
30		20 1	25 54	240	1.1904	1.2953	0.7270	2.365	1.083			
31	8.73	19 32	21 54	240	1.1919	1.2947	0.7357	2.374	1.086			
Feb. 1		19 3	17 54	240	1.1935	1.2940	0.7441	2.383	1.089			
2		18 34	13 54	240	1.1951	1.2933	0.7522	2.392	1.092			
3		18 6	9 54	240	1.1966	1.2927	0.7600	2.401	1.094			
4		17 38	5 54	246	1.1981	1.2920	0.7675	2.408	1.097			
5	9.06	17 10	9 1 48	246	1.1995	1.2913	0.7748	2.417	1.100			
6		16 42	8 57 42	240	1.2008	1.2907	0.7818	2.425	1.102			
7		16 15	53 42	252	1.2021	1.2900	0.7886	2.433	1.105			
8		15 47	49 30	240	1.2034	1.2893	0.7951	2.441	1.108			
9		15 19	45 30	252	1.2047	1.2886	0.8014	2.449	1.111			
10	9.39	14 55	41 18	246	1.2060	1.2880	0.8075	2.456	1.113			
11		14 29	37 12	246	1.2073	1.2874	0.8134	2.464	1.116			
12		14 3	33 6	252	1.2086	1.2867	0.8190	2.472	1.119			
13		13 37	28 54	246	1.2099	1.2861	0.8245	2.480	1.122			
14		13 12	24 48	252	1.2112	1.2854	0.8297	2.487	1.124			
15	9.72	12 48	20 36	246	1.2124	1.2848	0.8348	2.494	1.127			
16		12 24	16 30	252	1.2136	1.2842	0.8396	2.501	1.130			
17		12 0	12 18	252	1.2148	1.2836	0.8442	2.508	1.133			
18		11 37	8 6	252	1.2160	1.2830	0.8487	2.515	1.135			
19		11 14	8 3 54	252	1.2172	1.2824	0.8530	2.522	1.138			
20	10.04	10 52	7 59 42	252	1.2183	1.2818	0.8571	2.529	1.141			
21		10 30	55 30	258	1.2195	1.2813	0.8611	2.536	1.144			
22		10 9	51 12	258	1.2206	1.2808	0.8649	2.543	1.146			
23		9 48	46 54	252	1.2217	1.2802	0.8685	2.550	1.149			
24		9 27	42 42	252	1.2228	1.2797	0.8719	2.557	1.152			
25	10.37	9 7	38 30	258	1.2239	1.2792	0.8752	2.563	1.154			
26		8 47	34 12	258	1.2250	1.2787	0.8783	2.570	1.157			
27		8 27	29 54	252	1.2261	1.2782	0.8813	2.576	1.160			
28		8 8	25 42	258	1.2271	1.2778	0.8841	2.582	1.163			
29	10.64	12 7 51	7 21 24		1.2281	1.2773	0.8867	− 2.588	− 1.165			

EPOCH MEAN MIDNIGHT, WASHINGTON.

Date.	Sid. T.	G.	H.		Log. *g*.	Log. *h*.	Log. *i*.	*f*.	*l*.	*p*.	☽	☽ − Π.
1871.	h.	h. m. s.	h. m. s.					s.	y.			
March 1	10.64	12 7 51	7 21 24	258	1.2281	1.2773	0.8867	− 2.588	− 1.165			
2		7 34	17 6	258	1.2291	1.2769	0.8892	2.594	1.168			
3		7 17	12 48	258	1.2301	1.2765	0.8916	2.600	1.171			
4		7 1	8 30	258	1.2311	1.2761	0.8938	2.606	1.174			
5		6 45	7 4 12	258	1.2321	1.2758	0.8959	2.612	1.176			
6	10.97	6 30	6 59 54	258	1.2331	1.2754	0.8978	2.618	1.179			
7		6 15	55 36	258	1.2341	1.2751	0.8996	2.624	1.182			
8		6 1	51 18	264	1.2351	1.2748	0.9013	2.630	1.185			
9		5 47	46 54	258	1.2361	1.2746	0.9028	2.636	1.187			
10		5 34	42 36	258	1.2370	1.2743	0.9042	2.642	1.190			
11	11.29	5 22	38 18	264	1.2379	1.2741	0.9054	2.648	1.193			
12		5 10	33 54	258	1.2389	1.2739	0.9065	2.654	1.196			
13		4 59	29 36	258	1.2398	1.2737	0.9075	2.659	1.198			
14		4 48	25 18	264	1.2407	1.2735	0.9083	2.665	1.201			
15		4 38	20 54	258	1.2416	1.2734	0.9090	2.671	1.204			
16	11.62	4 28	16 36	258	1.2425	1.2733	0.9096	2.677	1.206			
17		4 19	12 18	264	1.2435	1.2732	0.9100	2.682	1.209			
18		4 10	7 54	258	1.2444	1.2732	0.9103	2.688	1.212			
19		4 2	6 3 36	258	1.2453	1.2731	0.9105	2.693	1.215			
20		3 54	5 59 18	258	1.2462	1.2731	0.9105	2.699	1.217			
21	11.95	3 47	55 0	258	1.2471	1.2731	0.9104	2.705	1.220			
22		3 41	50 42	264	1.2480	1.2732	0.9102	2.710	1.223			
23		3 35	46 18	258	1.2489	1.2733	0.9099	2.716	1.226			
24		3 30	42 0	258	1.2498	1.2733	0.9094	2.722	1.228			
25		3 25	37 42	258	1.2507	1.2735	0.9088	2.728	1.231			
26	12.28	3 21	33 24	258	1.2516	1.2736	0.9081	2.733	1.234			
27		3 17	29 6	258	1.2525	1.2738	0.9072	2.739	1.237			
28		3 14	24 48	258	1.2534	1.2739	0.9062	2.744	1.239			
29		3 11	20 30	258	1.2543	1.2742	0.9051	2.750	1.242			
30		3 9	16 12	258	1.2552	1.2744	0.9038	2.756	1.245			
31	12.61	3 7	11 54	252	1.2562	1.2746	0.9024	2.762	1.248			
April 1		3 6	7 42	252	1.2571	1.2749	0.9009	2.768	1.250			
2		3 6	5 3 30	258	1.2580	1.2751	0.8992	2.774	1.253			
3		3 5	4 59 12	258	1.2589	1.2755	0.8974	2.780	1.256			
4		3 5	54 54	252	1.2599	1.2758	0.8955	2.786	1.258			
5	12.94	3 5	50 42	252	1.2609	1.2762	0.8934	2.793	1.261			
6		3 6	46 30	252	1.2618	1.2765	0.8912	2.799	1.264			
7		3 8	42 18	252	1.2628	1.2769	0.8889	2.805	1.267			
8		3 10	38 6	252	1.2637	1.2773	0.8864	2.811	1.270			
9		3 11	33 54	252	1.2647	1.2778	0.8838	2.817	1.272			
10	13.26	3 13	29 42	252	1.2657	1.2783	0.8811	2.824	1.275			
11		3 16	25 30	246	1.2666	1.2787	0.8781	2.830	1.278			
12		3 19	21 24	246	1.2676	1.2792	0.8751	2.837	1.280			
13		3 22	17 18	252	1.2686	1.2797	0.8719	2.843	1.283			
14		3 25	13 6	246	1.2696	1.2802	0.8686	2.849	1.286			
15	13.59	3 29	9 0	246	1.2706	1.2807	0.8650	2.856	1.289			
16		3 33	4 54	246	1.2716	1.2813	0.8614	2.862	1.291			
17		3 37	4 0 48	246	1.2726	1.2818	0.8576	2.869	1.294			
18		3 42	3 56 42	240	1.2736	1.2824	0.8536	2.876	1.297			
19		3 47	52 42	246	1.2747	1.2829	0.8495	2.883	1.300			
20	13.92	3 52	48 36	246	1.2758	1.2834	0.8452	2.890	1.302			
21		3 57	44 30	240	1.2768	1.2841	0.8407	2.897	1.305			
22		4 2	40 30	240	1.2779	1.2847	0.8361	2.904	1.308			
23		4 8	36 30	240	1.2790	1.2853	0.8313	2.911	1.310			
24		4 14	32 30	240	1.2801	1.2859	0.8263	2.918	1.313			
25	14.25	4 20	28 30	240	1.2812	1.2865	0.8211	2.926	1.316			
26		4 26	24 30	240	1.2823	1.2871	0.8158	2.933	1.319			
27		4 32	20 30	234	1.2834	1.2877	0.8102	2.941	1.322			
28		4 38	16 36	234	1.2846	1.2884	0.8045	2.949	1.324			
29		4 44	12 42	240	1.2857	1.2890	0.7986	2.957	1.327			
30	14.58	12 4 50	3 8 42		1.2869	1.2896	0.7924	− 2.965	− 1.330			

EPOCH MEAN MIDNIGHT, WASHINGTON.

Date.	Sid. T.	G.	H.		Log. g.	Log. h.	Log. i.	f.	t.	p.	☽	☽ − Γ'.
1871.	h.	h. m. s.	h. m. s.					s.	y.		°	°
May 1	14.64	12 4 56	3 4 48		1.2881	1.2903	0.7861	− 2.972	− 1.332			
2		5 2	3 0 54	234	1.2893	1.2909	0.7795	2.981	1.335			
3		5 8	2 57 0	234	1.2905	1.2915	0.7727	2.989	1.338			
4		5 14	53 6	234	1.2917	1.2922	0.7657	2.997	1.341			
5		5 20	49 18	228	1.2929	1.2928	0.7584	3.006	1.343			
6	14.97	5 26	45 24	234	1.2941	1.2935	0.7509	3.014	1.346			
7		5 32	41 36	234	1.2953	1.2941	0.7431	3.023	1.349			
8		5 38	37 48	228	1.2966	1.2947	0.7351	3.031	1.352			
9		5 44	34 0	228	1.2978	1.2953	0.7268	3.039	1.354			
10		5 50	30 12	228	1.2991	1.2959	0.7182	3.047	1.357			
11	15.30	5 56	26 24	228	1.3003	1.2965	0.7093	3.056	1.360			
12		6 2	22 36	228	1.3016	1.2971	0.7001	3.065	1.363			
13		6 7	18 54	222	1.3028	1.2977	0.6906	3.074	1.365			
14		6 12	15 6	228	1.3041	1.2983	0.6806	3.083	1.368			
15		6 17	11 24	222	1.3054	1.2989	0.6706	3.092	1.371			
16	15.63	6 22	7 42	222	1.3066	1.2995	0.6600	3.102	1.374			
17		6 26	4 0	222	1.3079	1.3000	0.6491	3.111	1.376			
18		6 30	2 0 18	222	1.3092	1.3005	0.6377	3.120	1.379			
19		6 34	1 56 36	222	1.3105	1.3011	0.6259	3.129	1.382			
20		6 38	52 54	222	1.3118	1.3016	0.6137	3.138	1.384			
21	15.96	6 42	49 12	222	1.3131	1.3022	0.6010	3.148	1.387			
22		6 46	45 30	222	1.3144	1.3027	0.5878	3.157	1.390			
23		6 49	41 54	216	1.3158	1.3031	0.5740	3.167	1.393			
24		6 52	38 18	216	1.3171	1.3036	0.5598	3.177	1.395			
25		6 55	34 36	222	1.3185	1.3041	0.5448	3.187	1.398			
26	16.29	6 57	31 0	216	1.3198	1.3045	0.5292	3.197	1.401			
27		6 59	27 18	222	1.3212	1.3049	0.5129	3.207	1.404			
28		7 1	23 42	216	1.3225	1.3054	0.4959	3.217	1.406			
29		7 2	20 6	216	1.3239	1.3058	0.4781	3.227	1.409			
30		7 3	16 36	210	1.3252	1.3062	0.4594	3.237	1.412			
31	16.62	7 4	13 0	216	1.3266	1.3066	0.4397	3.248	1.415			
June 1		7 4	9 24	216	1.3279	1.3069	0.4189	3.258	1.417			
2		7 4	5 54	210	1.3293	1.3073	0.3970	3.269	1.420			
3		7 4	1 2 18	216	1.3307	1.3076	0.3738	3.279	1.423			
4		7 4	0 58 42	216	1.3321	1.3080	0.3492	3.289	1.426			
5	16.94	7 4	55 12	210	1.3335	1.3083	0.3230	3.300	1.428			
6		7 3	51 42	210	1.3348	1.3085	0.2950	3.310	1.431			
7		7 2	48 6	216	1.3362	1.3088	0.2649	3.321	1.434			
8		7 0	44 30	216	1.3376	1.3091	0.2325	3.332	1.436			
9		6 58	41 0	210	1.3390	1.3093	0.1973	3.342	1.439			
10	17.27	6 55	37 30	210	1.3404	1.3095	0.1588	3.353	1.442			
11		6 52	34 0	210	1.3417	1.3097	0.1165	3.363	1.445			
12		6 49	30 30	210	1.3431	1.3098	0.0695	3.374	1.447			
13		6 46	26 54	216	1.3445	1.3100	0.0167	3.384	1.450			
14		6 42	23 24	210	1.3459	1.3102	9.9564	3.395	1.453			
15	17.60	6 38	19 54	210	1.3473	1.3102	9.8863	3.406	1.456			
16		6 33	16 24	210	1.3486	1.3104	9.8024	3.417	1.458			
17		6 28	12 54	210	1.3500	1.3105	9.6983	3.428	1.461			
18		6 22	9 24	210	1.3514	1.3105	9.5608	3.439	1.464			
19		6 17	5 54	210	1.3528	1.3105	9.3586	3.450	1.467			
20	17.93	6 11	0 2 24	210	1.3542	1.3106	8.9700	3.461	1.469			
21		6 5	23 58 54	210	1.3556	1.3106	8.6286n	3.472	1.472			
22		5 58	55 24	210	1.3569	1.3106	9.2504	3.483	1.475			
23		5 51	51 54	210	1.3582	1.3106	9.4959	3.493	1.478			
24		5 44	48 24	210	1.3595	1.3105	9.6522	3.504	1.480			
25	18.26	5 37	44 54	210	1.3608	1.3104	9.7665	3.515	1.483			
26		5 29	41 24	210	1.3622	1.3103	9.8568	3.526	1.486			
27		5 21	37 54	210	1.3635	1.3102	9.9314	3.537	1.488			
28		5 12	34 24	210	1.3648	1.3101	9.9949	3.548	1.491			
29		5 3	30 54	210	1.3661	1.3099	0.0503	3.559	1.494			
30	18.59	12 4 54	23 27 18	216	1.3675	1.3098	0.0993n	− 3.569	− 1.497			

EPOCH MEAN MIDNIGHT, WASHINGTON.

Date.	Sid. T.	G.	H.		Log. g.	Log. h.	Log. i.	f.	t.	p.	☽	☽ $-$ P^{I}.
1871.	h.	h. m. s.	h. m. s.					s.	y.			
July 1	18.65	12 4 45	23 23 54	216	1.3688	1.3096	0.1432n	− 3.580	− 1.500			
2		4 35	20 18	210	1.3701	1.3093	0.1828	3.591	1.502			
3		4 25	16 48	210	1.3714	1.3092	0.2191	3.601	1.505			
4		4 15	13 18	210	1.3727	1.3089	0.2524	3.612	1.508			
5		4 5	9 48	216	1.3740	1.3087	0.2833	3.622	1.510			
6	18.98	3 54	6 12	210	1.3752	1.3084	0.3121	3.633	1.513			
7		3 43	23 2 42	216	1.3765	1.3081	0.3389	3.644	1.516			
8		3 32	22 59 6	210	1.3778	1.3078	0.3640	3.654	1.519			
9		3 21	55 36	210	1.3791	1.3075	0.3877	3.665	1.521			
10		3 10	52 6	216	1.3804	1.3072	0.4100	3.675	1.524			
11	19.31	2 58	48 30	216	1.3816	1.3068	0.4312	3.686	1.527			
12		2 46	44 54	216	1.3828	1.3064	0.4512	3.696	1.530			
13		2 33	41 18	210	1.3840	1.3060	0.4703	3.706	1.532			
14		2 21	37 48	216	1.3851	1.3056	0.4884	3.716	1.535			
15		2 8	34 12	216	1.3862	1.3052	0.5057	3.726	1.538			
16	19.64	1 56	30 36	216	1.3873	1.3047	0.5222	3.736	1.540			
17		1 43	27 0	216	1.3885	1.3043	0.5380	3.746	1.543			
18		1 30	23 24	216	1.3896	1.3039	0.5531	3.755	1.546			
19		1 17	19 48	222	1.3907	1.3034	0.5676	3.765	1.549			
20		1 4	16 6	216	1.3918	1.3029	0.5815	3.774	1.552			
21	19.97	0 50	12 30	216	1.3929	1.3024	0.5949	3.784	1.554			
22		0 37	8 54	216	1.3940	1.3019	0.6078	3.793	1.557			
23		0 23	5 18	222	1.3951	1.3014	0.6201	3.803	1.560			
24		12 0 10	22 1 36	222	1.3962	1.3008	0.6320	3.813	1.562			
25		11 59 56	21 57 54	222	1.3973	1.3003	0.6435	3.823	1.565			
26	20.29	59 42	54 12	222	1.3984	1.2997	0.6546	3.833	1.568			
27		59 28	50 30	222	1.3995	1.2992	0.6653	3.842	1.571			
28		59 14	46 48	222	1.4005	1.2986	0.6756	3.851	1.573			
29		59 0	43 6	222	1.4015	1.2980	0.6855	3.860	1.576			
30		58 46	39 24	222	1.4025	1.2975	0.6951	3.869	1.579			
31	20.62	58 32	35 42	228	1.4035	1.2968	0.7043	3.878	1.582			
August 1		58 18	31 54	228	1.4045	1.2962	0.7133	3.887	1.584			
2		58 4	28 6	222	1.4055	1.2956	0.7220	3.896	1.587			
3		57 50	24 24	228	1.4064	1.2950	0.7303	3.905	1.590			
4		57 36	20 36	228	1.4074	1.2944	0.7385	3.914	1.592			
5	20.95	57 22	16 48	228	1.4083	1.2938	0.7463	3.922	1.595			
6		57 8	13 0	228	1.4093	1.2931	0.7539	3.931	1.598			
7		56 53	9 12	234	1.4103	1.2925	0.7613	3.940	1.601			
8		56 39	5 18	228	1.4112	1.2919	0.7684	3.948	1.604			
9		56 25	21 1 30	228	1.4122	1.2913	0.7753	3.957	1.606			
10	21.28	56 11	20 57 42	234	1.4131	1.2907	0.7819	3.965	1.609			
11		55 57	53 48	234	1.4140	1.2900	0.7883	3.973	1.612			
12		55 43	49 54	234	1.4148	1.2894	0.7946	3.981	1.614			
13		55 30	46 0	234	1.4156	1.2888	0.8006	3.988	1.617			
14		55 17	42 6	234	1.4164	1.2881	0.8064	3.995	1.620			
15	21.61	55 4	38 12	234	1.4172	1.2875	0.8120	4.002	1.623			
16		54 51	34 18	240	1.4181	1.2869	0.8175	4.010	1.625			
17		54 38	30 18	240	1.4189	1.2863	0.8227	4.017	1.628			
18		54 25	26 18	234	1.4197	1.2857	0.8278	4.025	1.631			
19		54 12	22 24	240	1.4205	1.2852	0.8327	4.032	1.634			
20	21.94	54 0	18 24	240	1.4213	1.2846	0.8374	4.039	1.636			
21		53 48	14 24	240	1.4221	1.2839	0.8419	4.047	1.639			
22		53 36	10 24	240	1.4229	1.2834	0.8463	4.054	1.642			
23		53 24	6 24	246	1.4237	1.2828	0.8505	4.061	1.645			
24		53 12	20 2 18	240	1.4245	1.2822	0.8545	4.068	1.647			
25	22.27	53 0	19 58 18	240	1.4252	1.2816	0.8584	4.075	1.650			
26		52 49	54 18	246	1.4260	1.2811	0.8621	4.082	1.653			
27		52 38	50 12	246	1.4267	1.2806	0.8657	4.089	1.656			
28		52 27	46 6	246	1.4274	1.2801	0.8692	4.096	1.658			
29		52 16	42 0	246	1.4281	1.2796	0.8725	4.103	1.661			
30	22.60	52 6	37 54	246	1.4288	1.2791	0.8756	4.109	1.664			
31		11 51 56	19 33 48		1.4295	1.2786	0.8786n	− 4.116	− 1.666			

EPOCH MEAN MIDNIGHT, WASHINGTON.

Date.	Sid. T.	G.	H.		Log. *g*.	Log. *h*.	Log. *i*.	*f*.	*t*.	*p*.	☽	☽ —Γ′.
1871.	h.	h. m. s.	h. m. s.					s.	y.			
Sept. 1	22.73	11 51 46	19 29 42	246	1.4302	1.2781	0.8814*n*	— 4.122	— 1.669			
2		51 36	25 36	252	1.4309	1.2777	0.8841	4.128	1.672			
3		51 27	21 24	246	1.4316	1.2773	0.8867	4.135	1.675			
4		51 18	17 18	252	1.4323	1.2769	0.8892	4.141	1.677			
5		51 9	13 6	252	1.4330	1.2766	0.8915	4.147	1.680			
6	23.06	51 0	8 54	252	1.4336	1.2761	0.8936	4.153	1.683			
7		50 52	4 42	252	1.4343	1.2757	0.8956	4.160	1.686			
8		50 44	19 0 30	252	1.4350	1.2754	0.8975	4.166	1.688			
9		50 36	18 56 18	252	1.4356	1.2752	0.8993	4.172	1.691			
10		50 29	52 6	252	1.4362	1.2749	0.9009	4.178	1.694			
11	23.39	50 22	47 54	252	1.4368	1.2747	0.9025	4.184	1.697			
12		50 15	43 42	252	1.4375	1.2744	0.9038	4.190	1.699			
13		50 9	39 30	252	1.4381	1.2742	0.9051	4.196	1.702			
14		50 3	35 18	258	1.4387	1.2740	0.9062	4.202	1.705			
15		49 57	31 0	258	1.4393	1.2738	0.9072	4.207	1.708			
16	23.71	49 52	26 42	252	1.4399	1.2736	0.9080	4.213	1.710			
17		49 47	22 30	252	1.4405	1.2735	0.9088	4.219	1.713			
18		49 42	18 18	258	1.4411	1.2734	0.9094	4.224	1.716			
19		49 37	14 0	258	1.4417	1.2732	0.9098	4.230	1.718			
20		49 33	9 42	252	1.4423	1.2732	0.9102	4.236	1.721			
21	0.04	49 29	5 30	258	1.4429	1.2731	0.9104	4.242	1.724			
22		49 26	18 1 12	258	1.4435	1.2731	0.9105	4.248	1.727			
23		49 23	17 56 54	252	1.4441	1.2731	0.9105	4.254	1.729			
24		49 20	52 42	258	1.4447	1.2731	0.9103	4.260	1.732			
25		49 17	48 24	258	1.4453	1.2732	0.9101	4.266	1.735			
26	0.37	49 15	44 6	252	1.4459	1.2732	0.9096	4.272	1.738			
27		49 13	39 54	258	1.4465	1.2734	0.9091	4.278	1.740			
28		49 12	35 36	258	1.4471	1.2735	0.9084	4.283	1.743			
29		49 11	31 18	258	1.4477	1.2736	0.9076	4.289	1.746			
30		49 10	27 0	258	1.4484	1.2738	0.9067	4.295	1.749			
Oct. 1	0.70	49 9	22 42	258	1.4490	1.2741	0.9057	4.301	1.751			
2		49 9	18 24	258	1.4496	1.2743	0.9045	4.307	1.754			
3		49 9	14 6	252	1.4502	1.2745	0.9031	4.313	1.757			
4		49 9	9 54	258	1.4507	1.2748	0.9017	4.319	1.760			
5		49 9	5 36	258	1.4513	1.2750	0.9001	4.325	1.762			
6	1.03	49 10	17 1 18	252	1.4519	1.2753	0.8983	4.331	1.765			
7		49 11	16 57 6	252	1.4525	1.2757	0.8965	4.337	1.768			
8		49 13	52 54	258	1.4532	1.2760	0.8945	4.343	1.770			
9		49 15	48 36	258	1.4538	1.2763	0.8923	4.350	1.773			
10		49 17	44 18	252	1.4544	1.2768	0.8901	4.356	1.776			
11	1.36	49 19	40 6	258	1.4551	1.2772	0.8876	4.363	1.779			
12		49 22	35 54	252	1.4558	1.2776	0.8851	4.369	1.782			
13		49 25	31 42	258	1.4564	1.2780	0.8823	4.376	1.784			
14		49 28	27 24	252	1.4570	1.2785	0.8795	4.382	1.787			
15		49 31	23 12	252	1.4577	1.2790	0.8764	4.388	1.790			
16	1.69	49 34	19 0	252	1.4583	1.2794	0.8732	4.395	1.792			
17		49 38	14 48	252	1.4589	1.2800	0.8690	4.402	1.795			
18		49 42	10 36	252	1.4595	1.2805	0.8664	4.409	1.798			
19		49 46	6 24	252	1.4602	1.2810	0.8627	4.416	1.801			
20		49 50	16 2 12	246	1.4609	1.2816	0.8589	4.423	1.803			
21	2.01	49 55	15 58 6	252	1.4616	1.2821	0.8549	4.430	1.806			
22		50 0	53 54	252	1.4623	1.2827	0.8508	4.437	1.809			
23		50 5	49 42	246	1.4630	1.2833	0.8464	4.445	1.812			
24		50 10	45 36	246	1.4637	1.2839	0.8419	4.452	1.814			
25		50 15	41 30	252	1.4644	1.2845	0.8372	4.459	1.817			
26	2.34	50 20	37 18	246	1.4652	1.2851	0.8323	4.467	1.820			
27		50 25	33 12	246	1.4659	1.2858	0.8272	4.474	1.822			
28		50 30	29 6	246	1.4667	1.2864	0.8220	4.482	1.825			
29		50 36	25 0	246	1.4674	1.2871	0.8165	4.490	1.828			
30		50 42	20 54	240	1.4682	1.2877	0.8108	4.498	1.831			
31	2.67	11 50 48	15 16 54		1.4689	1.2883	0.8049*n*	— 4.506	— 1.834			

EPOCH MEAN MIDNIGHT, WASHINGTON.

Date.		Sid. T.	G.	H.		Log. *g*.	Log. *h*.	Log. *i*.	*f*.	*t*.	*p*.	☽	☽—Γ⁴.
1871.		h.	h. m. s.	h. m. s.					s.	y.			
Nov.	1	2.74	11 50 54	15 12 48	246	1.4698	1.2890	0.7988 *n*	— 4.514	— 1.836			
	2		51 0	8 42	240	1.4705	1.2896	0.7924	4.522	1.839			
	3		51 6	4 42	246	1.4713	1.2902	0.7858	4.530	1.842			
	4		51 12	15 0 36	240	1.4720	1.2909	0.7790	4.538	1.844			
	5		51 18	14 56 36	240	1.4728	1.2916	0.7719	4.546	1.847			
	6	3.06	51 24	52 36	240	1.4736	1.2922	0.7646	4.555	1.850			
	7		51 30	48 36	240	1.4744	1.2929	0.7571	4.563	1.853			
	8		51 36	44 36	240	1.4753	1.2935	0.7492	4.572	1.855			
	9		51 42	40 36	240	1.4761	1.2942	0.7411	4.581	1.858			
	10		51 48	36 36	234	1.4769	1.2949	0.7326	4.590	1.861			
	11	3.39	51 54	32 42	240	1.4778	1.2956	0.7239	4.599	1.864			
	12		52 0	28 42	240	1.4786	1.2962	0.7148	4.608	1.866			
	13		52 6	24 42	234	1.4795	1.2968	0.7054	4.617	1.867			
	14		52 12	20 48	234	1.4804	1.2974	0.6956	4.626	1.872			
	15		52 17	16 54	234	1.4813	1.2980	0.6855	4.636	1.874			
	16	3.72	52 22	13 0	234	1.4822	1.2986	0.6750	4.646	1.877			
	17		52 28	9 6	234	1.4830	1.2993	0.6641	4.655	1.880			
	18		52 33	5 12	234	1.4839	1.2999	0.6528	4.665	1.883			
	19		52 38	14 1 18	234	1.4848	1.3004	0.6410	4.675	1.886			
	20		52 43	13 57 24	234	1.4857	1.3010	0.6288	4.685	1.888			
	21	4.05	52 48	53 30	228	1.4866	1.3015	0.6160	4.695	1.891			
	22		52 53	49 42	234	1.4875	1.3021	0.6028	4.705	1.894			
	23		52 58	45 48	234	1.4885	1.3026	0.5889	4.715	1.896			
	24		53 2	41 54	228	1.4894	1.3032	0.5744	4.725	1.899			
	25		53 6	38 6	228	1.4903	1.3037	0.5594	4.735	1.902			
	26	4.38	53 10	34 18	228	1.4913	1.3042	0.5436	4.746	1.905			
	27		53 14	30 30	228	1.4922	1.3046	0.5270	4.756	1.907			
	28		53 18	26 42	228	1.4932	1.3051	0.5098	4.767	1.910			
	29		53 21	22 54	228	1.4942	1.3055	0.4916	4.778	1.913			
	30		53 24	19 6	228	1.4952	1.3060	0.4724	4.789	1.916			
Dec.	1	4.71	53 27	15 18	228	1.4962	1.3063	0.4523	4.800	1.918			
	2		53 30	11 30	228	1.4971	1.3068	0.4310	4.810	1.921			
	3		53 32	7 42	228	1.4981	1.3071	0.4084	4.821	1.924			
	4		53 34	3 54	228	1.4991	1.3075	0.3845	4.832	1.927			
	5		53 36	13 0 6	228	1.5001	1.3078	0.3590	4.843	1.929			
	6	5.04	53 38	12 56 18	222	1.5011	1.3082	0.3318	4.854	1.932			
	7		53 39	52 36	228	1.5022	1.3084	0.3026	4.866	1.935			
	8		53 40	48 48	222	1.5032	1.3087	0.2712	4.877	1.938			
	9		53 41	45 6	228.	1.5043	1.3090	0.2371	4.889	1.940			
	10		53 42	41 18	228	1.5053	1.3093	0.2000	4.900	1.943			
	11	5.36	53 42	37 30	222	1.5063	1.3096	0.1593	4.912	1.946			
	12		53 42	33 48	222	1.5073	1.3097	0.1141	4.923	1.948			
	13		53 42	30 6	228	1.5082	1.3099	0.0636	4.934	1.951			
	14		53 41	26 18	228	1.5092	1.3101	0.0062	4.945	1.954			
	15		53 40	22 30	222	1.5101	1.3102	9.9399	4.956	1.957			
	16	5.69	53 40	18 48	222	1.5111	1.3103	9.8615	4.967	1.959			
	17		53 38	15 6	228	1.5120	1.3104	9.7655	4.978	1.962			
	18		53 36	11 18	222	1.5130	1.3105	9.6418	4.990	1.965			
	19		53 34	7 36	222	1.5140	1.3105	9.4682	5.001	1.968			
	20		53 32	3 54	228	1.5150	1.3106	9.1726 *n*	5.012	1.970			
	21	6.02	53 30	12 0 6	222	1.5160	1.3106	7.6544 *p*	5.023	1.973			
	22		53 27	11 56 24	222	1.5170	1.3105	9.1466	5.035	1.976			
	23		53 24	52 42	228	1.5180	1.3105	9.4547	5.047	1.979			
	24		53 21	48 54	228	1.5190	1.3105	9.6329	5.059	1.981			
	25		53 18	45 6	222	1.5200	1.3104	9.7588	5.071	1.984			
	26	6.35	53 14	41 24	222	1.5210	1.3103	9.8563	5.082	1.987			
	27		53 10	37 42	228	1.5220	1.3102	9.9357	5.094	1.990			
	28		53 5	33 54	228	1.5230	1.3100	0.0027	5.105	1.992			
	29		53 0	30 6	222	1.5239	1.3099	0.0606	5.116	1.995			
	30		52 55	26 24	222	1.5249	1.3097	0.1115	5.127	1.998			
	31	6.68	11 52 50	11 22 42		1.5258	1.3095	0.1570 *p*	— 5.138	— 2.000			

METEOROLOGICAL OBSERVATIONS

MADE AT THE

UNITED STATES NAVAL OBSERVATORY

DURING

THE YEAR 1871.

INTRODUCTION.

The meteorological department, during 1871, was under the charge of Professor J. R. Eastman, U. S. N., who made a daily examination of all the records and a weekly inspection of all the instruments in use. The observations were made at 0^h, 3^h, 6^h, 9^h, 12^h, 15^h, 18^h, and 21^h, Washington civil time, by the Observatory watchmen, Messrs. T. Hays, D. Horrigan, and N. Cahill, who have acquired such a degree of skill as insures a reasonable accuracy in their work.

METEOROLOGICAL INSTRUMENTS.

Standard Barometer.—This barometer was made by James Green, of New York, and is only used as a standard, by which the Newman barometer is occasionally tested. Drawings and a description of this instrument will be found in the volume of Washington Observations for 1862.

Newman Barometer.—The barometer in daily use was made by Newman, and is mounted against the northern wall of the northwest room on the first floor of the Observatory.

The barometer is mounted with the usual adjustments at the top and bottom, and is attached by heavy brackets to a substantial mahogany board, which is firmly secured to the wall.

The cistern is 103 feet above the mean half-tide of the Potomac River. The cistern and tube are of glass; the internal diameter of the former being 3.0 inches and of the latter 0.532 inch.

The scale is attached to a brass rod having the usual adjustment to the surface of the mercury in the cistern. It is silvered and divided to 0.05 inch, but by means of a vernier may be read to 0.002 inch. The temperature of the mercury in the cistern is determined by a small ivory-scale thermometer, the bulb of which is constantly immersed in the mercury. The constant correction of + 0.005 inch, determined in 1864, has been applied to all the observations in 1871, and they have also received a further correction for temperature.

Dry-bulb Thermometer.—This is a mercurial thermometer, by Green, with a bulb 1.5 inches long and 0.2 inch in diameter. The scale is of glass, 12 inches long, 0.8 inch wide, and 0.1 inch thick. It is divided to half-degrees, from $-30°$ to $+125°$ F.

Several independent tests in the spring of 1868 indicated that the *freezing-point* had changed its position on the scale since 1863.

During the year, the dry-bulb, the maximum, and the minimum thermometers were compared with the Kew Standard Thermometer No. 462, belonging to Professor

Eastman. No appreciable errors were detected in the maximum and minimum thermometers. A correction of −0°.9 was deduced for the dry-bulb thermometer, and each observation in 1871 has been corrected by this quantity.

Wet-bulb Thermometer.—This instrument is similar to the preceding in materials, construction, and dimensions. The scale extends from −35° to + 115° F. Its bulb is covered with soft fine linen, kept moist by the capillary action of a bundle of fine linen fibers that communicate with water in a bird-glass placed close beside it. The linen is changed occasionally, before its free action is impaired by dust.

Maximum Thermometer.—This is a mercurial thermometer, with a bulb 1.5 inches long and 0.2 inch in diameter. The scale is of glass, 12 inches long, 0.8 inch wide, 0.1 inch thick, and is graduated to half-degrees from −50° to + 120° F.

At a point a short distance above the bulb the internal diameter of the tube is so reduced that, while with the increase of temperature the mercury passes freely, with the least decrease of temperature the column is broken at the point of contraction, if the instrument is nearly horizontal, and the top of the column marks the highest temperature.

The top of the scale is attached by a metallic clamp to a pivot, around which the thermometer revolves freely in a vertical plane. This pivot is secured to a walnut board, fixed to a post, about three feet from the ground, and the thermometer is placed nearly horizontal by resting the scale near the bulb on a wooden pin in the board. After each observation the instrument is adjusted by removing the pin and allowing the thermometer to swing freely from the pivot at the top of the scale, which motion is generally sufficient to reunite the column of mercury.

Minimum Thermometer.—This is a transparent spirit-thermometer, with a round bulb about 0.5 inch in diameter.

The scale is of silvered brass, 12 inches long, 1.0 inch wide, 0.06 inch thick, and is graduated to degrees from − 67° to + 131° F.

Its registering index is a short, fine, steel wire, inclosed in a delicate blue-glass cylinder, with a small knob at the extremity farthest from the bulb of the thermometer. This cylinder is drawn toward the bulb by the decrease of temperature, but when the temperature increases the spirit flows through and around the cylinder, which remains at rest at the lowest point reached by the column of spirit.

After each observation the index is adjusted by means of a small magnet.

Solar Thermometer.—On the 1st of March the outer glass case of the solar thermometer, used in 1870, was accidentally broken. Not having a duplicate, its place was not supplied until June 3. On that day a thermometer by L. Casella, No. 13582, was received and mounted in the position occupied by the one in use in 1870. This thermometer consisted of a blackened spherical bulb and its tube, inclosed within a bulb and cylinder of glass of the same form as the thermometer but of about three times the diameter. The air has been exhausted from the inclosing bulb and cylinder, and the thermometer is confined in the center of the cylinder by having its upper end sealed to the end of the cylinder, while the lower end is fixed in a cork collar just above the junction of the bulb and cylinder. The scale is engraved on the thermometer-tube, and has a range from −10° to +215° F.

At about 20° from the top of the column of mercury a small portion of air (covering about 0°.5 on the scale) is introduced into the column, so that whenever the temperarure decreases the portion of the column of mercury above the air remains in position, indicating the highest temperature subsequent to the last observation. After each reading the instrument is adjusted by holding it in a vertical position, tapping it gently, if necessary, until the broken portion forces the air down to the main column.

No. 13583, an exactly similar instrument, was substituted for 13582 on July 18, at 10^{h} a. m.

This thermometer rests in a horizontal position, in metallic crutches, about three inches high, which are attached to an inch board 16 inches long and 5 inches wide. The board is painted green, and placed on the grass about three yards west of the meteorological observatory.

METEOROLOGICAL OBSERVATORY.

In 1862 a small building for the special protection of thermometers was erected about four yards southwest of the southwest corner of the south wing of the Observatory. It is constructed of wood and is painted white throughout. Its form is octagonal, each side being 2.4 feet wide and 6.3 feet high to the eaves. The roof is of tin, unpainted on the under side. The ceiling is of thick boards tightly fitted together, and between it and the roof there is an open space freely communicating with the open air.

The door is on the north side, and it, as well as the sides, is of double louverwork, with a space of three inches between the two divisions. The sides terminate one foot from the ground, and, as the building is situated on a grass-plat, under ordinary circumstances the instruments should indicate correct temperature. The increasing density of the shade-trees and shrubbery in the Observatory grounds, and especially about this building, will soon render some new arrangement necessary.

The dry, wet-bulb, maximum, and minimum thermometers are in the meteorological observatory, and are all supported by means of arms and brackets to an upright metallic shaft, which is firmly secured to the ground in the center of the building.

The bulb of the minimum thermometer is 5.8 feet above the ground, those of the dry and wet-bulb thermometers are 4.2 feet, and that of the maximum is 3.2 feet above the ground.

A standard thermometer (Troughton and Simms, No. 1) is suspended between the dry and wet-bulb thermometers, and is frequently red as a check on the others.

A wooden frame is attached to the sides of the building, from which the self-registering thermometers, which are issued to naval vessels with chronometers, are suspended for convenience in determining their errors by comparison with the standard.

From frequent comparisons it has been ascertained that the errors of the maximum, minimum, and wet-bulb thermometers are not appreciable, and the published observations are therefore the unmodified copies of the original records.

The maximum and minimum thermometers were read at 6^{h} p. m. on each day.

DIRECTION AND FORCE OF THE WIND.

An ordinary wind-vane revolves freely on a spindle at the top of the time-ball staff, and the direction of the wind is estimated from the known azimuths of the lines of the building.

The velocity of the wind is recorded in numerals, of which 0 denotes a calm, 1 a very slight wind, and so on up to 10, which would indicate a violent hurricane. These recorded numbers are mere estimates, and, at best, are only approximative.

CLOUDS.

In the description of the prevailing forms of clouds the nomenclature of Howard is used; C., K., S., N., being the symbols for the forms designated *Cirrus*, *Cumulus*, *Stratus*, *Nimbus*; and the letters C. S., C. K., &c., indicate their combinations, *Cirro-Stratus*, *Cirro-Cumulus*, &c. The portion of the sky obscured is determined after careful scrutiny of the clouds or sky. A clear sky is denoted by 0, and a total obscuration by 10.

RAIN-GAUGE.

This instrument is placed within the inclosure for the protection of the solar thermometer. It consists of a cylinder 0.8 inch long and 4.1 inches in diameter, soldered to an inverted cone, which is loaded with lead on the outside and near the apex. The cone rests in an aperture in the horizontal top of an oblong box, and this, aided by the weight of the lead, prevents disturbance during high winds. The top of the gauge is 2.0 feet above the ground, and is free from all shelter, even in driving rainstorms.

At the apex of the cone is a small aperture, through which the water passes to a receiving-bottle in the box.

The rain is measured in a glass cylinder with an internal diameter of 0.60 inch, so graduated that the depth of rain can be determined to 0.002 inch. The gauge is examined every day, and as the apex of the cone closes the mouth of the bottle, except through the small aperture, there is little or no loss by evaporation.

Each inch of snow is assumed to be equal to 0.111 inch of rain; but whenever practicable, the snow has been melted and measured in the graduated cylinder.

ean Time.	0^{h}.	3^{h}.	6^{h}.	9^{h}.	Noon.	3^{h}.	6^{h}.	9^{h}.
1871.	in.	in.	in.	in.	in.	in.	in.	in.
nuary 1	29.956	30.025	30.096	30.166	30.155	30.144	30.154	30.129
2	30.068	30.006	29.918	29.888	29.846	29.866	29.898	29.964
3	30.111	30.194	30.220	30.255	30.172	30.110	30.072	30.074
4	30.111	30.175	30.247	30.334	30.283	30.247	30.209	30.195
5	30.096	30.044	29.982	29.973	29.902	29.806	29.823	29.791
6	29.755	29.717	29.713	29.784	29.780	29.791	29.873	29.963
7	30.007	30.048	30.101	30.203	30.161	30.131	30.170	30.164
8	30.141	30.116	30.052	29.985	29.813	29.734	29.796	29.900
9	30.002	30.103	30.187	30.304	30.301	30.310	30.358	30.382
10	30.348	30.363	30.371	30.377	30.291	30.208	30.174	30.173
11	30.143	30.127	30.145	30.144	30.118	30.111	30.146	30.195
12	30.197	30.215	30.258	30.358	30.334	30.328	30.376	30.396
13	30.398	30.414	30.443	30.506	30.461	30.432	30.444	30.447
14	30.439	30.415	30.419	30.431	30.355	30.394	30.268	30.246
15	30.196	30.148	30.101	30.064	29.954	29.850	29.826	29.793
16	29.753	29.811	29.864	29.926	29.908	29.921	29.986	30.040
17	30.056	30.074	30.128	30.175	30.160	30.150	30.182	30.210
18	30.197	30.215	30.242	30.296	30.297	30.302	30.371	30.418
19	30.472	30.489	30.527	30.584	30.562	30.516	30.554	30.567
20	30.524	30.502	30.470	30.442	30.383	30.289	30.257	30.207
21	30.131	30.092	30.041	30.032	29.907	29.753	29.636	29.618
22	29.657	29.746	29.802	29.868	29.879	29.895	29.992	30.046
23	30.088	30.125	30.127	30.153	30.068	29.969	30.017	30.032
24	30.056	30.093	30.135	30.198	30.180	30.170	30.260	30.289
25	30.366	30.405	30.457	30.516	30.487	30.477	30.518	30.539
26	30.502	30.475	30.415	30.399	30.273	30.138	30.080	29.990
27	29.962	29.990	29.995	30.089	30.062	30.028	30.070	30.126
28	30.147	30.185	30.203	30.183	30.092	30.081	30.060	30.008
29	29.878	29.878	29.886	30.051	30.043	30.040	30.077	30.112
30	30.124	30.148	30.162	30.217	30.203	30.176	30.175	30.159
31	30.101	30.061	30.032	30.023	29.944	29.847	29.765	29.732
Hourly means.	30.129	30.142	30.153	30.191	30.141	30.104	30.116	30.126

Mean Time.	0^{h}.	3^{h}.	6^{h}.	9^{h}.	Noon.	3^{h}.	6^{h}.	9^{h}.
1871.	in.	in.	in.	in.	in.	in.	in.	in.
February 1	29.709	29.783	29.841	29.959	29.979	30.019	30.035	30.070
2	30.077	30.034	30.027	30.007	29.944	29.833	29.858	29.933
3	30.014	30.018	30.023	29.984	29.853	29.730	29.670	29.715
4	29.744	29.768	29.798	29.846	29.813	. .	29.841	29.861
5	29.912	29.967	30.020	30.107	30.115	30.084	30.123	30.130
6	30.116	30.098	30.086	30.092	30.108	30.081	30.148	30.190
7	30.231	30.233	30.254	30.311	30.271	30.207	30.204	30.184
8	30.124	30.112	30.098	30.077	30.034	29.972	29.960	29.971
9	29.898	29.875	29.852	29.846	29.820	29.823	29.917	30.039
10	30.097	30.141	30.193	30.234	30.208	30.202	30.282	30.318
11	30.355	30.392	30.404	30.471	30.424	30.354	30.339	30.300
12	30.162	30.079	30.009	29.828	29.724	29.636	29.677	29.757
13	29.808	29.896	30.010	30.090	30.105	30.077	30.111	30.112
14	30.083	29.963	29.913	29.886	29.883	29.907	29.999	30.063
15	30.092	30.141	30.196	30.290	30.226	30.124	30.092	30.045
16	29.936	29.885	29.862	29.844	29.836	29.892	29.996	30.066
17	30.104	30.131	30.163	30.170	30.145	30.073	30.000	29.906
18	29.740	29.525	29.342	29.312	29.275	29.337	29.571	29.711
19	29.814	29.891	29.949	29.954	29.867	29.821	29.884	29.940
20	29.954	29.974	29.995	30.032	30.005	29.949	29.935	29.924
21	29.883	29.848	29.907	29.965	30.026	30.054	30.133	30.213
22	30.263	30.320	30.376	30.468	30.450	30.413	30.448	30.470
23	30.488	30.477	30.468	30.487	30.456	30.394	30.396	30.370
24	30.331	30.292	30.243	30.214	30.099	29.960	29.889	29.886
25	29.854	29.858	29.880	29.915	29.847	29.803	29.818	29.828
26	29.776	29.744	29.726	29.683	29.625	29.570	29.521	29.435
27	29.406	29.389	29.460	29.576	29.610	29.656	29.786	29.891
28	29.980	30.063	30.116	30.258	30.249	30.184	30.147	30.115
Hourly means.	29.998	29.996	30.007	30.032	30.000	29.969	29.992	30.016

Mean Time.	0^{h}.	3^{h}.	6^{h}.	9^{h}.	Noon.	3^{h}.	6^{h}.	9^{h}.
1871.	in.	in.	in.	in.	in.	in.	in.	in.
March 1	30.026	29.944	29.924	29.926	29.858	29.846	29.916	30.027
2	30.048	30.059	30.055	30.104	30.034	29.961	29.934	29.925
3	29.886	29.825	29.792	29.735	29.623	29.566	29.686	29.805
4	29.870	29.864	29.853	29.845	29.809	29.775	29.872	29.976
5	30.016	30.058	30.128	30.174	30.159	30.104	30.066	30.053
6	29.993	29.872	29.782	29.863	29.905	29.998	30.094	30.147
7	30.172	30.181	30.197	30.234	30.197	30.113	30.095	30.091
8	30.078	30.074	30.065	30.079	30.046	29.991	29.974	29.985
9	29.944	29.944	29.940	29.947	29.878	29.790	29.782	29.865
10	29.809	29.818	29.954	30.031	30.075	30.071	30.124	30.170
11	30.182	30.173	30.176	30.178	30.079	29.971	29.922	29.894
12	29.824	29.704	29.623	29.490	29.426	29.518	29.717	29.800
13	29.856	29.852	29.894	29.952	29.933	29.866	29.866	29.910
14	29.960	29.991	30.074	30.150	30.157	30.094	30.086	30.086
15	30.056	30.032	30.050	30.035	29.987	29.901	29.921	29.952
16	29.983	30.002	30.034	30.058	30.020	29.942	29.938	29.931
17	29.894	29.867	29.827	29.829	29.788	29.698	29.796	29.842
18	29.861	29.880	29.932	29.994	29.990	29.974	30.002	30.041
19	30.066	30.060	30.093	30.126	30.110	30.072	30.102	30.124
20	30.130	30.124	30.122	30.152	30.100	29.989	29.954	29.871
21	29.790	29.681	29.656	29.664	29.635	29.610	29.648	29.652
22	29.664	29.684	29.724	29.766	29.746	29.686	29.690	29.695
23	29.654	29.638	29.701	29.647	29.564	29.501	29.525	29.691
24	29.798	29.838	29.939	30.049	30.044	30.024	30.066	30.144
25	30.151	30.156	30.236	30.249	30.213	30.145	30.121	30.148
26	30.106	30.075	30.045	30.041	29.973	29.836	29.729	29.573
27	29.460	29.402	29.434	29.474	29.563	29.601	29.672	29.752
28	29.786	29.830	29.848	29.896	29.934	29.954	30.030	30.106
29	30.175	30.173	30.201	30.256	30.210	30.153	30.132	30.115
30	30.119	30.080	30.033	29.989	29.893	29.714	29.796	29.800
31	29.789	29.821	29.837	29.915	29.898	29.850	29.899	29.894
Hourly means.	29.940	29.926	29.941	29.963	29.931	29.881	29.908	29.938

Mean Time.	0 .	3^{h}.	6^{h}.	9^{h}.	Noon.	3^{h}.	6^{h}.	9^{h}.
1871.	in.	in.	in.	in.	in.	in.	in.	in.
April 1	29.871	29.851	29.831	29.799	29.692	29.593	29.562	29.528
2	29.477	29.495	29.553	29.600	29.634	29.587	29.623	29.686
3	29.674	29.598	29.586	29.546	29.509	29.472	29.490	29.523
4	29.583	29.624	29.746	29.829	29.842	29.796	29.760	29.785
5	29.764	29.771	29.784	29.836	29.849	29.826	29.854	29.918
6	29.959	29.977	29.969	30.017	30.002	29.946	29.922	29.958
7	29.970	29.954	29.938	29.946	29.899	29.853	29.840	29.881
8	29.878	29.867	29.908	29.970	29.931	29.874	29.872	29.888
9	29.879	29.897	29.945	29.966	29.939	29.918	29.901	29.927
10	29.918	29.907	29.934	29.939	29.878	29.778	29.730	29.702
11	29.645	29.593	29.582	29.543	29.491	29.363	29.343	29.380
12	29.384	29.604	29.696	29.710	29.689	29.688	29.724	29.787
13	29.780	29.775	29.764	29.722	29.651	29.571	29.574	29.612
14	29.635	29.643	29.638	29.625	29.589	29.516	29.540	29.597
15	29.617	29.638	29.693	29.721	29.712	29.692	29.701	29.748
16	29.768	29.760	29.829	29.879	29.868	29.836	29.839	29.899
17	29.938	29.964	30.016	30.044	29.999	29.962	29.983	30.014
18	30.025	30.032	30.052	30.053	30.011	29.956	29.935	29.962
19	29.952	29.935	29.927	29.889	29.876	29.783	29.728	29.724
20	29.701	29.677	29.675	29.640	29.605	29.550	29.539	29.616
21	29.654	29.646	29.658	29.678	29.595	29.553	29.599	29.678
22	29.709	29.745	29.795	29.808	29.793	29.820	29.864	29.953
23	30.000	30.073	30.157	30.249	30.255	30.247	30.271	30.335
24	30.342	30.358	30.405	30.413	30.361	30.280	30.225	30.234
25	30.201	30.139	30.137	30.112	30.006	29.916	29.904	29.962
26	29.950	29.953	29.982	30.018	30.031	29.981	29.983	30.025
27	30.003	29.979	29.961	29.952	29.901	29.802	29.778	29.663
28	29.740	29.709	29.731	29.734	29.708	29.620	29.665	29.748
29	29.736	29.734	29.734	29.714	29.670	29.639	29.665	29.718
30	29.726	29.786	29.680	29.673	29.644	29.690	29.599	29.641
Hourly means.	29.816	29.823	29.844	29.854	29.821	29.770	29.767	29.803

Mean Time.	0^{h}.	3^{h}.	6^{h}.	9^{h}.	Noon.	3^{h}.	6^{h}.	9^{h}.
1871.	in.	in.	in.	in.	in.	in.	in.	in.
May 1	29.643	29.654	29.700	29.767	29.762	29.735	29.765	29.830
2	29.848	29.882	29.908	29.964	29.940	29.883	29.890	29.938
3	29.928	29.914	29.904	29.903	29.857	29.838	29.802	29.816
4	29.778	29.745	29.756	29.711	29.722	29.700	29.670	29.657
5	29.623	29.623	29.631	29.633	29.634	29.591	29.594	29.630
6	29.502	29.588	29.572	29.541	29.511	29.494	29.493	29.532
7	29.573	29.616	29.674	29.732	29.732	29.685	29.688	29.743
8	29.753	29.764	29.804	29.841	29.834	29.784	29.800	29.879
9	29.825	29.868	29.954	29.965	29.946	29.919	29.899	29.921
10	29.941	29.915	29.944	29.964	29.954	29.896	29.888	29.930
11	29.973	30.004	30.040	30.062	30.025	29.967	29.954	29.979
12	29.952	29.935	29.945	29.929	29.896	29.838	29.809	29.768
13	29.752	29.701	29.710	29.725	29.685	29.676	29.680	29.760
14	29.904	29.926	29.967	29.976	29.954	29.906	29.882	29.933
15	29.930	29.929	29.951	29.942	29.884	29.797	29.766	29.803
16	29.804	29.811	29.830	29.852	29.804	29.732	29.683	29.674
17	29.700	29.696	29.724	29.785	29.819	29.771	29.777	29.855
18	29.912	29.989	30.075	30.132	30.117	30.088	30.077	30.114
19	30.114	30.102	30.124	30.165	30.151	30.089	30.064	30.080
20	30.071	30.067	30.099	30.094	30.082	30.033	30.022	30.008
21	30.006	29.982	29.980	29.947	29.905	29.838	29.817	29.823
22	29.812	29.891	29.790	29.785	29.761	29.728	29.716	29.756
23	29.787	29.838	29.888	29.925	29.930	29.913	29.936	30.010
24	30.070	30.112	30.167	30.217	30.209	30.177	30.164	30.208
25	30.227	30.213	30.221	30.227	30.174	30.113	30.077	30.080
26	30.069	30.059	30.068	30.068	30.034	30.005	29.969	30.008
27	30.000	30.000	30.028	30.045	30.018	29.982	29.987	30.008
28	30.014	30.011	30.037	30.054	30.034	30.006	29.996	30.022
29	30.022	30.023	30.047	30.063	30.034	29.977	29.959	29.980
30	29.990	30.026	30.030	30.015	29 986	29.931	29.920	29.948
31	29.925	29.918	29.900	29.899	29.870	29.806	29.851	29.868
Hourly means.	29.885	29.897	29.918	29.933	29.912	29.868	29.858	29.889

Mean Time.	0^{h}.	3^{h}.	6^{h}.	9^{h}.	Noon.	3^{h}.	6 .	9^{h}.
1871.	in.	in.	in.	in.	in.	in.	in.	in.
June 1	29.923	29.955	29.948	30.001	29.996	29.986	29.990	30.046
2	30.050	30.060	30.070	30.084	30.069	30.034	30.009	30.013
3	30.015	30.017	30.036	30.042	29.998	29.932	29.917	29.934
4	29.922	29.902	29.894	29.879	29.836	29.778	29.756	29.796
5	29.790	29.822	29.833	29.831	29.824	29.806	29.786	29.824
6	29.831	29.837	29.858	29.883	29.872	29.836	29.794	29.787
7	29.788	29.762	29.733	29.704	29.680	29.632	29.669	29.728
8	29.756	29.763	29.808	29.861	29.839	29.826	29.822	29.859
9	29.880	29.888	29.940	29.995	29.997	29.972	29.972	30.025
10	30.041	30.082	30.094	30.090	30.040	29.969	29.900	29.885
11	29.857	29.810	29.800	29.763	29.743	29.655	29.621	29.630
12	29.557	29.483	29.504	29.555	29.577	29.578	29.607	29.670
13	29.699	29.694	29.704	29.703	29.638	29.577	29.611	29.665
14	29.715	29.812	29.864	29.889	29.863	29.831	29.827	29.858
15	29.832	29.812	29.833	29.844	29.846	29.833	29.866	29.824
16	29.946	29.981	29.997	30.012	30.001	29.956	29.941	29.969
17	29.990	29.979	30.000	30.012	29.990	29.938	29.900	29.876
18	29.827	29.758	29.730	29.702	29.678	29.650	29.664	29.745
19	29.764	29.788	29.803	29.844	29.838	29.822	29.828	29.874
20	29.879	29.876	29.879	29.876	29.856	29.773	29.729	29.781
21	29.816	29.873	29.942	30.009	30.003	29.986	29.978	30.003
22	30.014	30.028	30.042	30.043	29.996	29.941	29.911	29.924
23	29.939	29.900	29.910	29.906	29.883	29.849	29.817	29.829
24	29.815	29.780	29.797	29.771	29.747	29.729	29.740	29.743
25	29.775	29.845	29.951	30.029	30.070	30.060	30.070	30.095
26	30.081	30.055	30.062	30.034	30.008	29.943	29.927	29.940
27	29.917	29.874	29.852	29.858	29.794	29.737	29.693	29.710
28	29.679	29.640	29.641	29.629	29.590	29.555	29.562	29.624
29	29.619	29.671	29.727	29.744	29.760	29.751	29.789	29.864
30	29.911	29.919	30.001	30.058	30.048	30.006	29.988	30.022
Hourly means.	29.854	29.855	29.875	29.888	29.869	29.831	29.823	29.851

Mean Time.	0^h.	3^h.	6^h.	9^h.	Noon.	3^h.	6^h.	9^h.
1871.	in.	in.	in.	in.	in.	in.	in.	in.
July 1	30.011	30.001	30.043	30.075	30.089	30.056	30.060	30.078
2	30.084	30.062	30.062	30.066	30.030	30.005	29.961	29.973
3	29.954	29.936	29.919	29.938	29.914	29.843	29.885	29.868
4	29.856	29.846	29.844	29.840	29.891	29.732	29.763	29.796
5	29.807	29.823	29.892	29.924	29.933	29.920	29.907	29.924
6	29.914	29.924	29.941	29.902	29.867	29.772	29.762	29.790
7	29.750	29.748	29.778	29.813	29.816	29.792	29.794	29.852
8	29.893	29.938	29.990	30.030	30.020	29.983	29.942	29.970
9	29.935	29.920	29.933	29.923	29.917	29.819	29.765	29.835
10	29.835	29.832	29.836	29.848	29.837	29.776	29.748	29.777
11	29.747	29.725	29.742	29.759	29.733	29.674	29.687	29.702
12	29.729	29.742	29.779	29.834	29.877	29.856	29.865	29.914
13	29.912	29.916	29.923	29.961	29.949	29.905	29.882	29.873
14	29.860	29.846	29.831	29.837	29.817	29.779	29.764	29.787
15	29.885	29.767	29.764	29.766	29.749	29.706	29.701	29.758
16	29.750	29.735	29.741	29.769	29.731	29.656	29.609	29.627
17	29.587	29.583	29.604	29.635	29.645	29.667	29.704	29.752
18	29.812	29.891	29.830	29.846	29.808	29.756	29.669	29.678
19	29.640	29.588	29.588	29.604	29.618	29.576	29.565	29.605
20	29.666	29.708	29.775	29.839	29.856	29.861	29.900	29.944
21	29.938	29.934	29.942	29.939	29.889	29.857	29.909	29.939
22	29.923	29.923	29.945	29.997	29.996	29.981	29.990	30.036
23	30.059	30.075	30.114	30.123	30.107	30.090	30.090	30.112
24	30.110	30.105	30.112	30.111	30.087	30.059	30.045	30.072
25	30.067	30.052	30.054	30.063	30.040	. .	29.942	29.899
26	29.877	29.855	29.905	29.902	29.901	29.868	29.870	30.004
27	29.908	29.931	29.957	29.954	29.938	29.879	29.859	29.922
28	29.930	29.897	29.928	29.938	29.950	29.927	29.938	29.969
29	29.957	29.948	29.969	29.997	29.986	29.938	29.934	29.877
30	29.960	29.968	29.976	29.988	29.956	29.932	29.914	29.928
31	29.910	29.872	29.882	29.868	29.857	29.825	29.822	29.845
Hourly means.	29.880	29.874	29.890	29.906	29.897	29.850	29.879	29.874

Mean Time.	0^h.	3^h.	6^h.	9^h.	Noon.	3^h.	6^h.	9^h.
1871.	in.	in.	in.	in.	in.	in.	in.	in.
August 1	29.865	29.836	29.861	29.894	29.880	29.835	29.855	29.918
2	29.938	29.946	29.966	30.007	29.995	29.971	29.972	30.010
3	30.026	30.016	30.010	30.035	29.992	29.929	29.899	29.906
4	29.882	29.849	29.837	29.834	29.799	29.730	29.724	29.748
5	29.695	29.655	29.667	29.684	29.709	29.690	29.683	29.751
6	29.766	29.902	29.865	29.924	29.931	29.924	29.919	29.962
7	29.972	29.968	29.989	29.995	29.967	29.911	29.895	29.908
8	29.856	29.859	29.863	29.845	29.814	29.777	29.747	29.764
9	29.768	29.778	29.835	29.863	29.850	29.822	29.834	29.912
10	29.910	29.910	29.933	29.989	29.962	29.899	29.905	29.925
11	29.923	29.903	29.890	29.917	29.896	29.749	29.822	29.865
12	29.881	29.868	29.887	29.920	29.917	29.873	29.872	29.916
13	29.937	29.938	29.950	29.966	29.946	29.905	29.909	29.937
14	29.963	29.982	29.998	30.010	29.978	29.941	29.924	29.968
15	29.963	29.958	29.959	29.967	29.955	29.905	29.890	29.902
16	29.906	29.864	29.882	29.867	29.847	29.794	29.761	29.784
17	29.793	29.812	29.841	29.892	29.914	29.905	29.939	29.957
18	29.937	29.903	29.925	29.930	29.888	29.827	29.697	29.844
19	29.867	29.872	29.898	29.919	29.925	29.900	29.914	29.948
20	29.956	29.962	29.994	30.003	29.948	29.983	29.847	29.883
21	29.860	29.828	29.840	29.860	29.832	29.828	29.862	29.930
22	29.974	30.012	30.070	30.110	30.124	30.111	30.146	30.194
23	30.198	30.198	30.201	30.209	30.188	30.135	30.122	30.135
24	30.136	30.119	30.122	30.117	30.078	30.016	30.003	30.034
25	30.022	30.012	30.028	30.024	29.997	29.942	29.915	29.940
26	29.940	29.948	29.956	29.987	29.956	29.926	29.917	29.928
27	29.905	29.889	29.881	29.855	29.792	29.753	29.764	29.815
28	29.841	29.845	29.891	29.939	29.930	29.896	29.864	29.892
29	29.855	29.839	29.825	29.833	29.771	29.728	29.720	29.737
30	29.798	29.622	29.613	29.620	29.569	29.515	29.569	29.691
31	29.759	29.792	29.876	29.950	29.958	29.959	29.961	30.014
Hourly means.	29.906	29.900	29.915	29.934	29.913	29.873	29.866	29.907

Mean Time.	0^{h}.	3^{h}.	6^{h}.	9^{h}.	Noon.	3^{h}.	6^{h}.	9^{h}.
1871.	in.	in.	in.	in.	in.	in.	in.	in.
September 1	30.062	30.102	30.131	30.156	30.150	30.125	30.133	30.148
2	30.161	30.188	30.197	30.228	30.209	30.160	30.133	30.158
3	30.181	30.166	30.185	30.184	30.158	30.100	30.099	30.121
4	30.108	30.086	30.099	30.114	30.067	30.014	29.992	30.011
5	30.021	30.015	30.044	30.038	30.022	29.960	29.942	29.949
6	29.940	29.943	29.949	29.935	29.883	29.822	29.808	29.807
7	29.790	29.758	29.771	29.815	29.837	29.852	29.916	30.018
8	30.080	30.124	30.181	30.240	30.236	30.198	30.244	30.273
9	30.297	30.283	30.298	30.306	30.257	30.199	30.179	30.181
10	30.165	30.143	30.141	30.152	30.108	30.048	30.044	30.079
11	30.086	30.115	30.190	30.243	30.241	30.229	30.243	30.265
12	30.263	30.273	30.297	30.322	30.283	30.247	30.235	30.244
13	30.218	30.182	30.166	30.140	30.085	30.024	30.021	30.063
14	30.086	30.118	30.149	30.195	30.201	30.170	30.180	30.182
15	30.174	30.110	30.097	30.046	29.983	29.921	29.905	29.899
16	29.866	29.846	29.853	29.896	29.885	29.852	29.891	29.940
17	29.948	29.971	29.989	29.999	30.000	29.984	30.011	30.064
18	30.108	30.111	30.191	30.207	30.165	30.112	30.066	30.054
19	29.996	29.972	29.948	29.900	29.850	29.779	29.759	29.752
20	29.742	29.738	29.772	29.846	29.887	29.896	29.936	30.019
21	30.095	30.127	30.178	30.228	30.209	30.192	30.202	30.236
22	30.245	30.245	30.263	30.305	30.252	30.173	30.159	30.148
23	30.120	30.088	30.053	30.034	29.936	29.869	29.828	29.818
24	29.851	29.839	29.843	29.866	29.849	29.788	29.788	29.824
25	29.845	29.859	29.894	29.953	29.942	29.900	29.888	29.857
26	29.817	29.731	29.671	29.672	29.666	29.668	29.720	29.762
27	29.773	29.762	29.776	29.801	29.770	29.734	29.752	29.783
28	29.790	29.801	29.839	29.885	29.882	29.887	29.962	30.018
29	30.044	30.078	30.119	30.188	30.185	30.165	30.206	30.248
30	30.291	30.299	30.322	30.353	30.297	30.241	30.224	30.245
Hourly means.	30.039	30.036	30.053	30.075	30.050	30.010	30.015	30.039

Mean Time.	0^{h}.	3^{h}.	6^{h}.	9^{h}.	Noon.	3^{h}.	6^{h}.	9^{h}.
1871.	in.	in.	in.	in.	in.	in.	in.	in.
October 1	30.246	30.248	30.276	30.317	30.259	30.194	30.173	30.181
2	30.147	30.121	30.121	30.124	30.049	29.962	29.928	29.932
3	29.867	29.813	29.810	29.824	29.775	29.714	29.736	29.776
4	29.770	29.783	29.790	29.820	29.781	29.765	29.810	29.884
5	29.899	29.922	29.960	29.992	29.956	29.927	29.913	29.909
6	29.851	29.781	29.745	29.733	29.698	29.659	29.670	29.690
7	29.699	29.794	29.872	29.984	29.962	29.968	30.029	30.125
8	30.155	30.227	30.259	30.323	30.337	30.284	30.295	30.328
9	30.326	30.307	30.323	30.338	30.276	30.203	30.166	30.168
10	30.138	30.110	30.074	30.067	29.993	29.926	29.908	29.913
11	29.899	29.895	29.897	29.910	29.845	29.781	29.804	29.820
12	29.804	29.806	29.867	29.962	30.014	30.068	30.146	30.247
13	30.305	30.361	30.421	30.489	30.446	30.397	30.403	30.412
14	30.375	30.362	30.347	30.346	30.301	30.215	30.203	30.203
15	30.148	30.195	30.061	30.034	29.967	29.925	29.961	30.028
16	30.038	30.029	30.062	30.104	30.089	30.040	30.040	30.076
17	30.079	30.055	30.071	30.094	30.002	29.990	29.936	29.946
18	29.945	29.941	29.982	30.026	30.014	30.035	30.099	30.165
19	30.183	30.172	30.197	30.216	30.075	29.959	29.899	29.892
20	29.914	29.944	30.015	30.117	30.154	30.165	30.244	30.317
21	30.372	30.399	30.433	30.458	30.379	30.290	30.265	30.260
22	30.213	30.200	30.198	30.204	30.146	30.067	30.046	30.048
23	30.030	30.011	30.025	30.045	29.980	29.925	29.931	29.925
24	29.919	29.896	29.919	29.954	29.957	29.944	29.989	30.037
25	30.045	30.080	30.106	30.148	30.143	30.134	30.154	30.137
26	30.108	30.098	30.067	30.097	30.017	29.964	29.920	29.872
27	29.824	29.794	29.788	29.813	29.793	29.765	29.768	29.774
28	29.742	29.694	29.736	29.800	29.815	29.836	29.946	30.010
29	30.055	30.095	30.134	30.202	30.195	30.184	30.207	30.275
30	30.287	30.303	30.316	30.372	30.316	30.260	30.275	30.273
31	30.246	30.205	30.205	30.180	30.115	30.045	30.007	29.945
Hourly means.	30.053	30.053	30.067	30.100	30.060	30.019	30.028	30.051

Mean Time.	0^{h}.	3^{h}.	6^{h}.	9^{h}.	Noon.	3^{h}.	6^{h}.	9^{h}.
1871.	in.	in.	in.	in.	in.	in.	in.	in.
November 1	29.870	29.810	29.744	29.696	29.632	29.622	29.765	29.862
2	29.881	29.907	29.941	30.017	29.998	29.961	29.978	30.008
3	30.043	30.057	30.110	30.159	30.116	30.068	30.099	30.101
4	30.068	30.041	30.011	29.982	29.945	29.887	29.883	29.880
5	29.884	29.880	29.894	29.952	29.940	29.899	29.923	29.983
6	30.010	30.042	30.067	30.128	30.089	30.052	30.070	30.080
7	30.059	30.059	30.081	30.105	30.076	30.021	30.004	30.001
8	29.965	29.892	29.857	29.836	29.785	29.753	29.768	29.798
9	29.824	29.832	29.873	29.892	29.894	29.883	29.894	29.858
10	29.802	29.711	29.653	29.609	29.544	29.546	29.618	29.688
11	29.793	29.891	29.994	30.128	30.143	30.203	30.261	30.317
12	30.378	30.391	30.425	30.479	30.457	30.430	30.435	30.442
13	30.408	30.398	30.370	30.359	30.304	30.230	30.189	30.125
14	30.043	29.961	29.844	29.721	29.461	29.250	29.188	29.204
15	29.288	29.346	29.406	29.504	29.543	29.601	29.668	29.690
16	29.706	29.720	29.732	29.788	29.788	29.826	29.872	29.926
17	29.952	29.981	30.042	30.120	30.126	30.158	30.184	30.218
18	30.260	30.270	30.305	30.343	30.320	30.298	30.310	30.315
19	30.315	30.315	30.318	30.347	30.299	30.272	30.262	30.243
20	30.207	30.183	30.162	30.149	30.070	30.016	29.985	29.970
21	29.948	29.950	29.967	29.968	29.902	29.814	29.736	29.700
22	29.664	29.649	29.643	29.677	29.647	29.643	29.686	29.766
23	29.819	29.896	29.970	30.086	30.087	30.081	30.100	30.124
24	30.074	30.014	29.944	29.862	29.770	29.754	29.804	29.818
25	29.894	29.971	30.102	30.205	30.201	30.181	30.222	30.221
26	30.218	30.185	30 134	30.086	29.993	29.874	29.815	29.772
27	29.679	29.648	29.635	29.623	29.699	29.785	29.840	29.902
28	29.941	29.969	29.996	30.018	29.972	29.917	29.887	29.774
29	29.808	29.772	29.790	29.854	29.871	29.937	30.014	30.068
30	30.094	30.092	30.098	30.143	30.102	30.101	30.120	30.151
Hourly means.	29.963	29.961	29.970	29.995	29.959	29.935	29.953	29.967

Mean Time.	0^{h}.	3^{h}.	6^{h}.	9^{h}.	Noon.	3^{h}.	6^{h}.	9^{h}.
1871.	in.	in.	in.	in.	in.	in.	in.	in.
December 1	30.148	30.140	30.151	30.185	30.138	30.113	30.116	30.129
2	30.112	30.116	30.191	30.228	30.250	30.207	30.207	30.220
3	30.157	30.167	30.121	30.144	30.077	30.015	29.961	29.917
4	29.810	29.758	29.682	29.644	29 525	29.501	29.562	29.767
5	29.854	29.954	30.019	30.099	30.072	30.051	30.117	30.159
6	30.162	30.180	30.199	30.202	30.165	30.050	29.967	29.835
7	29.733	29.684	29.694	29.733	29.712	29.678	29.704	29.716
8	29.728	29.748	29.770	29.783	29.738	29.798	29.954	30.018
9	30.016	30.057	30.107	30.191	30.203	30.203	30.255	30.300
10	30.295	30.283	30.247	30.223	30.132	29.991	29.925	29.952
11	29.956	29.964	29.967	29.964	29.845	29.756	29.741	29.782
12	29.820	29.879	29.963	30.057	30.044	30.013	30.016	29.981
13	29.894	29.858	29.774	29.715	29.683	29.709	29.792	29.846
14	29.920	29.959	29.995	30.057	30.038	30.052	30.102	30.117
15	30.147	30.117	30.063	30.073	30.012	29.979	29.958	29.985
16	30.020	30.052	30.091	30.119	30.078	30.022	30.062	30.084
17	30.073	30.089	30.090	30.151	30.126	30.114	30.152	30.174
18	30.152	30.116	30.011	30.012	29.929	29.936	30.085	30.153
19	30.118	30.095	30.076	30.013	29.892	29.731	29.682	29.635
20	29.580	29.571	29.590	29.648	29.684	29.717	29.855	29.961
21	30.021	30.108	30.185	30.359	30.368	30.368	30.389	30.464
22	30.441	30.431	30.433	30.458	30.432	30.384	30.398	30.396
23	30.327	30.301	30.254	30.229	30.118	30.014	29.969	29.934
24	29.957	30.048	30.123	30.225	30.207	30.144	30.130	30.097
25	30.030	30.007	29.988	29.935	29.910	29.846	29.888	29.917
26	29.919	29.935	29.965	30.002	29.960	29.922	29.902	29.863
27	29.732	29.742	29.705	29.802	29.825	29.947	30.089	30.223
28	30.329	30.439	30.467	30.538	30.513	30.462	30.485	30.437
29	30.376	30.307	30.200	30.147	30.087	30.062	30.066	30.100
30	30.108	30.135	30.163	30.219	30.223	30.225	30.250	30.240
31	30.216	30.195	30.182	30.200	30.135	30.022	30.056	30.018
Hourly means.	30.037	30.046	30.047	30.076	30.036	30.001	30.027	30.046

Mean Time.	0^{h}.	3^{h}.	6^{h}.	9^{h}.	Noon.	3^{h}.	6^{h}.	9^{h}.
1871.	°	°	°	°	°	°	°	°
January 1	33.7	31.6	30.1	32.1	38.6	40.8	37.1	29.6
2	27.6	28.1	30.8	35.1	45.4	45.9	44.6	39.1
3	34.6	31.1	25.1	26.6	38.1	38.5	32.5	30.1
4	29.1	27.1	25.1	24.6	31.9	35.6	29.8	29.3
5	30.1	32.6	34.1	37.9	45.5	49.9	49.1	47.6
6	46.6	42.9	43.1	42.7	42.8	44.4	39.1	33.3
7	31.1	29.1	28.1	28.1	33.4	32.1	27.0	22.5
8	24.5	24.1	23.6	25.3	26.6	27.6	28.1	23.6
9	20.1	19.6	18.6	17.6	22.4	22.6	17.1	10.1
10	3.1	2.7	0.6	12.1	21.1	23.1	23.1	24.1
11	25.4	26.1	27.0	29.1	32.3	33.6	32.7	33.1
12	34.1	32.1	27.6	29.1	45.4	54.3	46.1	36.1
13	33.1	31.1	28.9	30.6	48.6	57.1	50.4	43.5
14	39.6	37.4	37.3	37.7	50.1	61.3	52.5	48.6
15	46.1	47.6	50.6	50.6	57.6	58.0	53.7	54.1
16	51.1	44.1	38.6	38.1	40.4	39.3	35.7	32.3
17	32.0	30.0	29.1	30.9	38.4	41.1	34.9	29.6
18	28.9	31.1	31.8	33.6	44.3	39.1	34.8	32.1
19	29.1	27.1	29.1	30.8	39.1	40.9	34.1	33.5
20	32.1	31.4	31.0	33.1	36.6	38.7	35.6	33.6
21	33.3	33.1	32.9	34.6	46.6	51.0	46.6	47.6
22	41.1	36.6	33.4	33.6	37.6	40 6	33.1	30.6
23	27.1	21.7	19.6	16.3	15.9	15.7	13.9	14.1
24	12.6	12.6	12.6	14.5	22.3	30.5	26.6	22.6
25	20.1	19.9	19.6	21.1	29.8	29.8	28.5	25.1
26	22.1	19.6	17.1	14.6	14.3	15.1	17.1	23.6
27	16.6	16.1	17.5	20.1	33.6	38.7	31.9	28.1
28	24.6	22.1	24.6	26.1	29.6	26.6	23.6	23.3
29	22.6	22.1	23.1	21.7	33.5	34.3	29.1	31.4
30	31.9	32.3	32.1	32.6	34.3	33.6	33.4	32.8
31	32.7	33.1	33.6	34.1	35.1	35.8	37.1	38.7
Hourly means.	29.5	28.3	27.6	28.9	35.5	37.7	34.2	31.7

Mean Time.	0^{h}.	3^{h}.	6^{h}.	9^{h}.	Noon.	3^{h}.	6^{h}.	9^{h}.
1871.	°	°	°	°	°	°	°	°
February 1	39.5	42.1	39.1	38.6	37.7	36.6	35.5	34.9
2	34.1	34.6	34.3	34.6	37.1	39.7	39.3	42.6
3	34.1	31.1	29.1	32.6	40.7	47.6	39.6	37.6
4	43.1	35.6	35.3	41.3	46.8	. .	44.8	42.1
5	35.6	29 6	24.6	23.7	28.1	28.6	19.1	15.6
6	14.1	12.9	11.1	13.6	25.9	30.6	25.1	21.6
7	20.1	19.6	17.0	22.6	34.3	32.7	29.8	29.1
8	28.8	27.9	28.1	29.4	35.4	37.5	36.3	32.1
9	31.1	31.5	31.1	32.5	38.3	46.1	44.5	40.1
10	35.1	32.9	30.9	34.3	43.1	44.6	37.1	30.6
11	28.1	25.1	28.1	27.7	37.6	36.5	32.1	31.1
12	30.1	28.1	29.1	31.1	31.6	31.1	30.3	30.5
13	28.6	27.6	28.6	30.1	31.6	32.6	30.6	28.1
14	26.6	24.6	23.6	23.6	26.6	29.7	29.6	23.3
15	16.6	15.1	14.1	16.6	32.6	36.7	32.5	30.6
16	34.4	35.5	34.6	38.8	49.6	47.4	41.4	35.6
17	30.1	28.1	26.7	29.1	39.5	40.1	39.1	37.6
18	36.6	39.1	51.1	45.6	50.8	55.4	42.6	36.6
19	34.1	29.1	37.9	32.1	44.3	50.9	46.1	43.1
20	39.1	38.6	36.6	41.9	52.8	56.6	47.3	43.9
21	38.1	37.1	38.6	39.6	39.4	36.3	34.1	31.6
22	28.6	24.1	20.8	23.1	32.3	33.7	29.0	26.1
23	26.4	27.1	27.3	29.6	34.1	34.4	33.7	33.3
24	38.7	34.6	35.1	36.6	40.0	45.1	49.1	47.1
25	45.3	45.1	44.6	48.7	61.5	63.4	56.6	52.7
26	52.1	46.1	43.5	44.3	44.6	45.6	44.6	43.6
27	45.6	46.1	44.1	44.1	48.7	44.6	39.8	34.9
28	32.9	32.3	32.6	36.4	42.4	50.4	44.1	38.7
Hourly means.	36.9	35.0	34.7	36.5	39.2	39.8	37.6	34.1

Mean Time.	0^{h}.	3^{h}.	6^{h}.	9^{h}.	Noon.	3^{h}.	6^{h}.	9^{h}.
1871.	°	°	°	°	°	°	°	°
March 1	39.1	40.1	40.4	45.1	37.6	64.1	60.6	50.6
2	38.6	36.1	34.1	43.7	59.5	62.9	59.6	54.1
3	51.8	53.1	54.1	55.4	62.3	67.1	60.1	50.1
4	43.1	40.1	38.1	38.6	34.6	33.4	35.6	36.6
5	33.6	33.1	32.3	38.1	51.7	52.0	45.1	40.8
6	40.6	39.1	38.8	49.6	49.3	50.5	43.6	39.6
7	35.6	32.6	29.7	36.9	49.1	33.5	46.5	42.5
8	41.1	39.1	39.6	43.3	47.6	52.1	50.1	47.1
9	45.1	45.3	43.9	50.3	68.4	67.1	63.7	55.6
10	56.5	52.1	48.9	52.1	61.5	60.3	54.4	50.2
11	48.1	42.9	42.1	46.7	59.6	62.3	56.9	53.9
12	52.3	55.6	58.6	58.9	55.1	52.9	46.9	41.6
13	38.6	35.1	33.7	40.7	50.8	55.8	51.0	47.4
14	43.9	41.1	39.3	43.1	51.7	54.7	48.5	44.6
15	44.6	43.1	42.4	47.1	68.2	70.1	60.1	55.6
16	48.6	45.1	44.6	45.6	50.2	58.3	54.3	48.7
17	48.1	48.6	49.1	59.5	69.7	68.7	61.0	59.1
18	54.6	52.1	47.6	46.3	50.6	54.4	53.1	48.6
19	47.1	45.3	42.1	46.1	55.1	66.1	61.1	52.3
20	48.6	43.1	40.9	50.6	55.7	56.0	47.3	45.6
21	44.3	44.1	44.1	45.6	53.7	56.9	51.5	47.1
22	44.0	42.6	40.3	50.3	62.3	66.8	61.6	53.1
23	50.6	50.1	46.3	52.1	68.9	71.1	68.8	49.6
24	44.1	42.1	39.1	40.7	44.4	48.9	45.7	40.5
25	38.6	35.3	33.0	40.6	48.5	53.1	49.6	42.1
26	39.6	39.1	40.6	43.0	41.0	39.6	38.6	38.1
27	39.1	37.1	37.3	44.7	47.5	49.1	45.1	43.1
28	38.7	38.5	37.8	41.3	44.3	45.1	43.1	38.6
29	35.3	32.3	30.4	41.1	49.1	49.5	46.1	45.1
30	41.6	41.1	39.1	40.1	42.7	44.9	44.7	44.1
31	44.1	42.1	41.1	51.6	58.6	57.3	53.4	50.6
Hourly means.	43.5	38.9	40.9	46.1	53.3	56.3	51.9	48.0

Mean Time.	0^{h}.	3^{h}.	6^{h}.	9^{h}.	Noon.	3^{h}.	6^{h}.	9^{h}.
1871.	°	°	°	°	°	°	°	°
April 1	47.1	45.1	43.7	42.6	42.5	42.6	42.4	41.1
2	39.1	38.3	38.8	43.7	50.7	57.8	54.3	46.1
3	43.3	42.1	41.1	50.1	52.9	55.1	54.3	47.9
4	46.7	49.1	47.1	52.3	59.5	64.4	63.1	58.6
5	55.8	52.1	51.6	61.8	64.2	68.5	63.6	54.1
6	48.6	43.1	42.1	46.1	53.1	58.1	56.4	50.0
7	48.1	48.1	48.6	54.1	66.6	71.7	70.1	64.9
8	60.1	58.4	51.1	52.7	83.6	86.7	78.7	65.7
9	68.5	59.5	55.0	64.9	79.6	81.1	74.3	68.1
10	60.6	57.6	55.1	64.6	78.1	79.0	72.1	65.6
11	61.1	60.3	62.1	68.6	69.9	77.7	72.5	67.8
12	64.4	53.1	48.1	56.6	63.6	64.8	60.3	52.1
13	48.6	45.1	43.1	58.3	68.1	65.6	63.1	55.1
14	50.1	48.9	48.1	51.4	55.3	54.6	53.7	46.6
15	43.1	41.6	40.6	52.4	60.8	65.1	59.7	51.7
16	45.3	44.6	41.9	52.8	60.7	63.4	59.1	48.6
17	51.1	47.6	44.1	49.9	57.6	61.1	55.6	53.1
18	51.6	49.1	47.4	57.7	64.8	66.1	59.0	52.6
19	50.6	49.6	50.7	54.1	59.3	66.6	65.1	60.6
20	59.3	59.6	64.6	63.1	65.3	72.3	71.1	65.1
21	65.6	56.9	55.3	66.6	76.6	77.1	66.5	60.4
22	57.1	54.1	52.7	54.1	58.1	54.6	52.8	50.1
23	46.6	45.1	44.6	49.9	56.9	61.1	59.6	48.7
24	46.1	42.6	39.1	56.8	66.9	68.1	62.6	54.1
25	50.6	47.1	48.0	59.3	70.8	74.4	69.8	61.7
26	58.1	56.3	53.5	63.5	70.1	72.1	66.6	60.5
27	58.1	56.6	56.6	59.6	61.1	64.1	65.8	64.4
28	63.6	61.6	56.1	57.6	69.3	60.1	61.7	55.4
29	52.9	50.1	48.1	57.6	67.1	65.9	64.1	53.6
30	48.6	47.1	47.1	57.3	67.6	72.1	67.6	60.6
Hourly means.	52.7	50.8	48.9	55.9	64.0	66.4	62.8	56.2

Mean Time.	0^{h}.	3^{h}.	6^{h}.	9^{h}.	Noon.	3^{h}.	6^{h}.	9^{h}.
1871.	°	°	°	°	°	°	°	°
May 1	57.6	55.1	53.8	59.7	66.3	70.0	63.7	58.1
2	54.1	51.6	51.5	61.6	67.6	71.1	65.1	59.7
3	57.8	55.6	56.1	58.9	62.4	60.6	60.6	60.1
4	59.9	59.1	58.4	58.6	58.1	57.1	57.6	58.5
5	55.1	53.1	51.9	55.6	61.1	68.4	66.7	58.5
6	56.7	52.7	51.6	51.8	53.1	52.7	52.6	50.6
7	48.6	46.9	46.1	52.3	59.6	64.0	61.9	52.1
8	50.1	49.6	48.1	56.3	63.3	69.1	66.1	57.1
9	56.1	52.6	49.3	49.1	50.2	40.9	49.1	48.1
10	46.1	45.1	44.8	48.1	55.6	61.6	59.3	51.3
11	44.6	40.6	41.0	53.9	62.6	67.1	62.1	50.5
12	47.6	45.6	45.7	55.2	58.7	56.6	57.6	54.6
13	51.6	50.9	51.6	61.0	73.1	75.0	71.1	57.7
14	49.1	43.1	41.9	55.1	62.1	68.1	62.6	57.1
15	55.1	46.9	48.7	59.3	69.4	72.3	68.6	61.6
16	57.6	54.1	53.9	64.6	78.1	76.4	71.4	64.1
17	61.1	61.6	61.8	67.8	63.6	74.1	73.1	59.6
18	57.1	51.1	47.6	58.1	66.3	69.3	66.4	55.1
19	51.1	49.1	47.1	62.0	72.1	75.6	67.7	59.1
20	55.4	53.1	52.6	62.6	77.6	79.9	76.6	63.6
21	58.6	54.1	53.6	64.8	77.9	83.1	75.6	68.1
22	62.1	59.1	57.6	68.6	76.1	79.6	74.6	67.1
23	66.6	62.1	60.9	69.6	74.6	75.1	73.3	59.1
24	55.0	51.6	50.9	64.0	72.1	75.6	72.6	62.1
25	58.1	56.7	56.6	69.1	80.0	83.3	78.6	73.2
26	72.6	69.1	67.9	79.6	89.6	82.6	83.1	73.6
27	71.1	68.1	70.1	78.9	83.1	82.8	77.4	72.6
28	69.6	69.1	69.1	75.1	81.4	80.9	77.0	71.7
29	69.6	68.1	67.1	72.1	84.5	88.1	83.3	73.6
30	70.6	68.6	69.1	78.1	85.4	89.1	79.1	73.8
31	71.1	69.9	70.6	77.7	84.1	75.3	71.6	70.1
Hourly means.	58.0	55.3	51.5	62.8	70.0	71.8	68.6	61.4

Mean Time.	0^{h}.	3^{h}.	6^{h}.	9^{h}.	Noon.	3^{h}.	6^{h}.	9^{h}.
1871.	°	°	°	°	°	°	°	°
June 1	68.1	67.1	67.1	72.8	76.1	75.6	74.0	68.1
2	67.1	66.6	66.7	69.7	72.7	74.1	74.1	72.1
3	70.1	69.6	70.1	75.8	87.0	91.6	85.8	74.9
4	70.4	68.1	69.7	80.6	83.8	85.4	80.6	74.6
5	71.6	67.6	68.1	77.5	86.6	88.1	84.6	74.9
6	70.6	66.6	65.1	75.1	83.1	83.7	79.7	72.1
7	71.7	71.1	70.9	76.6	85.1	90.1	71.6	71.3
8	68.1	69.6	70.1	71.5	78.6	80.9	78.3	70.6
9	67.1	66.3	65.6	74.3	80.4	83.5	82.3	69.6
10	64.6	61.1	61.7	70.4	79.6	86.1	83.0	75.1
11	71.6	71.1	71.1	74.6	75.9	79.1	78.6	72.1
12	69.9	69.6	63.1	60.6	67.1	76.1	75.7	64.1
13	60.0	58.9	60.7	72.6	79.1	84.1	82.6	73.3
14	70.7	65.6	63.6	69.7	78.6	81.6	75.6	69.7
15	65.6	63.9	62.3	71.6	78.5	77.1	76.7	64.9
16	62.1	54.1	54.9	65.3	75.1	77.1	72.7	65.1
17	62.1	61.8	59.9	69.6	71.1	71.6	70.1	69.1
18	70.6	70.1	70.1	73.6	83.6	77.1	74.3	69.7
19	67.1	63.1	64.6	71.9	79.6	84.6	83.5	73.1
20	69.1	65.6	65.3	75.3	84.4	87.8	82.7	77.1
21	71.6	65.1	62.1	70.1	77.1	81.1	78.2	67.6
22	63.1	60.1	60.3	70.1	78.5	81.6	77.1	71.6
23	70.1	67.1	67.5	76.1	85.1	88.8	83.8	74.6
24	72.1	70.6	71.3	78.6	88.1	79.6	74.7	72.1
25	71.6	69.1	65.6	64.2	66.6	68.8	66.1	62.6
26	60.0	60.0	61.5	67.3	74.3	76.2	73.6	71.1
27	68.3	68.0	68.1	74.5	80.6	86.1	82.3	74.5
28	71.7	69.6	69.1	75.5	87.1	85.1	85.1	72.7
29	68.8	66.6	67.6	70.3	76.4	79.7	77.1	64.3
30	59.1	57.6	57.1	64.7	73.1	77.5	71.6	68.6
Hourly means.	67.8	65.7	65.0	71.7	79.1	81.3	77.9	70.7

Mean Time.	0^{h}.	3^{h}.	6^{h}	9^{h}.	Noon.	3^{h}.	6^{h}.	9^{h}.
1871.	°	°	°	°	°	°	°	°
July 1	67.1	66.3	66.1	63.1	67.8	67.3	68.7	67.0
2	66.4	66.6	66.6	73.1	81.1	82.3	78.6	73.8
3	72.6	70.1	71.1	75.6	84.5	87.1	71.6	70.1
4	69.3	69.1	69.7	71.3	81.6	80.1	71.7	70.1
5	68.6	69.1	68.5	74.1	82.3	85.1	82.3	74.6
6	71.6	68.6	68.6	78.6	87.1	89.8	78.9	74.1
7	74.6	73.9	76.1	81.7	86.9	89.5	87.1	76.1
8	71.6	69.1	66.6	74.9	81.5	86.3	82.8	75.1
9	70.6	69.1	69.1	79.0	85.1	91.6	79.1	76.0
10	74.1	73.1	73.6	81.5	87.1	91.3	89.1	77.1
11	75.6	75.4	75.1	79.5	87.8	90.1	78.6	73.7
12	72.6	72.1	73.3	75.3	80.6	82.5	81.5	75.6
13	72.6	69.6	69.6	77.4	86.5	84.0	83.7	76.5
14	75.6	74.1	74.3	77.6	79.1	84.8	82.7	75.8
15	72.1	72.1	73.4	78.9	87.3	88.9	86.6	75.1
16	73.1	68.6	69.1	77.7	86.1	87.6	84.6	80.1
17	75.1	74.1	73.6	78.1	82.9	84.1	79.7	69.0
18	65.4	59.1	58.6	69.1	77.7	81.3	73.8	71.6
19	70.1	67.3	66.1	71.8	78.6	79.6	71.3	69.6
20	64.6	62.1	61.1	66.1	71.4	72.4	70.9	61.1
21	59.1	57.4	58.1	66.9	71.6	74.5	61.7	57.6
22	56.1	53.6	52.9	63.7	72.6	74.7	72.4	61.1
23	57.6	55.4	55.6	66.8	73.8	77.1	74.6	64.1
24	61.6	56.1	55.1	69.1	77.9	79.5	75.8	66.9
25	62.6	58.6	57.6	67.6	68.9	. .	64.6	61.9
26	59.1	58.1	62.9	72.1	82.4	86.8	80.5	69.1
27	67.1	65.6	66.6	70.3	82.7	87.1	77.1	70.1
28	68.6	67.3	66.8	71.6	78.7	83.1	76.1	67.6
29	64.1	61.6	62.4	71.1	78.1	82.1	74.6	69.1
30	65.7	64.0	65.6	70.4	79.3	75.1	76.3	68.6
31	66.6	66.9	66.6	72.6	81.4	69.9	75.3	67.1
Hourly means.	68.1	66.3	66.5	73.1	80.0	82.5	77.2	70.5

Mean Time.	0^{h}.	3^{h}.	6^{h}.	9^{h}.	Noon.	3^{h}.	6^{h}.	9^{h}.
1871.	°	°	°	°	°	°	°	°
August 1	63.1	62.3	62.1	72.1	82.1	84.9	81.3	81.8
2	67.1	67.6	67.7	72.6	82.3	82.1	81.7	74.3
3	71.0	69.1	67.1	73.9	85.0	86.3	83.3	76.9
4	75.1	73.5	73.6	84.7	85.6	91.1	79.6	75.1
5	73.1	72.9	72.6	78.6	80.1	86.8	84.6	77.1
6	74.1	71.7	69.3	74.7	77.8	82.6	81.1	74.1
7	71.7	69.7	70.4	76.6	87.1	89.7	84.6	80.2
8	77.1	76.1	75.1	80.6	88.6	86.1	83.1	79.1
9	75.3	73.1	72.8	79.7	86.7	90.6	84.5	75.8
10	75.1	67.1	64.6	74.3	82.1	85.4	84.7	71.7
11	69.6	67.1	64.3	73.7	84.6	85.6	82.1	75.6
12	72.1	71.1	70.1	74.7	86.3	91.1	84.1	75.9
13	73.6	69.1	69.3	75.6	88.3	89.6	83.9	77.1
14	74.3	72.1	71.1	77.6	88.5	92.4	86.1	78.1
15	75.6	73.6	74.1	78.7	89.3	94.8	86.6	80.6
16	77.6	73.6	73.6	80.1	90.8	96.3	85.9	81.6
17	78.1	76.1	74.3	81.5	86.0	84.6	73.4	70.6
18	69.6	67.1	67.1	73.6	81.7	87.6	81.3	73.1
19	69.3	63.6	64.1	73.1	80.4	84.1	75.6	65.6
20	65.5	59.1	57.3	67.6	80.1	83.1	67.1	67.6
21	64.1	61.6	60.7	69.9	81.6	87.6	80.7	73.6
22	71.6	71.1	71.1	74.6	77.6	84.1	76.5	72.1
23	70.6	67.6	65.7	68.6	73.6	84.4	78.1	74.6
24	72.6	71.1	70.6	75.1	82.8	87.6	81.9	76.1
25	75.1	74.1	73.6	79.1	86.4	91.1	82.5	77.3
26	75.1	74.1	73.6	79.4	86.1	86.9	82.1	79.3
27	78.1	76.6	75.7	80.3	86.7	80.6	76.6	76.1
28	74.6	73.1	70.1	70.3	73.1	75.1	77.3	73.5
29	72.6	71.1	73.1	75.9	85.1	88.5	74.6	72.6
30	72.6	72.1	71.1	73.1	82.3	88.9	73.4	70.6
31	63.6	62.1	59.8	67.6	75.5	77.3	69.8	62.6
Hourly means.	72.2	70.0	69.2	75.4	83.4	86.7	80.3	71.3

Mean Time.	0h.	3h.	6h.	9h.	Noon.	3h.	6h.	9h.
1871.	°	°	°	°	°	°	°	°
September 1	58.6	55.1	55.3	69.6	73.6	75.8	68.1	61.7
2	61.1	57.6	55.0	67.6	78.3	79.7	71.5	62.3
3	57.6	54.6	52.6	66.6	81.5	84.6	74.7	65.1
4	59.6	57.1	55.6	69.1	79.6	88.6	75.6	66.9
5	62.6	61.6	60.1	70.6	82.1	85.8	76.1	66.6
6	61.4	59.1	57.7	67.8	85.7	87.7	77.1	70.6
7	66.7	65.3	62.7	74.1	84.8	83.1	71.3	65.6
8	59.1	55.1	52.6	66.1	79.1	78.6	68.1	59.6
9	53.1	51.1	49.7	66.7	75.6	78.7	71.1	62.1
10	58.6	56.1	53.8	66.0	79.0	82.6	73.1	63.6
11	59.2	59.6	59.1	65.8	70.6	68.6	66.0	64.6
12	63.4	63.1	62.6	63.7	70.1	72.6	69.6	67.6
13	66.1	63.6	61.6	70.7	83.5	85.6	77.1	73.1
14	69.6	65.1	63.6	65.6	67.1	66.1	61.3	58.5
15	57.4	55.6	55.3	59.1	61.4	65.1	61.6	59.6
16	58.1	57.8	56.9	63.5	74.6	78.0	69.9	61.9
17	58.1	57.1	59.1	65.1	76.3	79.1	71.4	65.4
18	64.1	56.6	53.1	59.7	68.9	71.3	63.6	62.9
19	56.1	58.1	60.1	62.6	67.1	72.1	67.1	64.6
20	61.7	60.1	62.6	57.7	58.7	59.6	59.6	55.3
21	48.9	44.1	41.9	50.7	60.7	64.1	54.6	47.6
22	44.1	41.1	40.1	55.1	65.7	68.7	57.3	52.7
23	47.6	42.6	44.9	56.6	73.1	78.4	67.7	61.1
24	58.6	55.1	54.6	68.1	77.3	80.4	71.6	66.1
25	62.1	59.1	57.6	64.5	70.6	66.1	65.5	60.1
26	57.9	57.1	58.1	58.6	63.1	66.6	58.1	51.6
27	47.6	45.1	42.6	54.3	62.4	64.8	55.5	49.3
28	45.6	45.1	46.1	54.7	63.6	61.6	55.1	53.1
29	48.6	45.6	46.1	53.1	61.1	63.4	55.1	46.6
30	43.4	41.1	39.1	52.3	65.4	69.1	58.9	49.1
Hourly means.	57.2	54.8	54.0	62.9	72.0	74.2	66.4	60.8

Mean Time.	0h.	3h.	6h.	9h.	Noon.	3h.	6h.	9h.
1871.	°	°	°	°	°	°	°	°
October 1	46.1	43.6	43.1	51.8	66.5	71.3	61.5	53.5
2	49.1	47.7	44.3	55.5	73.8	79.1	66.1	57.7
3	53.6	50.7	51.3	55.6	60.6	74.9	64.1	56.6
4	52.6	49.6	49.1	57.0	77.1	82.1	69.9	59.1
5	54.4	51.3	49.3	60.1	74.3	73.6	66.6	64.0
6	64.1	64.1	64.3	65.9	68.6	68.6	66.6	66.1
7	60.1	54.6	50.3	53.1	60.0	61.4	53.6	47.6
8	45.1	41.1	41.6	51.1	67.1	69.1	57.1	52.1
9	50.6	48.6	47.6	56.6	72.1	73.6	63.1	57.4
10	57.1	58.1	58.3	61.8	73.3	72.1	66.9	65.3
11	65.6	65.1	64.9	66.6	70.5	69.9	51 9	49.1
12	46.7	46.1	45.6	49.6	56.0	55.7	50.1	46.6
13	42.3	40.4	38.6	46.5	63.3	64.1	53.4	48.1
14	44.6	43.6	42.6	49.1	67.8	70.3	60.6	56.7
15	55.7	56.1	57.6	68.7	77.9	80.3	72.3	64.1
16	60.6	59.1	57.1	56.6	57.1	60.9	55.4	54.7
17	52.6	48.6	45.1	32.1	65.1	69.1	58.1	51.4
18	49.6	46.6	44.1	51.7	59.7	58.5	49.3	44.6
19	42.1	37.6	35.1	44.6	60.3	64.0	54.6	52.6
20	51.1	48.6	48.4	57.3	61.6	64.6	52.6	45.3
21	41.6	38.6	36.6	45.1	62.3	65.7	54.9	50.6
22	47.1	48.1	47.1	55.7	67.6	74.7	62.3	57.9
23	55.1	53.3	49.1	57.7	73.6	76.6	67.1	62.6
24	60.1	58.6	57.6	60.7	66.1	67.3	63.6	62.1
25	60.7	57.6	54.6	54.8	56.1	56.1	56.6	56.6
26	56.6	56.3	56.6	58.5	63.7	65.6	65.1	63.6
27	63.6	60.6	60.1	56.8	57.6	64.3	54.7	49.1
28	48.7	46.4	48.1	50.1	54.6	55.1	44.4	40.6
29	37.6	35.3	35.1	41.7	52.0	54.7	46.1	41.3
30	38.3	34.4	33.6	42.0	58.4	59.7	52.1	49.6
31	48.6	47.1	46.6	53.6	61.3	63.5	59.9	58.9
Hourly means.	51.7	49.6	48.5	53.8	64.7	67.3	53.7	54.4

Mean Time.	0h.	3h.	6h.	9h.	Noon.	3h.	6h.	9h.
1871.	°	°	°	°	°	°	°	°
November 1	58.6	58.1	58.5	59.3	64.1	67.8	52.1	48.6
2	45.3	42.6	41.0	45.9	53.1	58.5	49.6	44.5
3	40.9	38.1	37.6	46.3	60.3	60.8	49.9	45.3
4	43.9	44.6	45.1	45.8	47.1	47.6	47.5	46.6
5	45.3	44.1	44.1	46.1	49.8	57.1	46.6	43.6
6	41.1	39.1	38.3	41.9	49.8	51.6	42.8	36.6
7	39.7	40.6	38.1	40.1	46.6	50.6	42.9	38.6
8	34.6	33.6	33.1	35.9	49.4	51.3	46.3	42.3
9	41.6	37.6	34.6	41.4	53.1	50.8	47.1	46.6
10	44.6	45.1	45.1	45.1	47.6	48.3	48.3	49.1
11	46.1	43.1	43.6	45.7	50.6	50.6	44.9	41.5
12	36.1	32.6	33.3	39.6	49.8	53.4	42.8	35.1
13	33.6	31.6	32.0	37.1	41.4	41.3	39.6	39.1
14	39.8	40.6	41.9	47.0	53.6	56.6	53.7	53.3
15	50.1	48.1	43.6	43.4	44.3	39.1	37.1	35.7
16	32.6	35.6	35.6	36.3	37.7	37.4	36.4	35.1
17	33.6	32.6	32.3	36.0	40.1	43.3	37.9	34.5
18	32.3	31.7	30.6	35.8	50.8	52.6	42.6	34.6
19	31.1	29.6	28.6	33.1	39.6	44.7	43.1	43.1
20	43.1	33.1	42.6	44.6	49.3	50.1	50.4	50.7
21	50.1	46.6	42.1	43.6	48.1	47.6	44.6	42.4
22	38.1	36.1	34.3	36.5	40.9	41.3	38.6	36.6
23	33.1	30.6	28.6	30.6	38.1	38.7	35.3	34.1
24	35.1	36.1	38.1	39.1	40.4	40.4	40.1	38.6
25	38.4	33.1	34.1	39.1	47.1	50.7	41.6	37.1
26	39.1	39.6	41.1	44.6	51.6	58.6	52.3	51.7
27	53.1	53.6	52.6	50.8	52.9	49.1	43.1	39.6
28	35.1	32.6	30.0	31.9	34.9	33.6	30.6	29.1
29	28.9	29.4	29.6	32.0	34.0	32.3	28.1	25.6
30	23.6	24. 6	27.6	29.1	31.8	32.1	29.1	28.5
Hourly means.	39.6	38.5	38.0	40.8	49.6	48.0	42.8	40.3

Mean Time.	0h.	3h.	6h.	9h.	Noon.	3h.	6h.	9h.
1871.	°	°	°	°	°	°	°	°
December 1	26.6	25.6	22.6	25.3	28.8	30.8	26.6	23.6
2	24.1	23.6	22.3	27.9	36.6	40.3	32.6	29.1
3	29.1	30.1	30.6	31.7	33.6	33.9	33.6	33.6
4	33.9	33.6	33.6	34.1	36.6	37.0	32.9	21.6
5	17.1	12.6	10.1	12.1	17.6	20.6	16.1	13.9
6	13.6	13.1	12.6	11.8	24.7	28.1	25.1	27.3
7	28.7	30.6	27.9	33.6	45.3	49.1	41.0	41.3
8	39.3	36.1	35.1	39.1	46.9	46.9	38.1	33.6
9	29.1	28.6	27.6	30.7	35.3	35.6	28.7	25.6
10	22.1	19.3	18.9	26.1	41.6	40.6	34.1	28.9
11	28.6	31.6	31.6	33.6	50.6	43.7	38.1	31.3
12	32.6	40.6	37.1	37.1	44.1	44.3	37.9	33.6
13	34.1	34.6	34.4	37.1	47.6	48.6	42.7	40.7
14	34.3	31.6	28.6	28.6	32.6	33.3	27.6	23.1
15	20.1	20.6	22.1	24.0	25.5	27.1	24.4	19.7
16	16.1	14.3	13.8	19.1	33.9	33.1	28.9	27.6
17	29.6	27.6	28.1	29.7	34.4	37.6	37.6	36.6
18	34.6	35.1	35.6	36.1	45.6	49.3	43.3	37.1
19	29.9	31.3	30.1	31.1	30.3	30.7	29.7	27.1
20	28.1	25.6	21.0	16.7	14.9	13.7	8.8	7.6
21	6.1	4.1	1.1	1.6	8.6	12.1	8.7	7.1
22	10.7	14.1	15.3	17.1	20.8	22.1	21.1	21.1
23	21.6	22.7	22.9	24.6	28.2	31.2	32.6	37.6
24	40.1	39.9	37.6	33.1	45.0	49.4	41.7	39.1
25	34.1	34.1	34.6	35.6	43.1	57.6	50.3	42.1
26	55.6	34.1	33.6	41.6	48.6	46.7	43.3	40.8
27	39.9	39.1	37.9	41.6	45.5	39.6	33.6	28.3
28	22.9	18.6	17.1	17.8	22.1	24.5	21.3	23.3
29	24.3	24.7	27.6	30.9	32.3	32.3	32.6	32.8
30	32.6	32.1	32.1	32.6	33.1	32.7	32.6	32.6
31	33.1	33.1	33.1	36.1	36.6	39.6	41.6	49.6
Hourly means.	27.5	27.2	26.3	28.3	34.2	35.9	31.8	29.6

Mean Time.	0^h.	3^h.	6^h.	9^h.	Noon.	3^h.	6^h.	9^h.
1871.	°	°	°	°	°	°	°	°
January 1	30.5	29.0	28.0	29.7	33.5	36.0	33.5	29.0
2	26.8	28.0	29.5	32.5	39.2	41.5	38.2	35.5
3	29.5	28.2	23.5	25.0	36.4	32.5	29.7	29.5
4	29.2	27.5	25.8	23.0	28.4	32.0	29.0	29.0
5	30.2	33.0	34.0	34.5	37.8	39.8	42.5	43.0
6	43.5	42.0	42.2	41.7	41.8	38.9	34.3	30.0
7	29.0	27.0	25.0	26.5	31.7	32.0	27.3	23.0
8	25.0	25.0	24.0	26.0	27.0	28.2	28.5	23.8
9	20.5	19.0	18.0	18.0	20.9	21.0	17.0	10.8
10	. .	. .	. .	12.5	20.0	22.0	22.5	23.2
11	24.4	25.6	26.5	28.5	30.7	32.0	32.2	32.5
12	32.5	32.0	27.0	29.5	41.0	47.4	42.4	35.5
13	32.2	31.0	29.0	30.7	44.5	51.7	47.6	42.5
14	39.4	36.8	37.5	37.8	47.6	56.0	51.0	47.5
15	46.0	48.0	51.0	51.2	55.2	58.4	54.0	54.5
16	50.0	41.0	35.5	35.0	36.5	35.5	33.0	29.8
17	29.8	28.5	27.5	28.5	33.6	36.5	33.0	29.0
18	28.5	30.5	32.0	32.5	39.0	35.5	33.0	32.0
19	29.0	27.5	29.0	29.3	35.2	36.0	30.9	31.0
20	30.5	30.5	30.5	32.0	35.0	36.5	35.0	33.4
21	33.5	33.5	32.2	35.0	41.0	45.6	42.2	41.8
22	36.5	32.5	31.2	30.0	32.4	34.0	29.0	27.0
23	27.0	22.0	20.5	16.8	16.5	16.5	14.8	15.2
24	13.5	13.7	13.7	15.0	21.5	28.5	25.6	22.8
25	20.8	20.5	20.0	20.0	29.5	29.5	29.0	25.5
26	22.8	20.5	17.8	15.0	15.0	16.0	18.0	24.5
27	17.5	17.	18.5	20.5	34.0	34.5	31.6	28.9
28	25.0	22.6	24.0	25.0	27.5	26.5	24.0	24.0
29	23.2	22.6	23.5	22.0	32.4	32.5	29.4	31.5
30	32.5	33.0	32.7	32.5	34.5	34.0	33.8	33.5
31	33.4	33.6	34.0	35.0	36.2	35.5	37.5	39.4
Hourly means.	29.7	28.7	28.1	28.1	33.4	34.9	32.6	30.9

Mean Time.	0^h.	3^h.	6^h.	9^h.	Noon.	3^h.	6^h.	9^h.
1871.	°	°	°	°	°	°	°	°
February 1	38.8	42.8	40.0	39.0	38.2	37.0	35.8	35.5
2	35.0	35.3	35.0	35.3	37.9	40.5	40.0	38.0
3	29.5	27.5	26.0	31.0	34.7	39.2	35.0	34.2
4	37.0	33.2	34.0	36.1	38.5	. .	38.5	37.0
5	33.5	29.5	25.0	22.6	26.7	28.9	19.8	16.0
6	14.6	13.5	12.0	13.0	23.0	28.0	25.2	22.2
7	20.7	20.2	17.5	23.0	30.8	30.5	29.5	29.0
8	29.0	28.5	28.7	30.0	33.4	36.0	35.0	32.4
9	31.5	31.0	31.8	32.5	38.4	43.5	40.0	34.0
10	32.0	29.5	27.2	30.0	35.6	36.0	32.5	29.5
11	28.5	25.5	23.5	26.4	33.0	32.5	29.5	30.5
12	29.5	29.0	29.5	31.7	32.3	32.0	31.0	31.2
13	29.	28.0	29.0	30.8	32.0	32.0	30.0	28.0
14	27.0	24.8	24.0	24.2	27.0	30.0	29.7	23.5
15	17.0	15.5	14.5	17.0	31.0	34.5	31.5	30.0
16	32.2	33.2	34.5	38.0	42.5	39.7	36.8	32.5
17	29.5	28.0	26.5	28.6	36.5	37.3	36.0	37.0
18	37.0	39.5	51.5	46.0	51.3	48.0	38.2	33.5
19	30.9	28.0	26.5	30.6	39.0	43.4	39.	38.7
20	36.3	37.7	36.0	39.5	46.4	49.5	43.2	41.0
21	37.0	36.2	38.0	38.8	38.4	36.0	34.0	30.8
22	27.5	23.5	20.5	22.0	31.5	33.5	27.2	25.2
23	26.0	26.3	27.4	30.0	32.5	34.4	34.2	33.9
24	33.8	34.5	35.5	37.2	40.8	45.6	48.7	47.2
25	45.5	45.0	45.0	49.2	58.0	59.6	56.9	51.6
26	51.2	43.0	41.5	42.0	42.0	43.5	44.3	44.0
27	44.5	45.0	42.0	39.0	41.4	38.0	34.0	32.0
28	31.0	30.8	31.0	29.8	36.5	41.5	39.6	36.0
Hourly means.	32.0	30.9	30.5	31.9	36.8	38.2	35.5	33.4

Mean Time.	0^h.	3^h.	6^h.	9^h.	Noon.	3^h.	6^h.	9^h.
1871.	°	°	°	°	°	°	°	°
March 1	35.5	36.5	36.6	40.4	49.0	52.7	47.8	43.5
2	37.0	35.0	33.8	42.0	52.5	54.6	52.0	50.0
3	49.0	51.5	52.0	56.0	61.6	63.1	54.4	47.0
4	42.2	39.0	37.5	38.0	35.0	34.0	35.2	34.5
5	31.8	31.6	31.5	35.2	45.2	46.0	42.5	39.5
6	40.0	38.5	38.5	41.5	41.4	41.3	38.0	35.4
7	32.6	30.5	29.5	35.0	42.5	46.5	43.1	39.5
8	39.0	38.5	38.5	43.2	47.2	50.0	48.5	45.1
9	45.3	45.8	44.5	51.0	60.8	59.7	58.0	55.5
10	56.5	51.0	46.5	49.2	52.0	51.8	50.7	47.0
11	45.0	42.0	41.8	46.0	53.9	55.0	53.7	51.5
12	52.0	55.8	58.7	59.0	55.5	52.0	42.8	38.7
13	37.0	35.5	34.0	39.0	44.0	47.4	45.0	43.5
14	41.4	39.0	37.0	38.5	44.3	47.0	43.5	41.5
15	43.5	43.0	42.0	45.6	53.5	63.2	55.0	57.7
16	47.9	45.0	45.0	45.0	49.5	55.5	52.3	48.5
17	48.2	48.5	49.2	59.5	65.6	65.0	60.0	59.0
18	54.5	52.2	47.5	46.3	49.2	51.2	50.9	48.6
19	47.5	45.0	43.0	46.0	47.5	56.8	54.5	49.2
20	48.0	42.0	41.0	45.9	50.0	50.7	47.0	46.0
21	45.0	44.5	44.5	45.6	46.5	46.1	44.0	42.0
22	41.4	40.9	38.8	46.2	54.0	56.5	57.5	50.0
23	48.0	47.5	46.5	50.5	59.2	60.0	58.0	42.8
24	38.5	37.5	35.0	35.6	37.8	40.5	38.5	36.5
25	34.0	32.5	29.5	34.0	40.3	43.7	42.3	39.0
26	37.5	38.0	39.0	40.4	40.6	39.8	39.0	38.0
27	39.7	37.6	37.8	42.5	41.6	42.5	40.2	37.5
28	35.0	34.6	34.6	36.0	38.0	37.7	37.0	34.0
29	32.3	30.5	29.5	36.6	43.2	43.3	42.4	44.2
30	41.0	41.5	39.5	40.5	43.0	44.5	44.5	43.7
31	43.5	41.5	40.0	46.0	50.2	50.0	48.6	46.0
Hourly means.	42.2	41.0	40.1	43.8	48.2	49.9	47.3	44.4

Mean Time.	0^h.	3^h.	6^h.	9^h.	Noon.	3^h.	6^h.	9^h.
1871.	°	°	°	°	°	°	°	°
April 1	45.0	44.2	43.5	42.6	42.5	42.6	42.5	41.5
2	39.0	38.5	38.2	41.6	43.8	48.0	47.2	43.5
3	41.5	41.5	41.5	46.8	49.7	52.0	52.3	46.9
4	46.0	45.4	43.6	44.5	48.6	52.0	52.3	49.5
5	48.5	46.5	47.8	53.6	52.2	55.8	53.5	46.5
6	43.0	42.0	38.6	41.5	47.5	52.0	52.1	48.0
7	47.0	47.5	48.0	53.0	61.6	65.6	64.8	62.5
8	58.5	57.5	51.2	60.7	64.8	70.5	65.0	58.6
9	56.0	54.6	52.5	59.0	65.0	66.0	64.5	62.0
10	58.5	57.0	55.6	62.0	69.4	68.6	64.5	62.7
11	58.5	58.7	59.5	63.5	66.0	68.5	66.0	63.5
12	60.5	44.5	42.0	47.5	50.7	50.8	46.8	46.0
13	45.0	42.0	40.0	50.6	56.0	54.5	53.5	50.5
14	48.5	46.0	46.0	47.3	49.4	47.5	49.0	45.5
15	43.0	41.5	39.3	44.5	49.5	51.7	49.9	48.5
16	43.0	42.5	40.0	46.0	51.0	51.9	46.0	46.5
17	47.2	43.0	40.8	44.5	49.1	50.9	48.3	48.5
18	48.0	47.0	47.2	51.3	56.5	57.5	51.3	47.8
19	47.5	47.0	48.5	53.0	56.9	66.5	61.5	58.7
20	58.0	59.0	62.5	63.0	65.3	68.4	66.0	63.0
21	62.0	56.5	54.2	63.8	62.0	62.5	57.1	52.6
22	50.0	48.0	48.2	48.0	50.0	47.8	43.5	44.5
23	43.0	43.0	41.5	43.5	46.4	48.0	47.0	45.0
24	44.0	40.5	38.7	50.5	56.0	56.8	55.4	48.7
25	48.4	46.2	47.2	54.6	62.6	61.5	59.0	56.9
26	56.0	55.0	52.8	58.5	68.0	62.5	58.5	57.6
27	56.5	56.0	56.5	59.0	61.0	64.5	65.8	64.8
28	64.0	61.5	56.2	56.9	64.0	58.5	59.5	55.0
29	52.8	49.8	48.6	54.0	58.0	56.0	55.2	50.5
30	48.0	47.0	47.0	54.8	62.0	64.0	61.5	60.5
Hourly means.	50.2	48.3	47.2	52.0	56.2	57.4	55.3	52.5

Mean Time.	0^{h}.	3^{h}.	6^{h}.	9^{h}.	Noon.	3^{h}.	6^{h}.	9^{h}.
1871.	°	°	°	°	°	°	°	°
May 1	58.0	55.6	54.2	56.5	60.6	62.4	58.8	55.5
2	52.5	51.0	50.8	57.5	60.5	62.5	59.2	56.8
3	55.0	54.5	54.5	55.8	59.5	59.8	60.5	60.5
4	60.4	59.5	58.5	59.2	58.5	57.5	58.0	59.0
5	55.6	53.5	52.2	54.8	59.0	64.0	62.2	57.5
6	56.0	53.0	52.0	52.5	53.1	52.8	53.0	50.8
7	48.8	46.5	45.0	46.5	51.5	53.2	51.6	46.6
8	46.0	48.5	45.8	49.0	53.7	57.5	54.0	52.3
9	52.0	50.9	49.0	49.0	50.2	50.5	48.7	48.4
10	46.5	45.5	45.0	46.8	50.0	54.0	53.5	47.8
11	44.3	39.0	39.2	48.0	54.4	58.5	56.6	50.4
12	47.0	45.5	45.8	51.2	54.2	54.6	56.0	54.5
13	52.0	50.4	51.8	59.5	66.5	64.0	60.0	53.0
14	48.0	42.3	41.5	48.5	53.8	56.0	55.4	53.2
15	50.9	47.5	48.0	53.0	61.0	64.6	64.4	59.5
16	57.5	54.2	54.4	62.9	71.0	69.5	66.4	61.0
17	59.6	58.0	60.0	62.8	63.0	66.5	65.5	55.4
18	51.5	49.0	44.0	50.7	57.2	57.8	56.7	53.0
19	50.0	48.5	47.5	58.4	62.6	65.5	61.4	55.6
20	54.0	52.8	52.6	60.0	68.5	69.7	69.0	60.9
21	56.5	54.5	53.6	62.5	71.4	73.0	69.5	65.0
22	61.0	58.5	58.0	63.5	70.2	70.3	67.0	64.0
23	63.5	60.0	57.8	61.4	61.5	63.5	61.5	56.8
24	54.8	51.0	49.0	57.2	61.8	64.6	65.0	56.8
25	56.0	55.5	55.5	66.5	74.4	76.5	74.5	71.2
26	70.0	68.0	67.0	65.0	76.2	74.5	75.0	71.5
27	69.4	67.0	67.2	73.0	74.2	74.8	73.0	71.0
28	69.5	69.0	69.0	71.4	75.0	75.0	71.6	69.1
29	68.0	68.0	67.0	71.5	76.5	80.0	77.6	71.6
30	69.6	68.0	69.0	75.0	79.0	78.8	75.5	71.5
31	70.0	68.5	70.0	74.5	78.0	73.5	71.0	69.0
Hourly means.	56.6	54.6	54.0	58.8	63.4	64.7	63.0	59.0

Mean Time.	0^{h}.	3^{h}.	6^{h}.	9^{h}.	Noon.	3^{h}.	6^{h}.	9^{h}.
1871.	°	°	°	°	°	°	°	°
June 1	68.5	67.5	67.5	72.0	73.5	74.0	70.5	67.4
2	66.5	66.2	66.6	69.0	71.2	72.5	72.8	72.0
3	70.2	69.5	70.2	74.5	77.0	78.2	76.8	71.0
4	69.0	68.0	68.9	75.5	75.4	75.5	77.0	73.9
5	71.5	67.5	68.0	72.3	75.5	74.8	74.5	70.5
6	69.5	66.5	65.0	72.0	74.5	71.6	70.9	69.0
7	71.0	70.8	70.2	70.0	77.0	79.5	71.0	71.5
8	78.2	70.2	70.0	70.0	69.4	71.2	73.3	68.5
9	66.2	65.5	65.0	66.9	68.0	70.0	70.1	66.0
10	63.0	59.8	60.5	67.5	73.8	77.2	77.2	73.0
11	71.0	69.3	70.4	73.0	73.1	74.3	75.5	71.5
12	69.5	69.8	61.2	60.2	62.0	64.5	63.5	61.5
13	58.8	55.5	56.8	67.0	68.0	72.0	73.4	66.0
14	65.6	58.5	58.5	62.0	65.0	64.0	67.5	65.5
15	63.5	63.0	60.8	66.0	65.0	64.5	63.5	61.8
16	55.1	51.3	51.3	57.0	63.0	66.0	65.0	61.5
17	59.5	60.5	57.9	64.3	67.6	69.5	67.8	68.7
18	70.6	70.0	70.2	72.2	77.5	75.2	73.0	66.2
19	64.0	62.0	61.8	64.2	69.5	72.7	74.5	69.5
20	67.0	65.0	64.8	72.5	79.0	79.3	77.0	72.0
21	68.5	62.0	59.0	62.5	65.5	68.5	65.5	62.6
22	62.2	59.9	60.0	66.0	70.7	72.5	70.7	67.0
23	66.3	66.0	67.0	70.6	75.5	77.5	76.5	70.5
24	70.5	69.8	71.5	76.9	83.2	78.6	74.6	72.0
25	71.6	69.0	65.5	63.0	64.4	65.5	63.6	61.5
26	59.0	60.0	61.5	65.2	69.5	71.5	70.5	69.5
27	68.5	67.5	68.5	73.0	75.8	79.4	77.6	73.0
28	71.2	69.5	69.0	74.5	78.7	78.5	70.0	67.0
29	65.0	64.5	63.5	64.6	65.4	77.1	64.3	59.5
30	57.2	54.5	55.0	58.9	73.5	77.0	65.5	63.0
Hourly means.	66.6	64.6	64.2	68.1	71.6	73.1	71.1	68.1

Mean Time.	0^{h}.	3^{h}.	6^{h}.	9^{h}.	Noon.	3^{h}.	6^{h}.	9^{h}.
1871.	°	°	°	°	°	°	°	°
July 1	63.0	63.0	64.0	63.5	63.5	65.5	66.6	65.5
2	64.0	66.0	67.0	72.2	77.5	78.1	76.0	71.8
3	71.5	69.5	71.5	74.5	79.0	79.5	71.6	70.5
4	69.6	69.0	70.2	71.5	78.0	76.5	72.0	70.5
5	69.0	69.5	68.8	69.8	75.6	78.0	75.5	72.0
6	71.0	68.5	68.5	77.5	82.6	83.4	75.2	73.5
7	74.5	73.5	76.5	75.6	76.5	75.2	72.5	71.5
8	67.0	69.0	66.0	66.4	70.2	74.8	75.2	72.5
9	68.5	68.5	68.5	75.5	80.0	83.6	74.5	73.4
10	73.0	72.0	71.6	75.6	79.2	80.6	82.3	76.5
11	75.5	75.5	75.0	78.5	83.0	84.7	77.2	73.9
12	73.0	72.5	73.4	74.4	77.3	77.7	78.0	74.8
13	72.5	69.5	70.0	76.0	78.5	75.6	79.0	75.2
14	75.0	74.5	74.0	77.0	77.5	79.5	76.9	74.5
15	71.2	72.5	73.5	75.8	78.0	79.6	80.0	67.5
16	69.5	65.5	66.5	73.5	76.5	80.0	78.5	73.5
17	71.2	71.0	70.6	71.5	70.0	70.0	80.0	63.5
18	60.0	56.0	56.5	58.0	67.8	72.0	68.5	68.5
19	70.0	67.5	65.5	67.0	70.5	73.5	70.8	69.2
20	62.5	60.0	58.0	60.0	63.4	63.0	60.4	58.0
21	58.2	57.0	57.2	61.3	62.8	67.3	59.0	57.5
22	56.0	54.0	53.0	58.6	63.5	64.9	62.5	58.5
23	57.3	55.0	54.6	62.3	63.0	67.5	67.2	63.0
24	61.9	56.0	55.5	64.0	67.4	67.5	65.5	63.0
25	59.5	58.0	57.3	62.9	63.5	. .	61.0	59.8
26	58.5	58.0	61.5	66.5	69.5	72.0	72.0	65.0
27	63.5	64.0	66.5	69 2	75.8	77.5	74.0	70.0
28	69.0	67.5	67.0	71.4	73.6	77.0	73.0	65.5
29	63.0	61.5	62.0	68.2	73.3	72.8	72.0	66.0
30	64.9	63.9	65.6	68.2	74.0	73.0	72.8	67.4
31	67.0	67.0	67.0	69.5	72.2	68.4	72.5	64.8
Hourly means.	66.8	65.6	65.9	69.5	73.0	74.6	72.3	68.3

Mean Time.	0^{h}.	3.	6^{h}.	9^{h}.	Noon.	3^{h}.	6^{h}.	9^{h}.
1871.	°	°	°	°	°	°	°	°
August 1	61.8	62.0	61.9	67.8	74.8	77.0	80.0	69.0
2	66.5	67.0	67.9	72.0	75.5	77.8	77.0	72.6
3	70.8	68.0	67.0	72.0	78.3	79.5	78.3	74.6
4	74.0	73.0	73.5	76.6	79.6	81.0	73.7	75.0
5	73.5	73.0	72.5	76.1	76.0	79.0	80.2	75.5
6	73.0	71.0	66.5	71.4	71.5	74.0	75.3	72.0
7	70.5	69.3	70.0	75.5	82.5	83.2	80.4	78.5
8	75.8	75.6	75.5	77.5	83.0	76.0	80.5	78.0
9	75.0	73.0	73.5	74.6	76.0	76.7	75.5	73.0
10	71.5	67.0	63.5	70.0	73.0	72.0	71.5	68.0
11	68.0	66.0	64.0	72.0	76.9	76.4	77.8	71.5
12	71.5	71.5	70.5	74.0	79.5	79.3	74.9	72.5
13	72.8	68.9	69.0	73.0	79.5	84.0	74.0	74.0
14	73.5	72.0	71.0	75.9	79.0	81.0	79.0	74.0
15	74.5	73.5	74.5	76.3	81.0	82.8	79.7	78.5
16	76.5	73.5	73.5	76.5	81.7	83.0	80.0	80.0
17	75.5	73.0	71.2	75.4	77.0	73.6	67.5	66.8
18	69.5	66.5	66.8	68.0	69.5	72.0	71.5	69.5
19	67.3	60.0	59.5	63.6	67.0	67.5	63.0	60.9
20	60.9	57.0	56.5	63.5	65.7	68.5	66.9	64.0
21	59.0	61.3	60.5	68.0	71.8	75.0	72.6	71.0
22	60.0	70.0	70.5	71.0	72.8	74.5	70.6	68.0
23	68.2	67.0	65.5	68.0	72.4	77.5	75.5	73.9
24	72.0	70.5	70.8	74.8	80.0	81.7	78.2	75.0
25	74.0	73.4	73.5	76.2	80.0	79.5	76.8	75.5
26	74.5	73.0	73.3	76.5	78.6	77.5	77.5	77.3
27	75.9	74.0	74.2	75.5	80.0	76.8	75.2	75.5
28	74.5	73.5	70.0	69.6	72.0	73.2	74.6	73.5
29	73.0	71.5	73.5	74.7	77.2	80.0	74.0	72.0
30	72.5	72.0	71.0	71.5	74.1	76.3	68.5	64.5
31	64.0	60.8	57.0	59.6	62.0	62.0	62.2	58.0
Hourly means.	70.6	69.3	68.6	72.2	75.7	76.7	74.6	72.0

Mean Time.	0^h.	3^h.	6^h.	9^h.	Noon.	3^h.	6^h.	9^h.
1871.	°	°	°	°	°	°	°	°
September 1	57.0	54.5	55.0	62.5	63.0	64.0	61.0	58.3
2	57.6	57.0	55.0	61.3	65.0	66.0	63.0	60.5
3	57.5	55.0	53.0	62.5	67.0	69.5	65.7	61.4
4	59.0	57.0	55.8	66.0	70.5	71.5	66.5	64.3
5	62.0	61.3	60.5	67.4	72.8	72.0	69.2	62.5
6	59.0	58.5	57.5	67.5	74.3	74.0	70.8	68.2
7	66.0	65.1	63.0	70.0	72.5	69.7	64.0	56.5
8	52.3	50.5	48.8	57.5	65.2	62.8	59.0	55.5
9	51.3	50.0	49.0	59.5	63.4	65.6	63.2	58.2
10	57.5	56.0	54.0	63.5	67.6	68.9	65.6	61.8
11	58.8	59.0	58.5	61.8	64.0	63.2	59.5	61.6
12	61.5	61.6	61.5	61.6	64.0	64.5	63.5	63.5
13	63.5	62.5	61.0	66.4	72.6	72.0	68.8	68.5
14	68.2	62.0	58.0	59.0	59.5	61.5	61.6	58.5
15	56.2	55.2	55.5	59.5	62.0	65.4	61.8	59.7
16	58.5	58.0	57.0	62.0	66.5	68.0	63.5	60.2
17	57.6	56.5	58.5	61.5	65.5	68.0	66.0	61.9
18	59.6	57.0	52.2	55.5	60.5	61.5	60.2	60.0
19	56.2	58.0	59.3	61.0	63.9	67.4	66.4	64.0
20	62.0	60.5	62.5	57.5	57.5	58.2	57.5	52.0
21	46.5	44.5	41.0	46.4	51.8	54.0	50.0	45.5
22	44.5	41.5	40.5	49.9	57.2	59.5	53.8	51.0
23	47.0	42.5	45.5	55.0	65.3	67.4	63.5	60.0
24	58.0	55.0	53.0	62.0	67.4	68.5	67.5	64.0
25	62.0	58.0	57.0	58.9	61.5	59.0	59.4	57.0
26	56.8	56.6	57.5	58.5	60.0	60.5	53.5	50.6
27	47.5	45.5	43.0	51.8	53.8	55.1	51.0	47.0
28	44.0	43.0	45.2	49.9	54.5	52.5	50.0	50.0
29	46.8	44.5	45.6	47.0	51.0	51.4	48.2	45.0
30	43.0	41.4	39.5	47.8	53.8	56.5	54.0	48.5
Hourly means.	55.9	54.2	53.4	59.0	63.2	63.9	60.9	57.9

Mean Time.	0^h.	3^h.	6^h.	9^h.	Noon.	3^h.	6^h.	9^h.
1871.	°	°	°	°	°	°	°	°
October 1	45.5	43.5	43.5	49.0	56.0	57.6	56.1	50.7
2	48.5	47.5	44.8	54.8	60.5	64.2	57.6	54.5
3	52.5	49.6	51.2	54.2	59.5	66.8	61.5	54.0
4	52.5	49.5	49.2	55.2	67.5	65.5	62.0	57.0
5	54.0	51.5	49.5	58.0	66.5	66.5	63.5	61.0
6	64.0	64.5	64.7	66.2	68.8	68.5	67.0	66.5
7	59.2	51.0	48.5	48.6	52.4	53.0	49.0	49.0
8	44.2	40.0	42.0	49.0	58.5	60.5	54.0	51.4
9	50.0	48.5	47.4	54.4	64.0	64.5	58.5	56.0
10	57.0	58.5	58.8	62.0	68.6	68.0	66.3	65.5
11	66.2	65.5	65.0	67.0	69.0	68.0	51.2	44.0
12	47.4	46.0	45.8	46.0	50.0	49.0	47.8	45.8
13	42.5	40.8	39.2	46.2	53.9	55.2	49.8	47.5
14	44.5	44.0	43.0	49.4	61.8	63.5	58.5	55.4
15	54.5	56.0	57.6	67.0	71.8	73.0	69.5	64.2
16	61.0	58.0	57.5	56.2	56.6	58.9	56.0	54.9
17	53.0	49.2	45.6	51.6	56.5	59.2	54.5	51.0
18	49.5	47.2	44.0	49.2	51.0	48.3	44.3	42.0
19	42.0	38.0	35.5	42.5	52.5	54.8	50.0	48.5
20	47.5	46.5	46.5	48.0	50.5	51.5	47.0	43.2
21	39.5	37.8	35.6	41.9	55.0	57.5	52.0	49.0
22	47.0	48.5	47.5	53.0	61.0	65.0	57.6	55.5
23	54.4	53.0	49.5	57.0	66.6	66.6	61.9	60.0
24	60.0	58.0	51.8	59.5	64.4	65.5	62.5	62.5
25	60.0	57.6	54.5	55.2	56.2	56.5	57.2	57.2
26	57.4	57.6	57.0	59.2	64.2	65.0	65.5	64.0
27	64.0	61.0	60.5	56.8	54.0	55.0	55.3	48.0
28	49.0	46.7	46.0	42.5	46.0	46.5	40.5	37.8
29	36.3	35.0	35.0	39.5	45.5	47.5	43.5	41.0
30	38.5	34.8	34.0	41.6	52.6	54.2	50.0	48.5
31	48.0	47.0	47.0	53.0	57.3	59.5	58.0	57.5
Hourly means.	51.3	49.4	48.3	52.7	58.7	59.8	55.7	53.2

Mean Time.	0^h.	3^h.	6^h.	9^h.	Noon.	3^h.	6^h.	9^h.
1871.	°	°	°	°	°	°	°	°
November 1	58.0	58.5	59.0	60.0	64.6	50.5	48.0	46.5
2	42.0	39.5	38.6	42.0	46.7	49.8	45.3	43.3
3	39.5	38.4	38.2	45.0	51.0	53.0	46.5	43.5
4	43.0	43.5	44.2	45.2	47.0	47.0	46.5	46.5
5	44.0	44.0	44.5	46.0	47.3	51.5	45.5	43.5
6	40.0	39.1	38.0	38.5	42.5	42.4	39.0	36.0
7	38.2	38.5	34.5	55.5	40.0	41.2	39.0	35.7
8	33.0	33.5	33.2	34.5	43.2	45.0	42.8	40.5
9	39.0	37.0	34.5	39.7	46.8	46.5	44.5	44.5
10	44.5	45.5	46.0	45.6	47.5	45.9	47.0	46.0
11	42.2	40.0	59.5	41.6	44.0	43.2	39.6	37.5
12	36.5	33.0	33.5	35.5	41.6	44.9	37.5	32.6
13	32.0	30.0	30.4	33.5	37.2	37.5	36.8	37.0
14	38.3	39.5	42.3	47.5	54.0	56.9	54.0	53.0
15	48.5	46.0	39.5	38.5	39.5	36.0	34.0	32.5
16	30.9	32.5	32.2	33.0	34.5	34.3	33.5	32.5
17	31.5	31.0	31.0	33.5	36.4	39.0	36.0	33.6
18	32.0	31.5	30.5	35.0	45.5	47.0	40.5	34.5
19	31.5	30.5	29 2	33.7	39.5	43.0	42.7	42.5
20	43.0	42.5	42.5	45.4	50.6	50.5	51.6	51.2
21	50.5	46.0	41.5	41.7	43.7	44.0	45.3	42.5
22	38.2	36.2	34.0	35.5	37.5	37.3	35.5	34.0
23	31.5	29.7	28.0	27.5	33.0	33.9	32.6	32.5
24	34.0	35.5	36.8	39.3	41.7	41.0	40.6	39.5
25	39.2	34.0	34.7	38.2	42.8	45.3	41.0	37.2
26	39.0	39.8	41.5	44.4	50.2	56.0	52.0	51.9
27	53.2	54.0	53.0	51.3	46.7	43.5	39.2	37.0
28	32.5	31.5	28.5	29.6	31.8	30.8	29.9	29.5
29	29.5	30.0	30.0	30.6	32.5	32.0	29.0	26.0
30	24.2	25.0	28.0	27.0	28.8	30.7	29.0	29.0
Hourly means.	38.7	37.9	37.2	39.8	42.9	43.7	40.8	39.1

Mean Time.	0^h.	3^h.	6^h.	9^h.	Noon.	3^h.	6^h.	9^h.
1871.	°	°	°	°	°	°	°	°
December 1	27.0	26.0	23.0	26.0	26.0	29.0	27.0	23.8
2	24.5	24.0	23.0	28.4	35.0	34.3	30.2	28.0
3	28.5	29.5	29.8	31.8	32.6	34.2	34.0	34.0
4	33.5	34.0	34.1	34.5	36.6	37.4	32.5	20.6
5	18.0	. .	. .	. .	. .	18.7	15.0	14.0
6	14.0	13.5	12.5	12.0	25.0	28.0	23.5	24.2
7	27.0	29.5	28.0	32.5	39.5	45.5	38.0	38.5
8	37.0	35.0	35.0	38.0	43.5	38.0	36.0	32.5
9	26.5	26.0	27.5	31.2	36.0	36.3	27.0	26.0
10	22.0	19.0	19.0	25.5	39.0	38.0	34.5	29.0
11	28.3	31.5	32.0	33.0	44.5	40.0	37.0	31.0
12	32.5	37.5	37.5	36.5	43.5	41.5	36.0	23.0
13	34.5	35.0	35.0	37.0	44.0	44.0	39.5	38.5
14	33.5	30.2	27.0	27.1	30.5	32.0	26.0	22.5
15	18.5	21.0	22.5	24.5	25.2	26.5	24.5	20.0
16	16.5	15.0	14.0	19.0	31.5	31.4	29.0	28.0
17	30.0	28.0	28.5	30.0	34.2	36.8	37.0	36.0
18	34.7	35.0	35.5	36.5	45.0	48.0	40.5	35.5
19	30.0	32.0	30.8	31.0	30.8	31.2	30.2	27.0
20	27.5	25.5	21.0	17.0	14.4	13.0	8.5	6.0
21	6.0	3.0	1.5	2.4	8.0	10.5	9.0	7.6
22	11.0	14.5	16.0	16.3	21.5	22.6	21.8	21.6
23	22.0	22.9	23.5	25.1	29.0	31.6	32.8	38.2
24	4.07	40.5	38.2	33.8	42.5	44.9	40.0	37.5
25	33.5	34.0	35.0	36.0	43.5	55.7	50.8	37.0
26	36.0	34.5	34.0	41.5	46.6	45.2	43.4	41.2
27	40.3	39.7	38.5	40.9	40.6	35.0	29.2	29.0
28	23.0	19.0	18.0	17.0	21.5	23.0	20.9	22.5
29	24.0	25.0	28.0	31.0	32.6	32.8	33.2	33.5
30	33.2	32.8	32.8	33.4	33.9	33.3	33.0	33.0
31	34.0	34.0	34.0	36.0	37.3	40.3	42.4	50.2
Hourly means.	27.4	27.6	27.2	28.8	33.8	34.2	31.0	29.0

Mean Time.	0^h.	3^h.	6^h.	9^h.	Noon.	3^h.	6^h.	9^h.
1871.	°	°	°	°	°	°	°	°
January 1	35.0	32.0	25.0	41.3	90.0	88.0	59.0	30.2
2	27.2	25.0	29.5	43.6	70.0	71.0	48.5	41.0
3	36.0	30.2	25.0	29.0	86.0	89.0	65.0	29.0
4	26.5	25.0	23.0	28.2	83.0	85.5	58.3	29.5
5	29.5	32.5	35.0	43.2	70.0	72.2	54.2	49.0
6	46.0	44.0	43.0	44.5	55.5	66.0	55.1	38.0
7	33.0	28.0	26.0	39.0	86.8	86.0	56.2	24.2
8	24.5	25.0	23.5	33.5	39.0	38.0	32.0	29.5
9	23.5	21.0	20.5	23.6	86.5	85.9	67.8	15.0
10	10.5	0.0	2.0	23.0	44.7	48.0	31.0	25.0
11	26.5	27.0	28.0	34.1	52.2	46.8	43.0	35.0
12	33.0	32.0	29.0	34.9	96.0	99.0	85.5	42.0
13	33.5	30.0	28.0	36.5	89.5	95.0	75.5	47.2
14	41.9	38.0	38.0	46.0	77.0	100.0	81.0	51.0
15	50.5	47.5	50.5	56.8	88.0	90.5	62.6	53.5
16	50.0	48.0	45.0	42.2	88.5	90.2	71.0	36.5
17	32.0	28.6	27.0	37.0	89.0	95.5	77.0	30.2
18	28.5	29.5	31.5	41.2	93.0	82.5	58.6	35.0
19	31.5	30.0	28.0	36.2	88.7	91.7	78.0	34.8
20	34.0	30.0	30.0	43.0	54.0	73.5	65.2	33.5
21	33.5	32.8	33.8	62.5	99.6	93.5	80.0	45.0
22	44.0	40.0	35.0	50.5	88.5	90.5	81.5	30.0
23	26.9	22.0	19.0	20.0	24.0	25.0	22.0	14.5
24	13.8	13.0	12.0	26.0	81.0	82.2	75.0	24.5
25	20.0	20.0	17.0	28.0	65.0	51.0	41.9	29.9
26	23.0	19.0	18.0	20.0	20.0	30.0	24.0	23.0
27	18.5	18.0	18.0	32.5	89.0	94.8	82.4	28.0
28	26.0	22.3	23.5	37.0	54.8	53.0	25.5	24.0
29	23.0	22.0	23.0	44.0	99.5	97.0	78.0	32.0
30	33.0	33.0	32.0	41.2	51.0	50.0	49.0	33.0
31	33.0	33.0	33.5	39.0	46.0	45.0	41.0	39.2
Hourly means.	30.6	28.3	27.5	37.3	72.4	76.4	58.9	33.3

Mean Time.	0^h.	3^h.	6^h.	9^h.	Noon.	3^h.	6^h.	9^h.
1871.	°	°	°	°	°	°	°	°
February 1	40.0	45.2	41.0	42.0	44.5	44.8	40.0	34.5
2	34.0	34.0	34.5	40.4	46.5	49.5	49.0	39.5
3	33.0	30.0	29.0	47.2	90.0	98.0	87.0	35.6
4	45.0	38.0	36.0	62.1	98.0	. .	98.0	42.0
5	40.5	34.0	28.2	35.2	79.8	81.5	81.5	18.0
6	15.0	14.0	12.0	23.5	82.0	84.0	77.5	23.9
7	19.5	18.0	15.0	50.0	87.0	85.0	46.0	31.0
8	29.0	27.5	27.5	39.0	68.5	70.9	64.0	34.0
9	30.0	31.0	32.0	39.2	61.2	94.0	86.5	45.0
10	35.0	33.5	29.0	67.0	96.5	97.0	88.5	33.5
11	26.0	22.5	20.5	47.8	88.2	88.0	71.0	31.5
12	31.2	30.0	31.0	. .	40.0	45.0	45.0	31.9
13	31.0	27.5	28.0	46.2	69.0	69.2	54.5	30.0
14	25.5	26.5	25.0	30.0	64.8	97.0	57.2	29.0
15	18.0	12.5	11.0	61.5	93.0	100.5	78.0	. .
16	32.3	33.6	33.2	74.3	105.5	104.0	92.0	37.5
17	30.0	27.0	22.5	48.0	73.0	68.5	59.5	39.0
18	37.0	39.0	51.0	54.0	70.5	108.0	97.2	42.0
19	35.6	30.0	26.0	49.0	96.0	102.0	90.0	45.2
20	38.0	38.0	35.6	66.5	105.5	108.2	101.5	43.5
21	40.0	35.0	39.0	46.0	49.0	47.2	44.0	35.5
22	31.0	24.2	20.0	54.0	86.0	86.0	73.0	29.0
23	25.4	26.0	27.6	36.5	52.8	49.5	42.0	34.0
24	34.0	35.0	36.2	44.9	48.0	53.5	55.0	48.5
25	45.5	43.5	43.2	70.0	108.0	110.8	67.8	55.5
26	52.5	45.0	44.0	50.0	54.0	60.5	49.5	45.0
27	46.0	46.5	44.0	67.6	92.0	96.8	87.0	34.5
28	32.0	31.0	31.5	66.5	97.5	100.0	96.0	37.5
Hourly means.	33.2	31.4	30.5	50.3	76.7	81.5	70.6	36.5

Mean Time.	0^h.	3^h.	6^h.	9^h.	Noon.	3^h.	6^h.	9^h.
1871.	°	°	°	°	°	°	°	°
March 1	40.0	41.5	42.0	65.0	87.0			
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Hourly means.								

Mean Time.	0^h.	3^h.	6^h.	9^h.	Noon.	3^h.	6 .	9^h.
1871.	°	°	°	°	°	°	°	°
April 1								
2								
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Hourly means.								

Mean Time.	0^h.	3^h.	6^h.	9^h.	Noon.	3^h.	6^h.	9^h.
1871.	°	°	°	°	°	°	°	°
May 1								
2								
3								
4								
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Hourly means.								

Mean Time.	0^h.	3^h.	6^h.	9^h.	Noon.	3^h.	6^h.	9^h.
1871.	°	°	°	°	°	°	°	°
June 1								
2								
3								
4	67.5	63.0	71.4	142.0	152.2	158.7	123.2	103.5
5	65.0	64.0	68.5	133.5	147.5	147.0	141.8	87.0
6	70.0	65.5	67.0	132.0	145.0	146.6	147.0	82.5
7	67.2	69.0	74.0	130.0	148.0	154.5	146.5	65.0
8	64.0	70.0	72.0	88.0	145.0	149.0	132.5	73.0
9	67.0	64.0	65.0	131.0	147.5	147.5	141.0	92.5
10	64.0	58.0	66.5	112.5	139.2	145.5	142.0	106.0
11	67.5	66.0	72.0	87.0	104.0	127.0	126.0	86.7
12	71.0	71.0	69.0	83.0	121.0	141.0	135.0	90.0
13	57.0	54.0	59.0	136.0	141.0	143.0	139.0	101.0
14	68.2	68.0	64.5	127.0	142.0	143.0	138.0	79.5
15	66.0	62.0	63.5	68.0	142.0	153.0	135.5	80.5
16	65.0	56.0	53.0	126.0	138.2	148.5	126.6	82.0
17	60.0	59.0	62.5	107.0	105.0	96.0	81.0	69.5
18	71.0	71.2	71.5	119.9	154.0	150.5	138.2	80.5
19	64.0	60.0	64.0	127.5	141.0	145.4	143.0	109.0
20	67.0	64.5	65.0	133.0	144.0	147.0	140.0	90.0
21	75.0	67.5	67.0	119.5	140.5	146.0	144.0	86.5
22	66.0	56.0	66.0	124.0	145.2	145.7	145.0	100.0
23	68.0	64.0	69.0	131.1	152.0	154.1	144.0	100.5
24	70.0	67.0	75.0	131.5	152.0	150.5	143.0	77.5
25	70.5	68.0	70.5	80.2	98.0	104.0	92.0	69.5
26	58.0	60.0	68.2	92.0	146.0	149.0	105.0	79.0
27	69.0	67.5	69.5	132.0	148.5	145.2	140.0	95.5
28	70.0	65.0	71.5	99.5	153.0	154.0	145.5	98.0
29	69.5	63.6	66.0	120.2	143.0	140.6	138.5	95.0
30	59.0	53.5	58.5	124.0	139.0	141.9	140.5	74.0
Hourly means.	66.5	63.6	67.0	116.2	139.8	143.5	133.8	87.2

Mean Time.	0^h.	3^h.	6^h.	9^h.	Noon.	3 .	6^h.	9^h.
1871.	°	°	°	°	°	°	°	°
July 1	69.0	67.0	64.0	66.0	82.5	90.0	88.5	69.0
2	64.2	66.6	69.0	120.5	145.0	148.0	108.0	84.5
3	72.5	68.0	76.5	132.0	145.6	149.5	144.0	73.0
4	68.0	66.0	74.5	86.0	144.0	149.5	109.0	72.5
5	68.0	69.0	69.5	70.0	144.2	149.5	144.0	101.0
6	68.0	66.0	69.5	137.0	157.0	155.8	147.0	93.0
7	76.0	73.0	78.5	135.0	147.5	142.0	143.7	67.6
8	65.0	63.2	64.0	132.0	145.8	146.4	145.2	106.0
9	66.5	64.5	67.0	132.0	145.0	146.5	81.0	70.0
10	70.0	70.0	70.5	134.5	156.0	146.0	112.0	74.5
11	72.0	72.0	75.5	131.5	148.5	143.2	78.5	72.0
12	71.0	70.0	78.5	82.5	135.5	106.6	88.0	86.5
13	71.5	67.0	73.0	127.8	148.7	153.0	144.0	115.0
14	72.0	73.0	75.5	102.7	147.0	146.8	146.0	107.2
15	71.0	71.0	73.0	129.0	156.0	152.5	145.0	105.0
16	73.0	70.0	71.0	139.0	150.0	155.0	148.0	83.0
17	74.0	72.0	76.0	126.0	149.5	150.0	140.2	107.0
18	57.0	51.0	51.0	60.0	147.0	141.0	128.0	77.0
19	70.0	66.5	65.0	119.0	137.2	145.0	104.0	73.0
20	68.0	60.0	59.0	119.0	139.0	142.0	140.0	78.2
21	58.0	57.0	61.0	120.2	147.0	144.5	112.0	60.8
22	54.0	53.0	53.5	121.0	136.5	146.5	133.0	78.0
23	55.0	53.5	54.0	124.0	138.0	145.5	137.0	98.0
24	60.0	52.0	53.5	123.5	143.5	144.0	135.8	85.0
25	59.2	55.0	54.0	92.0	90.0	. .	65.0	65.0
26	59.5	58.0	67.0	126.0	136.5	146.0	138.0	61.0
27	60.5	65.0	67.0	77.2	143.0	140.0	78.0	68.5
28	68.0	63.5	68.0	121.0	130.0	138.0	73.0	64.0
29	60.0	58.0	63.0	124.0	119.0	135.5	74.5	64.0
30	60.5	61.5	67.9	114.0	146.0	89.0	84.3	62.5
31	63.0	64.0	67.0	124.0	131.0	77.2	82.0	64.0
Hourly means.	66.0	64.1	67.0	114.5	139.7	138.8	116.0	80.2

Mean Time.	0^h.	3^h.	6 .	9^h.	Noon.	3^h.	6^h.	9^h.
1871.	°	°	°	°	°	°	°	°
August 1	58.0	58.0	62.5	123.0	127.2	124.5	106.0	68.0
2	64.0	66.2	69.2	90.5	123.7	101.0	106.0	70.0
3	66.2	65.0	68.0	125.0	142.9	120.0	93.5	74.0
4	72.0	70.0	74.0	99.0	114.0	142.5	78.0	24.0
5	71.0	71.0	72.0	102.0	91.6	140.9	97.0	73.2
6	70.0	67.0	69.0	96.0	109.0	131.5	103.1	70.0
7	68.0	66.0	71.3	91.0	143.0	140.0	87.0	78.0
8	73.5	73.0	75.0	123.0	136.0	123.5	90.5	76.5
9	72.5	69.5	71.0	129.0	144.5	141.0	104.0	69.9
10	69.0	63.0	62.2	122.8	133.5	138.5	81.0	65.0
11	66.5	64.5	63.0	123.0	142.0	124.0	83.0	68.0
12	66.2	66.0	70.5	112.0	137.0	151.0	96.0	69.2
13	69.0	66.0	68.0	126.5	149.5	136.0	82.0	78.6
14	69.0	67.0	71.0	128.0	145.3	144.9	90.5	74.5
15	71.5	69.5	73.0	128.0	144.1	129.0	89.0	76.0
16	72.0	69.0	71.0	130.0	140.8	146.0	85.5	76.0
17	72.5	70.0	72.5	129.0	126.0	127.5	74.0	66.5
18	67.2	64.0	67.2	107.5	134.0	139.0	85.3	65.6
19	64.0	59.0	62.0	117.5	129.7	127.5	76.9	58.0
20	57.8	53.0	54.5	108.0	135.5	132.0	77.0	59.8
21	56.0	55.0	59.0	114.0	137.5	136.0	84.5	68.5
22	65.3	68.0	70.2	100.0	101.0	137.3	83.0	70.5
23	69.0	67.0	65.9	77.3	89.5	123.0	79.0	71.5
24	70.0	69.5	65.0	99.0	119.0	137.0	84.0	71.2
25	76.0	73.0	73.0	105.0	134.3	144.7	83.0	73.0
26	71.5	70.0	73.0	119.0	135.7	100.0	83.5	71.5
27	70.0	68.5	76.0	102.0	113.0	86.2	76.5	75.0
28	73.0	72.0	22.0	81.2	84.0	92.5	76.4	71.5
29	71.0	71.0	74.0	119.0	131.5	141.3	75.0	70.5
30	70.5	70.0	70.0	91.0	121.5	135.0	71.5	66.0
31	59.5	57.0	55.0	121.0	134.0	132.0	65.0	58.0
Hourly means.	68.1	66.4	66.8	110.9	127.4	129.8	85.4	70.3

Mean Time.	0^{h}.	3^{h}.	6^{h}.	9^{h}.	Noon.	3^{h}.	6^{h}.	9^{h}.
1871.	°	°	°	°	°	°	°	°
September 1	53.0	50.0	53.0	118.0	98.0	108.0	67.5	59.5
2	55.0	53.0	53.0	121.5	123.0	133.0	66.8	58.5
3	54.0	51.0	50.5	120.0	139.3	135.0	70.0	59.0
4	54.5	53.2	53.5	119.0	139.5	136.5	70.5	62.0
5	58.0	56.0	60.0	121.0	136.8	134.0	71.2	60.5
6	55.0	54.5	55.5	83.0	141.0	131.1	74.0	65.0
7	62.0	61.0	61.5	108.4	137.0	117.3	69.0	61.0
8	54.0	52.0	49.0	117.0	144.5	129.7	64.0	54.0
9	48.0	45.0	46.0	120.0	133.5	129.0	67.2	56.5
10	54.0	52.0	57.0	119.0	133.6	132.2	68.0	59.5
11	56.1	55.0	58.0	89.0	96.5	78.0	65.5	63.5
12	64.5	66.0	66.5	70.0	106.0	90.0	69.0	66.0
13	65.0	60.0	59.5	119.0	124.0	119.5	74.5	70.0
14	67.0	64.5	62.0	76.8	87.0	73.0	60.0	57.5
15	55.0	55.0	55.0	60.8	66.5	71.0	60.5	59.5
16	57.5	56.5	56.5	92.5	96.0	117.0	66.0	57.0
17	55.0	56.0	59.0	96.0	130.0	118.0	69.9	60.3
18	58.0	57.0	55.0	109.0	125.5	113.5	59.0	58.5
19	53.5	57.0	59.5	76.0	87.5	86.5	65.5	61.0
20	59.0	60.0	62.0	59.0	64.0	69.0	58.0	54.0
21	45.0	40.0	39.0	104.0	119.0	114.2	49.0	42.5
22	40.0	37.0	37.0	103.0	124.5	118.9	50.5	47.0
23	43.0	41.0	44.5	78.5	126.5	121.0	63.5	56.5
24	53.5	52.0	53.0	107.0	126.1	108.0	67.0	62.0
25	60.0	57.0	52.5	98.0	103.9	74.0	62.0	57.0
26	56.5	55.0	59.0	67.0	95.0	88.0	53.2	46.0
27	44.0	42.5	39.0	104.0	115.0	103.0	47.8	44.0
28	41.5	40.5	45.5	102.0	120.0	76.0	50.0	48.0
29	45.0	40.0	42.0	103.0	120.2	107.8	47.5	41.0
30	38.5	37.0	55.0	104.8	120.5	114.0	50.5	44.5
Hourly means.	53.5	51.9	53.3	98.9	116.0	108.2	62.6	56.4

Mean Time.	0^{h}.	3^{h}.	6^{h}.	9^{h}.	Noon.	3^{h}.	6^{h}.	9^{h}.
1871.	°	°	°	°	°	°	°	°
October 1	43.5	38.8	39.0	90.2	121.2	111.5	53.0	46.0
2	44.5	44.0	42.0	100.5	128.0	120.5	58.0	51.5
3	47.5	46.5	50.0	65.5	80.6	115.0	58.0	49.5
4	47.0	45.5	45.0	95.5	128.2	120.0	62.5	53.0
5	50.0	49.0	46.5	104.0	108.0	88.2	63.5	61.0
6	63.0	63.0	64.0	68.0	80.1	71.0	65.0	65.0
7	57.8	49.5	46.0	100.0	118.2	103.2	47.5	42.0
8	39.0	37.0	39.0	87.0	116.0	101.0	50.0	48.0
9	45.0	43.2	42.4	101.0	124.0	101.0	58.0	51.0
10	54.0	56.5	56.0	82.5	102.5	88.0	65.0	63.0
11	65.5	64.5	64.0	77.0	80.2	77.0	51.5	48.0
12	47.2	46.0	46.0	93.0	98.0	86.0	43.0	41.5
13	38.0	36.5	38.0	90.5	116.0	82.0	46.5	43.0
14	40.0	41.0	42.0	88.7	118.0	89.0	54.9	50.8
15	48.3	48.0	55.0	92.0	126.0	103.0	67.5	64.0
16	58.0	58.0	57.5	60.0	67.0	84.0	54.0	51.0
17	48.0	43.5	43.0	103.0	120.0	88.7	51.0	49.0
18	45.5	41.0	40.0	87.0	112.5	88.0	44.0	37.5
19	36.0	33.0	32.0	94.0	114.0	76.0	47.5	46.0
20	45.0	44.0	43.0	105.8	114.8	79.0	44.0	40.0
21	36.0	33.0	31.5	94.0	115.0	77.0	47.0	45.0
22	44.2	44.5	43.5	103.0	119.0	93.0	56.0	52.0
23	50.0	47.0	46.0	99.0	122.0	87.5	61.0	59.5
24	59.0	57.0	54.5	72.8	76.5	75.0	61.5	61.0
25	59.5	57.3	54.0	60.5	64.2	58.0	56.0	57.0
26	56.5	56.5	56.0	62.2	73.0	77.6	64.0	62.5
27	63.0	60.0	60.0	60.0	70.0	65.0	46.0	43.3
28	44.2	43.5	45.0	96.0	108.0	90.0	39.0	36.0
29	33.5	30.0	31.0	88.0	107.5	88.0	40.0	37.0
30	33.5	31.5	30.0	87.5	107.0	80.2	47.0	45.0
31	46.0	43.6	44.2	73.5	76.0	76.3	58.0	57.0
Hourly means.	48.0	46.2	46.0	86.5	103.6	88.4	53.5	50.2

Mean Time.	0^{h}.	3^{h}.	6^{h}.	9^{h}.	Noon.	3^{h}.	6^{h}.	9^{h}.
1871.	°	°	°	°	°	°	°	°
November 1	57.2	57.5	58.0	62.0	79.0	84.0	47.0	44.0
2	40.5	39.0	37.0	93.0	110.0	90.0	42.0	36.5
3	34.0	33.0	34.0	75.0	114.0	81.0	43.0	42.0
4	42.0	43.0	44.0	60.5	62.0	54.5	46.0	46.0
5	44.0	42.5	44.5	51.0	65.0	74.0	50.9	39.0
6	36.0	35.5	36.0	58.5	104.0	77.5	35.0	33.2
7	39.0	40.0	32.0	56.0	103.0	79.0	35.7	34.0
8	29.0	29.0	28.5	55.0	59.0	68.2	42.0	36.0
9	36.0	32.0	30.0	58.2	97.1	56.0	64.0	46.0
10	43.5	44.0	45.0	60.0	57.0	56.0	45.0	45.0
11	45.0	40.8	40.5	62.0	110.5	76.2	42.0	37.0
12	32.0	29.0	29.0	74.5	105.0	84.3	37.5	29.0
13	29.0	28.8	29.0	51.5	62.1	49.0	38.2	39.0
14	39.5	40.5	42.0	48.0	56.0	57.0	53.0	52.0
15	48.5	46.0	42.0	61.2	74.0	41.2	36.5	35.0
16	32.0	35.0	35.0	43.0	51.0	48.0	35.5	33.5
17	32.0	31.2	31.5	59.0	65.5	79.0	33.2	31.5
18	30.0	29.5	28.5	60.5	103.0	76.5	35.2	31.5
19	28.5	27.5	26.0	37.5	51.1	52.0	41.0	42.5
20	43.0	43.2	43.0	51.6	61.0	55.3	49.5	50.6
21	49.5	45.0	39.0	54.0	72.0	52.0	43.0	40.9
22	37.0	34.0	30.0	50.0	57.0	55.0	37.0	35.0
23	31.0	29.0	24.5	52.0	95.2	54.2	34.0	33.0
24	34.5	36.0	38.0	39.0	44.2	45.0	41.0	37.0
25	36.7	30.0	32.0	80.0	101.0	78.2	36.0	. .
26	39.0	39.0	40.2	53.5	73.0	65.0	49.5	51.0
27	52.0	53.0	52.0	69.5	83.0	58.5	40.2	38.9
28	34.0	31.5	26.5	56.0	48.5	37.5	29.7	28.5
29	29.0	28.5	28.0	41.0	57.0	58.5	26.0	24.0
30	20.2	23.0	27.0	40.0	71.0	46.2	25.5	28.0
Hourly means.	37.4	36.5	35.8	57.1	76.4	63.0	40.5	37.9

Mean Time.	0^{h}.	3^{h}.	6^{h}.	9^{h}.	Noon.	3^{h}.	6^{h}.	9^{h}.
1871.	°	°	°	°	°	°	°	°
December 1	26.0	25.0	19.2	46.0	64.0	47.0	22.0	20.0
2	21.5	21.0	18.5	43.0	93.0	70.2	26.0	24.0
3	27.0	28.5	28.5	38.0	54.0	39.0	33.5	33.0
4	34.0	33.0	33.0	38.0	47.2	37.5	31.0	20.5
5	16.0	11.0	9.2	28.0	79.2	57.0	14.0	11.0
6	10.5	10.0	9.0	11.5	82.6	59.0	23.5	27.8
7	28.5	29.0	23.5	40.0	96.5	75.0	35.0	36.0
8	34.0	32.5	31.0	46.0	67.6	73.0	34.5	32.5
9	24.0	23.7	26.0	39.5	91.6	64.1	24.0	20.5
10	17.0	16.0	14.0	30.0	94.0	72.0	27.2	25.0
11	25.0	28.0	27.0	40.0	101.0	62.1	30.0	30.0
12	30.0	37.0	36.0	41.9	77.0	56.0	33.0	28.0
13	32.0	34.0	32.0	45.0	93.0	69.0	40.0	38.5
14	31.2	29.0	27.0	40.0	88.3	63.9	25.0	20.0
15	16.2	20.0	21.5	27.0	37.0	35.0	19.0	16.0
16	14.0	12.5	12.0	27.0	85.0	63.0	26.0	24.7
17	29.0	25.0	28.0	33.5	51.0	41.5	35.5	35.0
18	31.5	34.5	34.5	37.0	93.0	67.5	41.0	32.0
19	28.0	30.0	27.0	32.0	39.0	34.5	28.0	22.0
20	27.0	24.0	17.8	34.0	93.0	55.5	4.2	4.2
21	4.2	0.0	—2.0	15.0	90.5	63.0	2.5	3.0
22	9.0	15.0	15.5	25.0	44.0	34.0	. .	. .
23	. .	. .	. .	33.0	46.0	39.0	31.5	37.0
24	38.5	37.0	33.5	40.2	99.0	74.2	39.0	35.5
25	32.0	35.0	35.2	41.0	66.0	87.0	43.5	40.0
26	34.0	34.0	33.0	57.5	61.5	52.5	43.5	40.5
27	39.3	38.5	37.5	46.5	99.0	62.5	31.5	26.0
28	20.0	15.0	14.0	22.4	41.0	32.0	16.5	24.0
29	24.0	24.3	27.5	36.0	34.8	35.5	32.0	32.0
30	31.7	32.0	32.0	34.0	37.0	35.0	32.5	33.0
31	33.0	33.0	33.5	41.5	60.0	40.0	41.9	49.0
Hourly means.	25.6	25.6	24.5	35.8	71.2	54.7	28.9	27.4

MONTHLY MAXIMUM AND MINIMUM READINGS OF THE BAROMETER (REDUCED TO 32° F.) AT THE HOURS OF OBSERVATION IN 1871.

Month.	Day and hour.	Maximum.	Day and hour.	Minimum.	Range.
	d. h.	in.	d. h.	in.	in.
January	19, 9 a. m.	30.584	21, 9 p. m.	29.618	0.966
February . . .	23, 0 a. m.	30.488	18, noon	29.275	1.213
March	29, 9 a. m.	30.256	27, 3 a. m.	29.402	0.854
April	24, 9 a. m.	30.413	11, 6 p. m.	29.343	1.070
May	25, 9 a. m.	30.227	6, 6 p. m.	29.493	0.734
June	25, 9 a. m.	30.095	12, 3 a. m.	29.483	0.612
July	23, 9 a. m.	30.123	19, 6 p. m.	29.565	0.558
August	23, 9 a. m.	30.209	30, 3 p. m.	29.515	0.694
September . . .	30, 9 a. m.	30.353	26, noon	29.666	0.687
October . . .	13, 9 a. m.	30.489	6, 3 p. m.	29.659	0.830
November . . .	12, 9 a. m.	30.479	14, 6 p. m.	29.188	1.291
December . . .	28, 9 a. m.	30.538	4, 3 p. m.	29.501	1.037

	in.
Maximum for the year, January 19, 9^{h} a. m.	30.584
Minimum for the year, November 14, 6^{h} p. m.	29.188
Range for the year	1.396
Mean monthly maximum range	0.879

MAXIMUM AND MINIMUM TEMPERATURE IN 1871.

Day.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max	Min.	Max.	Min.	Max.	Min.
1871.	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
1	41.5	28.0	40.7	36.0	66.0	38.4	44.2	42.5	71.0	53.5	78.2	66.9	69.4	62.5	85.7	61.0	77.5	54.6	72.5	42.5	71.5	53.0	32.0	21.8
2	48.4	28.0	41.2	34.0	65.0	34.5	59.0	37.6	73.0	50.3	76.4	67.0	84.5	66.0	86.2	67.0	80.7	55.5	78.5	44.2	58.6	39.6	40.7	22.0
3	41.5	22.8	48.5	29.0	67.7	51.0	60.0	40.0	64.0	55.6	91.8	69.8	87.0	70.0	88.0	67.0	85.8	52.0	75.0	50.0	61.5	38.0	34.5	29.5
4	36.3	23.0	50.5	36.5	39.4	33.5	67.0	45.5	60.5	57.2	90.5	68.5	83.5	68.5	91.5	73.5	88.0	55.5	82.5	49.0	48.7	44.0	39.5	33.0
5	51.0	29.5	36.5	19.5	53.5	32.5	69.0	49.4	71.0	52.0	88.3	68.0	85.5	68.0	87.8	72.5	85.5	60.0	77.5	49.0	57.0	44.0	21.5	9.5
6	51.0	39.8	34.0	11.0	51.0	38.9	59.5	42.5	54.0	52.0	88.0	65.0	91.2	67.6	83.5	69.0	88.0	57.5	70.0	64.0	52.3	39.0	30.0	11.0
7	34.5	25.0	36.0	18.5	54.0	30.0	74.5	48.0	66.0	46.0	90.5	69.7	89.7	74.8	90.0	70.5	85.0	63.0	66.5	49.5	51.0	35.5	52.4	25.0
8	29.5	23.0	39.3	28.0	53.0	39.5	88.3	51.0	70.7	47.5	82.0	70.0	86.5	65.5	88.8	75.0	79.1	52.0	69.0	41.0	52.8	31.0	47.0	35.7
9	24.5	17.0	47.3	31.2	70.5	42.5	81.3	54.8	57.5	49.0	84.5	65.4	92.0	68.6	90.3	72.0	80.5	49.5	74.3	47.0	54.0	34.0	39.0	27.0
10	24.5	1.8	46.5	29.5	62.0	48.0	80.0	55.0	62.6	44.0	87.0	61.0	91.5	72.5	85.3	64.8	83.6	54.0	74.5	57.0	50.3	44.5	44.0	17.2
11	35.0	23.6	38.1	22.0	64.3	41.5	78.0	60.5	66.6	40.3	81.4	70.5	90.0	74.5	87.5	64.8	71.5	58.0	73.0	52.5	52.5	42.0	51.0	26.5
12	55.0	25.0	32.5	26.5	59.8	47.0	65.5	48.5	59.5	45.3	78.0	60.2	85.5	72.5	90.5	69.3	75.0	63.0	57.2	46.0	54.5	33.5	46.0	31.0
13	57.0	28.2	34.5	28.5	57.5	33.6	70.0	43.0	76.8	50.5	85.2	58.0	87.2	68.5	90.0	69.2	87.0	62.0	65.9	38.5	43.2	32.0	50.2	33.2
14	61.5	35.0	31.7	23.5	56.5	39.5	56.0	47.5	69.5	41.0	83.5	64.5	85.0	74.5	92.5	71.3	67.5	61.5	70.6	41.5	. .	. .	41.5	28.0
15	60.5	44.5	37.6	11.0	70.6	41.6	66.8	44.0	75.3	48.0	81.8	62.0	89.0	72.5	94.5	73.4	65.5	55.2	81.5	50.2	46.0	37.0	29.0	19.0
16	45.3	36.0	50.5	30.2	58.5	44.5	64.8	42.5	81.0	53.0	80.0	54.5	91.0	67.2	95.5	74.0	78.0	56.6	72.2	56.5	39.3	32.5	35.5	12.6
17	45.3	29.0	42.5	26.0	72.5	48.0	61.3	43.6	75.5	66.0	72.5	58.0	85.5	73.0	88.0	74.5	79.0	58.0	69.4	44.6	45.0	32.4	38.5	28.5
18	46.0	30.2	60.0	36.5	59.3	46.0	67.0	47.5	70.5	47.5	84.4	68.5	82.0	59.0	87.6	66.2	72.5	53.0	60.5	44.0	52.0	30.9	53.5	34.0
19	42.5	27.9	. .	. .	67.0	40.7	68.0	50.5	75.4	46.5	85.5	64.3	81.5	66.0	84.3	64.3	74.6	55.2	64.0	34.8	45.5	29.0	31.5	29.5
20	40.0	31.5	57.6	35.6	61.0	41.0	76.5	58.2	80.5	52.0	88.0	65.0	75.0	60.6	83.4	56.2	62.5	58.5	65.6	48.0	51.0	38.6	29.5	8.5
21	53.5	32.5	40.0	35.5	57.5	44.0	77.1	54.2	82.5	53.5	81.6	62.0	76.7	57.8	88.3	60.6	64.8	41.5	66.0	37.0	49.0	40.0	17.4	−1.0
22	41.2	32.0	36.2	19.5	67.5	40.5	59.0	53.0	82.0	56.5	81.8	58.0	77.0	54.0	84.3	70.8	69.0	39.5	74.5	47.5	43.0	34.5	22.8	6.2
23	29.0	14.7	36.0	26.0	72.0	45.5	64.0	43.9	76.6	60.5	88.5	67.5	77.5	54.6	85.2	66.0	78.0	44.0	78.5	49.0	41.0	28.0	33.5	20.5
24	31.5	12.0	49.7	34.0	50.5	39.0	69.0	39.5	76.2	50.5	88.8	69.8	81.0	55.0	88.6	70.4	82.0	56.0	68.3	57.0	41.2	34.0	52.6	33.0
25	31.5	19.6	63.7	44.3	54.6	33.6	77.8	47.0	83.8	55.5	69.0	63.5	75.2	57.5	90.6	70.5	71.5	58.0	62.6	54.0	51.8	30.0	55.2	32.5
26	29.7	14.0	52.8	43.0	44.5	39.5	73.0	53.0	91.2	67.5	76.8	59.7	86.3	57.0	88.5	70.5	. .	. .	68.0	56.5	60.0	37.4	49.5	34.0
27	39.5	15.0	54.0	40.0	50.5	36.7	66.8	57.0	86.8	68.5	86.1	68.2	87.3	66.0	89.0	75.5	65.0	43.0	63.0	55.5	55.9	43.0	46.0	33.8
28	33.0	22.0	52.0	31.0	46.0	38.5	72.2	52.5	84.0	68.5	89.0	68.3	83.2	66.0	80.0	56.0	64.6	45.5	56.0	45.0	40.5	29.2	28.2	16.0
29	36.5	21.7	. .	. .	52.3	30.3	69.5	47.5	88.0	66.0	80.8	66.0	82.6	61.6	88.3	72.0	64.5	48.8	56.0	35.0	35.5	28.0	35.7	22.5
30	35.4	28.0	. .	. .	47.2	39.0	75.5	47.0	89.3	68.5	77.6	56.0	81.5	64.0	90.0	71.0	69.8	39.7	60.5	33.2	33.5	23.2	34.0	32.0
31	38.0	32.9	. .	. .	60.0	41.0	. .	. .	86.0	69.5	. .	. .	84.4	65.8	79.0	60.0	. .	. .	63.5	47.0	. .	. .	41.6	32.5
Mean .	40.95	25.59	44.07	29.12	58.44	39.99	68.69	48.22	74.43	54.26	83.25	64.53	84.04	65.54	87.83	68.35	75.72	53.47	68.94	47.31	49.59	35.79	38.82	24.02
Mean temp.	33.27		36.60		49.22		58.30		64.34		73.89		74.79		78.09		64.60		58.12		42.69		31.42	

	°
Mean temperature for the year from the maximum and minimum thermometers	55.45
Maximum temperature for the year on August 16	95.5
Minimum temperature for the year on December 21	— 1.0
Maximum range during the year	96.5
Mean range.	18.21

MONTHLY MAXIMUM AND MINIMUM TEMPERATURES IN 1871.

Month.	Maximum.		Minimum.		Range.
	Day.	Temp.	Day.	Temp.	
1871.		°		°	°
January	14	61.5	10	1.8	59.7
February	25	63.7	6, 15	11.0	52.7
March	17	72.5	7	30.0	42.5
April	8	88.3	2	37.6	50.7
May	26	91.2	11	40.3	50.9
June	3	91.8	16	54.5	37.3
July	9	92.0	22	54.0	38.0
August	16	95.5	28	56.0	39.5
September . . .	4, 6	88.0	22	39.5	48.5
October	4	82.5	30	33.2	49.3
November . . .	1	71.5	30	23.2	48.3
December . . .	25	55.2	21	— 1.0	56.2

Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.
		Direction.	Force.					Direction.	Force.					Direction.	Force.		
1871. Jan. 1	0	NW.	3	C. K.	7	1871. Jan. 2	0	SW.	1	C. K.	4	1871. Jan. 3	0	W. NW.	3	C. K.	2
	3	NW.	2	Clear	0		3	SW.	1	C. K.	3		3	NW.	2	Clear	0
	6	NW.	1	S.	1		6	S.	1	C. K.	7		6	W. NW.	2	C. S.	1
	9	SW.	1	C. S.	1		9	S.	1	C. K. S.	9		9	SW.	1	Clear	0
	Noon	W. NW.	2	C. K. S.	2		Noon	S. SE.	1	C. K.	9		Noon	W. SW.	2	C. K.	2
	3	W. NW.	1	Clear	0		3	W.	1	C. K.	10		3	SW.	2	C. K.	7
	6	W. NW.	1	Clear	0		6	W.	2	K.	10		6	SW.	1	Clear	0
	9	W. NW.	1	Clear	0		9	W.	2	C. K.	10		9	SW.	1	C.	1
Jan. 4	0	SW.	1	Clear	0	Jan. 5	0	S. SE.	1	C. K.	9	Jan. 6	0	S. SW.	1	C. K.	10
	3	W.	1	Clear	0		3	S. SE.	1	C. K.	10		3	SW.	1	C K.	10
	6	NW.	2	Clear	0		6	SE.	2	C. K.	10		6	SW.	1	K.	10
	9	NW.	1	Clear	0		9	SW.	2	K.	10		9	NW.	2	N.	10
	Noon	W.	1	C. K.	4		Noon	S. SW.	3	C. K.	10		Noon	W.	1	C. K.	10
	3	S. SE.	1	C. K.	7		3	S. SW.	4	C. K.	10		3	W.	1	C. K.	9
	6	SE.	1	C. K.	8		6	SW.	3	C. K.	10		6	NW.	2	S.	1
	9	SE.	1	C. K.	9		9	S. SW.	3	C. K.	10		9	NW.	1	Clear	0
Jan. 7	0	NW.	2	C. K.	8	Jan. 8	0	NE.	1	C. K.	10	Jan. 9	0	NW.	2	Snow	10
	3	NW.	3	C. K.	9		3	E.	1	C. K.	10		3	NW.	2	Snow	10
	6	NW.	3	C.	2		6	E.	1	K.	10		6	NW.	2	K.	10
	9	W.	2	C. K. S.	6		9	SE.	1	N.	10		9	NW.	1	C. K.	3
	Noon	N. NW.	2	C. K. S.	6		Noon	SE.	1	Snow	10		Noon	NW.	2	C. K.	4
	3	NW.	2	C. K. S.	4		3	S. SE.	1	Snow	10		3	NW.	1	C. K.	3
	6	NW.	2	C. K. S.	3		6	SE.	1	Snow	10		6	NW.	1	C. S.	2
	9	NW.	1	C. K.	3		9	N. NW	2	Snow	10		9	NW.	1	Clear	0
Jan. 10	0	NW.	1	Clear	0	Jan. 11	0	S. SE.	1	C. K.	9	Jan. 12	0	NW.	1	C. K,	10
	3	NW.	1	Clear	0		3	S. SE.	1	C. K.	10		3	N. NW.	1	Clear	0
	6	NW.	1	C. K.	8		6	NE.	1	K.	10		6	W.	1	Clear	0
	9	W. NW.	1	C.	4		9	SE.	1	C. K.	10		9	W.	1	Haze	
	Noon	S.	1	C. K.	10		Noon	W.	1	K.	10		Noon	W,	1	Haze	
	3	S.	1	K.	10		3	W.	1	K.	10		3	NW.	1	Haze	
	6	S.	1	K.	10		6	NW.	1	C.	3		6	NW.	1	Haze	
	9	S.	1	K.	10		9	NW.	1	K.	10		9	NW.	1	Clear	0
Jan. 13	0	NW.	1	Clear	0	Jan. 14	0	NW.	1	Clear	0	Jan. 15	0	NE.	1	C. K.	6
	3	NW.	1	Haze			3	NW.	1	C. K.	7		3	E.	1	K.	10
	6	NW.	1	Haze			6	N.	1	C. K.	7		6	E. SE.	1	K.	10
	9	NW.	1	Haze			9	N.	1	C. K.	9		9	SE.	1	C. K.	10
	Noon	W.	1	Haze			Noon	NW.	1	C. K.	10		Noon	SE.	2	C. K.	10
	3	SW.	1	Haze			3	E. NE.	1	C. K. S.	7		3	SE.	2	C. K.	10
	6	NE.	1	Haze			6	NE.	1	C. K. S.	8		6	SE.	1	N.	10
	9	NE.	1	C. K.	3		9	NE.	1	K.	10		9	SE.	2	N.	10

REMARKS.

January 4. A lunar halo at 8^h 40^m p. m.
8. Began to snow at 7^h a. m.; depth, 5 inches. Amount melted, 0.672 inch.
10. Snowing lightly at 2^h p. m.
15. Began to rain at 3^h 35^m p. m. Amount, 0.250 inch.

Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.
		Direction.	Force.					Direction.	Force.					Direction.	Force.		
1871.						1871.						1871.					
Jan. 16	0	SE.	1	Fog	0	Jan. 17	0	NW.	3	C. K.	9	Jan. 18	0	NW.	1	Haze	
	3	W.	3	C. K.	9		3	NW.	2	C. K.	1		3	NW.	1	Haze	
	6	NW.	4	C. K.	6		9	NW.	2	Clear	0		6	NW.	1	K.	10
	9	NW.	3	C. K. S.	9		6	NW.	3	Clear	0		9	NW.	1	C. K.	10
	Noon	NW.	4	C. S.	1		Noon	W. NW.	2	Clear	0		Noon	NE.	1	C. K.	8
	3	NW.	4	C. K. S.	7		3	W.	1	Clear	0		3	NE.	1	C. K.	10
	6	NW.	3	C. K.	9		6	W.	1	C. S.	2		6	NE.	2	C. K.	10
	9	NW.	3	C. K.	3		9	W. NW.	1	C.	4		9	NE.	1	Snow	10
Jan. 19	0	N.	1	Clear	0	Jan. 20	0	E.	1	K.	10	Jan. 21	0	SE.	1	K.	10
	3	N.	1	C. K.	6		3	E.	1	K.	10		3	S.	1	K.	10
	6	NE.	1	K.	10		6	E.	1	C. K.	9		6	SW.	1	C. K.	5
	9	N. NE.	1	C. S.	2		9	S. SE.	1	C. K.	10		9	SW.	1	Haze	
	Noon	NE.	2	C. K.	3		Noon	S. SW.	1	C. K.	10		Noon	W.	2	C. K.	
	3	E.	1	Clear	0		3	S. SE.	1	C. K.	8		3	S.	1	C. K.	4
	6	E.	1	C. K.	9		6	S.	1	C. K.	10		6	SW.	1	C. K.	10
	9	E.	1	K.	10		9	S. SE.	1	C. K.	10		9	W.	4	C.	2
Jan. 22	0	NW.	4	C.	2	Jan. 23	0	NE.	2	K.	10	Jan. 24	0	N.	1	K.	10
	3	NW.	5	C. K.	9		3	NE.	2	C. K.	10		3	N.	1	K.	10
	6	NW.	4	C.	1		6	NE.	3	C. K.	10		6	N.	1	K.	10
	9	NW.	4	S.	1		9	E. NE.	3	K.	10		9	NW.	1	C. K.	9
	Noon	NW.	4	C. K.	2		Noon	NE.	2	Snow	10		Noon	SW.	1	C. K.	6
	3	NW.	2	C. S.	1		3	NE.	2	Snow	10		3	NW.	1	C. K.	8
	6	N. NE.	3	C. K. S.	8		6	N.	2	Snow	10		6	NW.	1	S.	1
	9	NE.	1	K.	10		9	N.	2	Snow	10		9	NW.	1	Clear	0
Jan. 25	0	NW.	1	Clear	0	Jan. 26	0	NE.	1	Snow	10	Jan. 27	0	NW.	2	Sleet	10
	3	NW.	1	Clear	0		3	NE.	2	Snow	10		3	NW.	1	C. S.	2
	6	NW.	1	C. S.	4		6	NE.	2	Sleet	10		6	NW.	1	C. K.	10
	9	NW.	1	C. K. S.	8		9	NE.	1	Snow	10		9	NW.	1	Haze	
	Noon	N. by E.	1	K.	10		Noon	N.	1	Snow	10		Noon	NW.	1	C. K.	7
	3	E. by N.	1	C. K.	10		3	N.	1	Snow	10		3	W.	1	C. K.	8
	6	NE.	2	C. K.	10		6	N.	1	Sleet	10		6	W.	1	C.	4
	9	NE.	1	Snow	10		9	N.	1	Sleet	10		9	S.	1	Haze	
Jan. 28	0	W.	1	Haze		Jan. 29	0	NE.	1	Snow	10	Jan. 30	0	SW.	1	K.	10
	3	W.	1	C. K.	6		3	NE.	1	K.	10		3	SW.	1	K.	10
	6	NE.	1	K.	10		6	NW.	1	K.	10		6	SW.	1	K.	10
	9	NE.	1	C. K.	10		9	NW.	1	C. S.	2		9	SW.	1	K.	10
	Noon	E. NE.	2	C. K.	10		Noon	W.	1	Clear	0		Noon	S.	1	K.	10
	3	NE.	1	Snow	10		3	S.	1	C.	1		3	S.	1	K.	10
	6	N.	1	Snow	10		6	SW.	1	C. S.	2		6	S.	1	Mist	10
	9	NE.	1	Snow	10		9	SW.	1	K.	10		9	S. SW.	1	K.	10

REMARKS.

January 18. Light snow at 7^h p. m.

21. Light rain at 5^h 30^m p. m.

23. Snow during the afternoon. Depth, 7.0 inches.

25. Began to snow lightly at 8^h 45^m p. m. Changed to sleet and rain, and continued until 0^h 20^m a. m. on the 27th. Depth of snow, 3.0 inches. Amount of rain and melted snow and sleet, 1.102 inches.

28. Snowing at 3^h p. m., and continued until 1^h a. m. on the 29th. Depth, 2.0 inches.

Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.
		Direction.	Force.					Direction.	Force.					Direction.	Force		
1871.						1871.						1871.					
Jan. 31	0	S. SW.	1	K.	10												
	3	S.	1	Mist	10												
	6	SE.	1	Mist	10												
	9	S.	1	Mist	10												
	Noon	S.	1	N.	10												
	3	S. SE.	1	N.	10												
	6	S. SW.	1	C. K.	10												
	9	S. SW.	1	N.	10												
Feb. 1	0	SW.	1	N.	10	Feb. 2	0	SW.	1	K.	10	Feb. 3	0	W. NW.	4	Clear	0
	3	S.	1	Mist	10		3	SW.	1	K.	10		3	NW.	3	Clear	0
	6	N.	1	K.	10		6	S. by W.	1	K.	10		6	NW.	2	C. S.	4
	9	N.	1	N.	10		9	S. by E.	1	Fog			9	NW.	1	C. K. S.	7
	Noon	NW.	1	N.	10		Noon	W.	1	Fog			Noon	SW.	3	C. K.	8
	3	N.	1	N.	10		3	SW.	1	Fog			3	SW.	2	C. K.	8
	6	W. NW.	1	C. K.	10		6	SW.	1	Fog			6	SW.	2	C. K.	7
	9	W. NW.	1	C. K.	10		9	NW.	3	C. K.	8		9	W.	1	C. K.	8
Feb. 4	0	W.	3	C. K.	2	Feb. 5	0	NE.	3	C. K.	10	Feb. 6	0	N.	2	C. K	10
	3	W.	1	C. K.	2		3	NE.	1	C. K.	10		3	N.	1	C. K.	10
	6	W.	1	C. K.	3		6	NE.	2	S.	1		6	NW.	1	C. K.	10
	9	W.	3	Clear	0		9	NE.	2	C. K.	4		9	NW.	2	C. K.	9
	Noon	NW.	4	Clear	0		Noon	NE.	2	C. K.	8		Noon	NW.	2	C. K.	2
	3						3	NE.	2	C. K.	4		3	NW.	2	Clear	0
	6	NW.	1	C. K. S.	8		6	NE.	2	C. S.	4		6	NW.	2	Clear	0
	9	N. NW.	3	C. K.	7		9	N.	2	C. K.	8		9	NW.	1	Clear	0
Feb. 7	0	NW.	1	Clear	0	Feb. 8	0	E. SE.	1	Snow	10	Feb. 9	0	SE.	1	C. K.	10
	3	NW.	1	Clear	0		3	SW.	1	Snow	10		3	SE.	1	C. K.	10
	6	NW.	1	Clear	0		6	NE.	1	K.	10		6	SE.	1	K.	10
	9	NE.	1	Clear	0		9	NE.	1	K.	10		9	S.	1	K.	10
	Noon	S.	1	C.	4		Noon	SW.	1	C. K.	9		Noon	SW.	1	C. K.	10
	3	E.	1	C. K.	10		3	SW.	1	C. K.	8		3	S.	1	C. K.	4
	6	E.	1	C. K.	10		6	SW.	1	C. K.	9		6	NW.	1	C. K.	2
	9	E.	1	C. K.	10		9	SE.	1	C.	3		9	NW.	3	Clear	0
Feb. 10	0	W.	1	Clear	0	Feb. 11	0	N.	1	Clear	0	Feb. 12	0	NE.	2	Snow	10
	3	W.	1	Clear	0		3	N.	1	Clear	0		3	NE.	2	N.	10
	6	W.	1	Clear	0		6	N. NW.	1	S.	1		6	NE.	2	N.	10
	9	W.	1	Clear	0		9	E.	1	Haze			9	NE.	1	K.	10
	Noon	W.	4	C.	1		Noon	E.	1	C. K.	7		Noon	NE.	1	Mist	10
	3	NW.	3	C.	1		3	E.	1	C. K.	9		3	NW.	1	K.	10
	6	N. by W.	1	C. S.	1		6	E.	1	C. K.	10		6	W.	1	K.	10
	9	N.	1	Clear	0		9	E.	1	Snow	10		9	NW.	1	K.	10

REMARKS.

January 31. Light rain at 11^h a. m.
February 1. Heavy rain until 6^h p. m. Amount, 1.008 inch.
7. Snowing lightly at 11^h 30^m p. m.
9. Brilliant display of zodiacal light soon after sunset.
10. The apex of the zodiacal light reached an altitude of 45° at 7^h p. m.
11. Snow and rain from 8^h 45^m to 7^h a. m. on the 12th. Melted snow and rain, 0.760 inch.

Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.
		Direction.	Force.					Direction.	Force.					Direction.	Force.		
1871. Feb. 13	0	NW.	1	C. K.	4	1871. Feb. 14	0	E.	2	Snow	10	1871. Feb. 15	0	NW.	1	Clear	0
	3	NW.	1	K.	10		3	NE.	2	Snow	10		3	NW.	1	Clear	0
	6	NW.	1	C. .	10		6	N.	2	Snow	10		6	NW.	1	Haze	
	9	NW.	1	C. K.	8		9	N.	2	Snow	10		9	NW.	1	Clear	0
	Noon	N. NW.	2	C. K.	9		Noon	NW.	2	Snow	10		Noon	W.	1	C. K.	6
	3	NE.	1	C. K.	8		3	NW.	1	C. K.	10		3	S. by W.	1	C. K.	8
	6	NE.	1	C. K.	10		6	NW.	1	C. K. S.	10		6	E. SE.	1	Haze	
	9	E.	2	K.	10		9	NW.	1	Clear	0		9	E.	1	Haze	
Feb. 16	0	SE.	2	K.	10	Feb. 17	0	NW.	1	Clear	0	Feb. 18	0	E.	1	N.	10
	3	E.	1	K.	10		3	W. NW.	1	Clear	0		3	SE.	1	K.	10
	6	S.	1	C. K.	10		6	W.	1	S.	1		6	SE.	2	C. K.	10
	9	SE.	1	C. K.	7		9	W. NW.	1	Haze			9	S. SE.	1	N.	10
	Noon	W.	3	C. K.	3		Noon	W.	1	Haze			Noon	S. SW.	2	C. K. S.	9
	3	NW.	3	Clear	0		3	SE.	1	Haze			3	NW.	4	C. K.	4
	6	W.	1	Clear	0		6	SE.	1	K.	10		6	NW.	4	C. K.	2
	9	NW.	1	Clear	0		9	E.	2	N.	10		9	NW.	2	C. K.	4
Feb. 19	0	NW.	3	Clear	0	Feb. 20	0	W. NW.	1	C. K.	10	Feb. 21	0	E.	1	Clear	0
	3	NW.	2	Clear	0		3	SW.	1	C. K.	10		3	NE.	1	C. K.	4
	6	NW.	1	S.	1		6	W.	1	C. K.	7		6	N.	1	K.	10
	9	S.	1	C. S.	4		9	W. SW.	1	C. K.	7		9	N.	1	C. K.	10
	Noon	S.	2	C. S.	3		Noon	S. SE.	1	C. K.	6		Noon	N.	1	C. K.	10
	3	W.	2	C. K.	6		3	S. SE.	1	C. K.	4		3	NE.	1	C. K.	10
	6	W. by NW.	1	C. K.	9		6	E.	1	C. K.	3		6	N. NE.	2	C. K. S.	10
	9	NW.	1	C. K.	10		9	E.	1	C.	2		9	N.	2	S.	1
Feb. 22	0	E. NE.	2	Clear	0	Feb. 23	0	NE.	1	C. K.	10	Feb 24	0	NE.	1	K.	10
	3	NE.	2	Clear	0		3	NE.	1	C. K.	10		3	E.	1	K.	10
	6	NE.	1	Clear	0		6	NE.	1	C. K.	10		6	S.	1	K.	10
	9	NE.	2	C. S.	4		9	NE.	1	C. K.	10		9	SW.	1	Haze	
	Noon	NE.	2	C. K. S.	6		Noon	W.	1	K.	10		Noon	SW.	1	Mist	10
	3	E.	1	C. K. S.	8		3	NW.	1	N.	10		3	S. SW.	2	Haze	
	6	E.	1	C. K. S.	7		6	N.	1	Mist	10		6	SW.	2	C. K. S.	7
	9	NE.	1	C. K.	3		9	N.	1	Mist	10		9	SW.	2	C. K.	8
Feb. 25	0	SW.	1	Haze		Feb. 26	0	SE.	1	K.	10	Feb. 27	0	NW.	2	N.	10
	3	SE.	1	S.	1		3	NW.	1	C. K.	9		3	NW.	2	K.	10
	6	S. SE.	1	Fog			6	NE.	1	C. K.	10		6	NW.	3	C. K.	10
	9	S.	1	C. K.	6		9	NE.	1	K.	10		9	W.	3	C. K.	3
	Noon	S.	1	C. K.	5		Noon	N. NE.	1	K.	10		Noon	W.	3	C. K.	7
	3	N.	1	N.	10		3	N.	1	N.	10		3	NW.	3	C. K.	4
	6	E.	1	N.	10		6	NE.	1	C. K.	10		6	W.	3	C. K. S.	2
	9	NW.	1	N.	10		9	NE.	1	N.	10		9	NW.	2	C. K.	2

REMARKS.

February 13. Snowing from 11h 35m p. m. to 1h p m. on the 14th. Depth of snow, 9.5 inches.
17. Raining at intervals from 9h p. m. through the night. Amount, 0.580 inch.
23. Light rain and mist during the evening. Amount, 0.060 inch.
25. Light rain during the evening. Amount, 0.064 inch.
26. Light rain at 2h 45m p. m. Amount, 0.248 inch.

Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.
		Direction.	Force.					Direction.	Force.					Direction.	Force		
1871.						1871.						1871.					
Feb. 28	0	W.	2	C. K.	3												
	3	W.	1	C. K.	8												
	6	W. NW.	3	C. K. S.	2												
	9	NW.	3	S.	2												
	Noon	NW.	2	Clear	0												
	3	SW.	1	C. S.	2												
	6	S.	1	C. K.	6												
	9	S.	2	Clear	0												
Mar. 1	0	S.	3	Clear	0	Mar. 2	0	NW.	1	Clear	0	Mar. 3	0	S.	1	C. K.	9
	3	S.	3	Clear	0		3	NW.	1	Clear	0		3	S. SW.	2	C. K.	10
	6	S. SW.	3	Clear	0		6	NW.	1	Clear	0		6	S. SW.	1	C. K.	10
	9	SW.	2	C. K.	2		9	NW.	1	Haze			9	S.	2	N.	10
	Noon	S. SW.	2	C. K.	3		Noon	SW.	2	Haze			Noon	SW.	4	K.	10
	3	SW.	2	C. K.	2		3	S.	1	Haze			3	SW.	3	K.	10
	6	NW.	1	Clear	0		6	S. SW.	1	C. S.	2		6	NW.	3	N.	10
	9	SW.	1	S.	1		9	S. SW.	1	Clear	0		9	NW.	3	C. K.	10
Mar. 4	0	N. NW.	2	N.	10	Mar. 5	0	NW.	1	Clear	0	Mar. 6	0	S. by W.	1	C. K.	10
	3	NW.	1	N.	10		3	W.	2	Clear	0		3	S. SW.	2	C. K.	3
	6	N. NW.	2	N.	10		6	NW.	2	Clear	0		6	S. SW.	1	C. K. S.	3
	9	N. by E.	2	N.	10		9	NW.	2	Clear	0		9	W.	5	C. K.	4
	Noon	N.	2	Snow	10		Noon	SW.	1	Clear	0		Noon	W. NW.	7	C.	2
	3	NW.	3	Snow	10		3	S.	2	C. K.	2		3	W. NW.	5	C.	2
	6	NW.	3	C. K.	9		6	S.	1	C. K. S.	8		6	N. NW.	3	C. K. S.	3
	9	NW.	3	Clear	0		9	S. by W.	1	C. K.	10		9	NW.	1	Clear	0
Mar. 7	0	NW.	1	Clear	0	Mar. 8	0	SE.	1	K.	10	Mar. 9	0	NE.	1	Fog	
	3	NW.	1	Clear	0		3	E.	1	K.	10		3	NE.	1	Mist	
	6	NW.	1	Clear	0		6	NE.	1	K.	10		6	NE.	1	Mist	
	9	W. by N.	1	C.	2		9	E.	1	K.	10		9	SE.	1	K.	10
	Noon	SE.	1	C.	3		Noon	E.	1	K.	10		Noon	S.	5	C. K.	6
	3	S. by W.	1	C.	3		3	E.	1	K.	10		3	S.	3	C. K.	9
	6	SE.	1	C. K.	9		6	NE,	1	C. K. S.	3		6	SE.	3	C. K.	8
	9	SE.	1	C. K.	10		9	NE.	1	C. K.	3		9	SE.	1	N.	10
Mar. 10	0	S.	1	N.	10	Mar. 11	0	SE.	1	C. S.	7	Mar. 12	0	SE.	1	K.	10
	3	W. NW.	2	N.	10		3	SE.	1	C.	1		3	S.	1	K.	10
	6	NW.	1	C. K.	9		6	SE.	1	C. K.	9		6	S. by E.	3	C. K. S.	9
	9	NW.	1	C. K.	3		9	NE.	1	Haze			9	S	3	N.	10
	Noon	SW.	1	C. K.	6		Noon	SW.	1	C. K.	9		Noon	SW.	1	N.	10
	3	SW.	1	C. K.	8		3	S.	1	C. K.	9		3	W. NW.	3	C. K.	9
	6	S.	1	C. K. S.	9		6	SE.	1	C. K. S.	10		6	NW.	3	C. K.	9
	9	S.	1	C.	6		9	E.	1	K.	10		9	NW.	1	Clear	0

REMARKS.

February 28. The bulb of the solar thermometer envelope was broken at 6h p. m.

March 3. Rain at 6h 45m a. m. Amount, 0.147 inch. Rain during the night; changed to snow at 9h a. m. on the 4th. Amount of rain and melted snow, 0.906 inch.

9. Lightning at 6h 40m p. m.; heavy shower of rain at 7h 30m p. m. Amount, 1.480 inch.

12. Raining during the forenoon. Amount, 1.110 inch.

Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.
		Direction.	Force.					Direction.	Force					Direction.	Force.		
1871. Mar. 13	0	NW.	1	Clear	0	1871. Mar. 14	0	W.	2	C. K.	4	1871. Mar. 15	0	E. SE.	1	C. K.	5
	3	W.	1	C. K.	7		3	NW.	2	C. K.	10		3	E.	1	C. K. S.	3
	6	W.	1	C. K.	7		6	N.	2	C. K.	10		6	NE.	1	C. K. S.	3
	9	SW.	1	C. K.	6		9	N.	2	C. K.	3		9	NE.	1	C.	2
	Noon	SE.	1	C. K.	6		Noon	NE.	1	C. K.	4		Noon	S.	1	C.	3
	3	SW.	1	C. K.	4		3	S.	1	C. K.	5		3	E.	1	C. K.	7
	6	W.	1	C. K.	4		6	E. SE.	1	C. K. S.	4		6	E.	1	C. K.	8
	9	W.	2	C.	2		9	SE.	1	C. K.	5		9	SE.	1	C. K.	2
Mar. 16	0	NE.	1	Clear	0	Mar. 17	0	E.	1	K.	10	Mar. 18	0	N. NW.	2	N.	10
	3	E.	1	C. K	6		3	NE.	1	K.	10		3	NW.	2	C. K. S.	4
	6	NE.	1	K.	10		6	N.	1	C. K.	8		6	N. by W.	2	N.	10
	9	NE.	1	K.	10		9	S. SW.	1	Haze			9	N.	1	N.	10
	Noon	NE.	1	K.	10		Noon	S. SW.	3	C. K.	9		Noon	N.	1	K.	10
	3	NE.	1	C. K.	7		3	S.	3	C. K.	9		3	N. NW.	1	K.	10
	6	E. NE.	1	C. K. S.	8		6	N.	2	N.	10		6	NE.	1	C. K.	9
	9	E.	1	C.	2		9	NW.	2	N.	10		9	NE.	1	K.	10
Mar. 19	0	N.	1	C. K.	8	Mar. 20	0	E.	1	Clear	0	Mar. 21	0	N.	1	N.	10
	3	NE.	1	Fog			3	NE.	1	Clear	0		3	NW.	1	K.	10
	6	NW.	1	Fog			6	N.	1	C. S.	2		6	NW.	1	C. K.	9
	9	W. NW.	1	C. K.	4		9	NE.	2	C. K.	8		9	SW.	1	N.	10
	Noon	SE.	1	C.	6		Noon	E.	2	C. K. S.	9		Noon	W. NW.	4	C.	2
	3	SE.	1	C.	6		3	E.	2	C. K.	10		3	NW.	4	C.	2
	6	SE.	1	C. S.	3		6	E.	2	N.	10		6	W. NW.	2	C. K.	3
	9	SE.	1	Clear	0		9	E.	2	N.	10		9	W.	2	C. K.	1
Mar. 22	0	SW.	1	C. K.	2	Mar. 23	0	NE.	1	C. K.	10	Mar. 24	0	NW.	3	C. K.	7
	3	NW.	2	C. K.	2		3	N.	1	C. K.	10		3	NW.	3	K.	10
	6	NE.	1	C. K.	4		6	NW.	1	C. K. S.	6		6	NW.	2	C. K. S.	8
	9	SE.	1	C. K.	4		9	S. SW.	1	Haze			9	NW.	4	C. K. S.	6
	Noon	S.	1	C. K.	3		Noon	SW.	1	Haze			Noon	NW.	3	C. K.	4
	3	SE.	1	C. K.	4		3	W. SW.	2	Haze			3	NW.	3	C.	2
	6	SE.	1	C. K.	5		6	W. NW.	3	C. K.	7		6	NW.	3	C. K.	1
	9	E.	1	Haze			9	NW.	4	S.	1		9	NW.	1	Clear	0
Mar. 25	0	NW.	2	Clear	0	Mar. 26	0	SW.	1	C.	4	Mar. 27	0	W.	2	K.	10
	3	NW.	3	Clear	0		3	SW.	1	C. K.	6		3	W.	2	K.	10
	6	NW.	2	C. K.	2		6	SW.	1	K.	10		6	W. NW.	2	K.	9
	9	NW.	2	C. K.	5		9	E.	1	K.	10		9	W. NW.	4	C. K.	8
	Noon	W. NW.	1	C. K.	2		Noon	SE.	1	N.	10		Noon	W. NW.	5	C. K.	4
	3	NW.	2	C. K.	4		3	E.	3	N.	10		3	NW.	4	C. K.	4
	6	W.	1	C. S.	3		6	NE.	2	N.	10		6	NW.	3	C. K.	9
	9	SW.	1	Clear	0		9	NE.	2	N.	10		9	NW.	2	C. K.	9

REMARKS.

March 17. Heavy shower at 5^h 30^m p. m.. Continued raining until noon on the 18th. Amount, 0.728 inch.
20. Rain during the evening. Amount, 0.440 inch.
26. Rain from 9^h 30^m a. m. to midnight. Amount, 0.500 inch.

Day.	Hour.	WIND		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.
		Direction.	Force.					Direction.	Force.					Direction.	Force.		
1871. Mar. 28	0	NW.	2	C. K.	9	1871. Mar. 29	0	NW.	2	Clear	0	1871. Mar. 30	0	S.	1	K.	10
	3	W.	2	C. K.	6		3	NW.	1	Clear	0		3	SE.	1	N.	10
	6	W.	2	C. K.	7		6	N.	1	C. S.	2		6	SE.	1	N.	10
	9	NW.	3	C. K.	2		9	E.	2	Haze			9	NE.	1	Mist	10
	Noon	NW.	3	C. K.	9		Noon	S. SW.	2	C. K.	7		Noon	NE.	1	K.	10
	3	W. NW.	3	C. K.	9		3	S.	2	C. K.	8		3	NE.	1	K.	10
	6	NW.	3	C. K.	4		6	S.	2	C. K.	9		6	N.	2	K.	10
	9	NW.	2	Clear	0		9	S.	1	C. K.	10		9	N. NW.	1	K.	10
Mar. 31	0	N. NW.	1	K.	10												
	3	NW.	1	C. K.	5												
	6	NW.	2	C. K.	2												
	9	N. NW.	2	Clear	0												
	Noon	NE.	1	C. K.	6												
	3	NE.	1	C. K.	9												
	6	SE.	1	C. K.	10												
	9	E.	1	C. K.	10												
Apr. 1	0	SE.	1	K.	10	Apr. 2	0	N.	2	K.	10	Apr. 3	0	E.	1	C. K.	3
	3	E.	1	N.	10		3	NW.	2	K.	10		3	SE.	1	C. K.	4
	6	E. NE.	1	N.	10		6	NW.	1	C. K. S.	9		6	S.	1	C. K.	7
	9	E.	2	N.	10		9	NW.	2	C. K.	10		9	SE.	1	C. K.	10
	Noon	E.	3	N.	10		Noon	W. NW.	3	C.	1		Noon	SW.	2	N.	10
	3	NE.	2	N.	10		3	W. NW.	2	C. S.	3		3	E. SE.	1	C. K.	10
	6	NE.	2	K.	10		6	NW.	1	C. K.	7		6	S.	1	K.	10
	9	N.	1	Mist	10		9	SE.	1	C. K.	6		9	NW.	1	C.	1
Apr. 4	0	NW.	2	C. K.	8	Apr. 5	0	W. SW.	1	Clear	0	Apr. 6	0	E.	1	C. K.	8
	3	NW.	5	C. K. S.	10		3	W.	1	Clear	0		3	E.	1	C. K.	10
	6	NW.	3	C.	2		6	W.	1	S.	1		6	E.	1	C. K.	10
	9	NW.	3	C. K.	1		9	NW.	1	C.	2		9	E. SE.	1	C. K.	10
	Noon	NW.	3	C. K.	1		Noon	W.	3	C.	2		Noon	S. SW.	1	C. K.	10
	3	N. NW.	2	C. K.	2		3	NW.	1	C.	1		3	SW.	1	Clear	0
	6	W. SW.	2	C. S.	2		6	N.	1	C. K.	4		6	S.	1	Clear	0
	9	W.	2	C. K.	2		9	NE.	1	C. K.	9		9	S.	1	Clear	0
Apr. 7	0	S.	1	C. S.	4	Apr. 8	0	SW.	1	C. K.	3	Apr. 9	0	W.	1	C. K.	4
	3	S.	1	C. K.	10		3	SW.	1	Clear	0		3	W.	2	C. K.	9
	6	S. SW.	1	C. K.	10		6	W. by N.	2	Haze			6	W.	1	C. K.	9
	9	S. SW.	1	C. K.	10		9	SW.	1	Haze			9	S.	1	C. K.	10
	Noon	S.	1	Haze			Noon	W.	2	C. K.	4		Noon	NW.	3	C. K.	8
	3	S.	1	Haze			3	SW.	1	C. K.	5		3	NW.	2	C. K.	10
	6	S. by W.	1	C. K.	6		6	S. SW.	1	Haze			6	NW.	1	C. K.	9
	9	SW.	1	Clear	0		9	NW.	1	C. K.	3		9	NW.	1	C. K.	6

REMARKS.

March 29. Raining lightly at 10^h p. m.
30. Rain during the morning. Amount, 0.226 inch.
April 1. Light rain during the day. Amount, 0.286 inch.
3. Light showers at 11 a. m. and 7 p. m.
4. Rain at 0^h 45^m a. m. Amount, 0.048 inch.
5. A light shower at 11^h 10^m p. m.
9. A few drops of rain at 8^h 5^m p. m.

Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.
		Direction.	Force.					Direction.	Force.					Direction.	Force.		
1871. Apr. 10	0	W.	1	C. K.	4	1871. Apr. 11	0	S.	1	C. K.	3	1871. Apr. 12	0	W. SW.	4	C. K.	8
	3	W.	1	C.	2		3	S.	1	C. K.	8		3	W.	6	Clear	0
	6	W.	1	Haze			6	S.	1	C. K.	10		6	W.	2	Clear	0
	9	W.	1	Haze			9	SW.	1	C. K.	10		9	W. by S.	3	C.	1
	Noon	S.	1	Haze			Noon	SW.	2	C. K.	9		Noon	W. SW.	3	C. K.	2
	3	S. SE.	1	Haze			3	S. SW.	3	C.	2		3	W.	3	Clear	0
	6	SE.	2	Haze			6	S. SW.	3	C. K.	3		6	NW.	3	C.	2
	9	S.	1	Clear	0		9	SW.	3	C. K.	3		9	NW.	1	Clear	0
Apr. 13	0	NW.	1	Clear	0	Apr. 14	0	NW.	1	Haze		Apr. 15	0	W.	1	Clear	0
	3	NW.	1	Clear	0		3	NW.	1	C. K.	10		3	W.	1	C. K.	7
	6	SW.	1	C. K.	8		6	N. NE.	2	C. K.	10		6	W.	1	C. K.	4
	9	S.	1	Haze			9	NE.	1	C. K.	10		9	NW.	2	C.	1
	Noon	S. SW.	3	Haze			Noon	E.	2	C. K.	10		Noon	NW.	2	C. K.	4
	3	SW.	3	Haze			3	NE.	2	K.	10		3	NW.	2	C. K.	4
	6	W.	1	C. K.	8		6	NE.	1	C. K.	9		6	E.	1	C. K.	5
	9	W.	1	C. K.			9	N.	1	Clear	0		9	NW.	1	Clear	0
Apr. 16	0	N.	1	Clear	0	Apr. 17	0	N.	1	K.	1	Apr. 18	0	E.	1	K.	10
	3	NE.	1	Clear	0		3	N. NE.	2	C. K.	2		3	E.	1	C. K.	3
	6	N.	1	C. K. S.	6		6	N. NE.	1	C. K. S.	1		6	E.	1	C. K.	9
	9	NE.	2	C. K.	5		9	N.	1	C. K.	1		9	E. by S.	1	C. K.	10
	Noon	E.	2	C. K.	3		Noon	NW.	2	C. K.	2		Noon	S. SW.	1	C. K.	10
	3	W. NW.	2	C. K.	2		3	NW.	2	C. K.	2		3	S. by E.	2	Haze	
	6	W. NW.	1	Clear	0		6	N. NE.	1	C. K.	1		6	SE.	3	Haze	
	9	NW.	2	S.	1		9	SW.	1	C. K.	1		9	SE.	1	C. K.	4
Apr. 19	0	SE.	1	K.	10	Apr. 20	0	NE.	1	K.	10	Apr. 21	0	SW.	3	C. K.	2
	3	E.	1	K.	10		3	SE.	1	K.	10		3	SW.	1	C. K.	3
	6	NE.	1	K.	10		6	S.	1	K.	10		6	W.	1	Haze	
	9	E.	1	K.	10		9	S.	1	N.	10		9	S.	1	C.	2
	Noon	W.	1	K.	10		Noon	S. SW.	3	C. K.	10		Noon	S. SW.	2	C. K.	4
	3	E.	1	Haze			3	S. SW.	3	C. K.	6		3	SW.	2	C. K.	6
	6	E.	1	C. K.	3		6	S. SW.	3	C. K.	2		6	NW.	2	C. K. S.	10
	9	E.	2	Haze			9	SW.	3	Clear	0		9	N.	1	C. K.	9
Apr. 22	0	N.	2	K.	10	Apr. 23	0	NW.	3	C. K.	3	Apr. 24	0	W.	1	Clear	0
	3	N.	2	K.	10		3	NW.	2	C. K. S.	2		3	W.	1	Clear	0
	6	NW.	1	K.	10		6	NW.	3	C. K. S.	2		6	W.	1	Clear	0
	9	NW.	2	C. K.	10		9	NW.	3	C.	1		9	S.	1	Clear	0
	Noon	NW.	3	C. K.	10		Noon	NW.	4	Clear	0		Noon	S. SE.	2	C.	1
	3	W. NW.	2	C. K.	10		3	W. NW.	3	C. S.	4		3	SE.	2	C. K.	4
	6	W. NW.	3	C. K. S.	6		6	NW.	2	C. K.	2		6	SE.	1	C.	2
	9	NW.	3	C. K. S.	9		9	W. NW.	1	Clear	0		9	SE.	1	Clear	0

REMARKS.

April 11. Light showers during the forenoon. Lightning in the N. and NW. in the evening.
20. Commenced to rain at $7^h 20^m$ a. m. Amount, 0.180 inch.

Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.
		Direction.	Force					Direction.	Force.					Direction.	Force.		
1871. Apr. 25	0	S. by E.	1	Clear	0	1871. Apr. 26	0	W.	1	K.	10	1871. Apr. 27	0	SE.	2	K.	10
	3	SW.	1	Clear	0		3	W.	1	K.	10		3	E.	2	N.	10
	6	SW.	1	Haze			6	W.	1	C. K.	6		6	E.	2	K.	10
	9	SW.	1	Haze			9	N. NW.	2	Haze			9	E.	2	K.	10
	Noon	SW.	1	Haze			Noon	SW.	1	C. K.	10		Noon	E.	2	N.	10
	3	SW.	3	Haze			3	SE.	1	C. K.	10		3	SE.	2	N.	10
	6	W. SW.	1	N.	10		6	E.	2	C. K.	10		6	SE.	1	C. K.	10
	9	W.	1	K.	10		9	E.	1	N.	10		9	S.	1	C. K.	10
Apr. 28	0	SW.	1	C.	10	Apr. 29	0	NW.	1	C. K.	8	Apr. 30	0	NW.	1	C. K.	3
	3	W.	1	C.	2		3	NW.	1	C. K.	6		3	W.	1	C. K.	9
	6	W. NW.	1	K.	10		6	NW.	1	C. K.	6		6	W.	1	C. K.	10
	9	NE.	2	C. K.	10		9	NW.	1	C. K.	2		9	S.	1	C. K.	6
	Noon	W.	1	C. K. S.	8		Noon	W. SW.	2	C. K.	7		Noon	SE.	1	C.	3
	3	N. NW.	2	C. K.	9		3	W. SW.	1	C. K.	10		3	S.	1	C.	3
	6	NE.	1	N.	6		6	NE.	1	C. K.	4		6	S.	1	C. K.	9
	9	SW.	2	N.	10		9	NE	1	C. K.	2		9	SW.	1	N.	10
May 1	0	W.	1	C. K.	8	May 2	0	NE.	1	C. K.	8	May 3	0	S. SE.	2	N.	10
	3	NW.	1	Haze			3	NW.	1	C. K.	9		3	S. SE.	1	K.	10
	6	N. NW.	1	C. K.	10		6	NE.	1	C. K.	8		6	E.	1	C. K.	10
	9	E.	2	Haze			9	S.	1	C. K.	10		9	S.	1	K.	10
	Noon	N.	1	C. K.	10		Noon	SE.	1	C. K.	9		Noon	S.	2	K.	10
	3	NE.	2	C. K.	9		3	SE.	2	C. K.	8		3	S.	1	N.	10
	6	NE.	1	C. K.	8		6	SE.	2	C. K.	10		6	NE.	1	K.	10
	9	NE.	1	C. S.	4		9	SE.	3	C. K.	10		9	E.	1	K.	10
May 4	0	E.	1	Mist	10	May 5	0	NE.	1	N.	10	May 6	0	E.	3	K.	10
	3	NE.	1	Mist	10		3	NE.	1	N.	10		3	NE.	1	Mist	10
	6	NE.	1	N.	10		6	N.	1	K.	10		6	NE.	2	N.	10
	9	E.	1	N.	10		9	NW.	2	K.	10		9	NE.	1	N.	10
	Noon	NE.	2	K.	10		Noon	NW.	1	C. K.	10		Noon	NE.	1	N.	10
	3	NE.	2	N.	10		3	N. NE.	1	C. K.	8		3	N.	2	N.	10
	6	NE.	2	N.	10		6	NE.	1	C. K.	4		6	N. NW.	1	N.	10
	9	NE.	1	N.	10		9	E.	1	C. K.	3		9	NW.	3	N.	10
May 7	0	NW.	2	N.	10	May 8	0	NW.	2	K.	10	May 9	0	SE.	1	N.	10
	3	NW.	2	C. K.	7		3	W.	2	C. K.	8		3	SW.	1	N.	10
	6	NW.	2	C. K.	4		6	NW.	2	C. K.	6		6	N.	1	N.	10
	9	NW.	4	C. K.	6		9	W. NW.	2	Clear	0		9	N. NW.	1	N.	10
	Noon	NW.	4	C. K.	4		Noon	NW.	2	C.	1		Noon	NW.	1	N.	10
	3	NW.	3	C. K.	5		3	W.	2	C. K.	2		3	NE.	1	N.	10
	6	W.	2	C.	2		6	NW.	2	C. K.	4		6	N. by E.	1	N.	10
	9	W.	1	C. K.	4		9	NW.	1	C. K.	10		9	N. NE.	1	N.	10

REMARKS.

April 25. Light showers during the evening.
26. Rain at $7^h\ 45^m$ p. m., continuing until 3^h p. m. on the 27th. Amount, 0.360 inch.
28. Rain, with lightning and thunder, at $7^h\ 15^m$ p. m. Amount, 0.150 inch.
30. Showers after $6^h\ 30^m$ p. m. Amount, 0.080 inch.
May 2. Light rain at $6^h\ 10^m$ p. m.
4. Rain during the day and until 3^h a. m. on the 5th. Amount, 1.186 inch.
6. Rain during the day. Amount, 0.840 inch.
8. Raining lightly at $0^h\ 45^m$ a. m. Amount, 0.030 inch.
9. Rain during the day and until 5^h a. m. on the 10th. Amount, 0.640 inch.

Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.
		Direction.	Force.					Direction.	Force.					Direction.	Force.		
1871. May 10	0	N.	1	N.	10	1871. May 11	0	SW.	1	Clear	0	1871. May 12	0	SW.	1	C. K.	2
	3	N. by W.	1	N.	10		3	N.	1	Clear	0		3	N.	1	C. K.	8
	6	W. NW.	1	C. K.	10		6	NW.	1	Clear	0		6	N. NW.	1	C. K.	8
	9	N. NW.	1	K.	10		9	E. NE.	1	C.	8		9	E.	1	K.	10
	Noon	NW.	1	C. K.	9		Noon	SW.	1	C. K.	7		Noon	NE.	1	N.	10
	3	W. NW.	1	C. K.	9		3	SW.	1	C. K.	6		3	NE.	1	N.	10
	6	W.	1	C. K. S.	7		6	S. SW.	1	C. K.	8		6	W. NW.	1	C. K.	10
	9	W.	1	Clear	0		9	S. SW.	1	C. K.	4		9	NW.	1	Haze	
May 13	0	W.	1	K.	10	May 14	0	N.	1	Clear	0	May 15	0	SW.	1	C. K.	6
	3	W. NW.	1	C. K.	10		3	N.	1	Clear	0		3	NW.	1	C. K.	4
	6	NW.	1	C. K.	10		6	NW.	1	Clear	0		6	NW.	1	C. K.	8
	9	NW.	1	C. K.	10		9	NW.	1	Clear	0		9	S.	1	Haze	
	Noon	W.	1	Haze			Noon	NW.	2	Clear	0		Noon	SE.	2	C. K.	5
	3	N. NW.	1	Haze			3	NW.	1	C. K.	3		3	SW.	1	C. K.	6
	6	NE.	1	Haze			6	SW.	1	C. K.	5		6	S. SW.	1	C. K.	7
	9	NE.	1	Clear	0		9	SW.	1	C. K.	10		9	SW.	1	C. K.	2
May 16	0	SW.	1	C. K.	3	May 17	0	SW.	1	Clear	0	May 18	0	W.	2	C. K.	3
	3	W.	1	C.	2		3	W.	1	C. K.	6		3	N. NW.	1	C. K.	3
	6	W. NW.	1	C. K.	3		6	S.	1	C. K.	8		6	N. NW.	2	C. K.	2
	9	S.	1	Haze			9	W. NW.	2	C. K.	10		9	NE.	3	Clear	0
	Noon	SE.	1	Haze			Noon	SW.	1	C. K.	10		Noon	NW.	1	Clear	0
	3	S.	2	C. K.	10		3	W.	2	C. K.	4		3	W.	2	Clear	0
	6	SW.	1	C. K.	7		6	W.	1	C. K.	4		6	W. NW.	1	Clear	0
	9	SW.	1	C.	2		9	NW.	1	C. K.	2		9	NW.	1	Clear	0
May 19	0	NW.	2	Clear	0	May 20	0	W.	1	Clear	0	May 21	0	SW.	1	Clear	0
	3	NW.	1	Clear	0		3	SW.	1	Clear	0		3	W.	1	Haze	
	6	W. NW.	1	C. K.	2		6	W.	1	C. S.	3		6	W.	1	Haze	
	9	SE.	1	C. K.	3		9	S. SW.	1	C.	1		9	SW.	1	Haze	
	Noon	S. SE.	2	C. K.	7		Noon	S.	1	Haze			Noon	S.	1	Haze	
	3	SW.	1	C. K.	8		3	S.	1	Haze			3	S.	1	Haze	
	6	S.	1	C. S.	4		6	S.	1	Haze			6	S. SW.	1	C. K.	10
	9	SW.	1	Clear	0		9	S.	1	Clear	0		9	SW.	1	Haze	
May 22	0	SW.	1	Clear	0	May 23	0	W.	1	K.	10	May 24	0	NW.	1	Clear	0
	3	SW.	1	Clear	0		3	NW.	2	C. K.	8		3	NW.	1	Clear	0
	6	W. NW.	1	C. K.	10		6	W.	2	Clear	0		6	NW.	1	Clear	0
	9	S. SE.	1	Haze			9	W. NW.	2	Haze			9	NE.	1	Haze	
	Noon	S.	1	Haze			Noon	W. NW.	3	C. K.	7		Noon	E.	1	Haze	
	3	N. NW.	1	Haze			3	NW.	2	C. K.	8		3	SW.	1	Haze	
	6	W.	1	C. K.	7		6	NW.	2	C. K.	6		6	SW.	1	C. K.	8
	9	W.	1	C. K.	6		9	NW.	1	Clear	0		9	S. SE.	1	Clear	0

REMARKS.

May 12. Rain at 11^h 35^m a. m. Amount, 0.054 inch.
16. Lightning at 8^h p. m.
17. Lightning in the SW. from 9^h 30^m p. m. till midnight.

Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.
		Direction.	Force.					Direction.	Force.					Direction.	Force.		
1871. May 25	0	SW.	1	Clear	0	1871. May 26	0	SW.	3	Clear	0	1871. May 27	0	W.	1	C. K.	9
	3	SW.	1	C. K.	6		3	SW.	1	C. K.	4		3	W.	1	C. K.	7
	6	SW.	1	Haze			6	SW.	1	C. K.	4		6	W. NW.	2	C. K.	7
	9	S.	2	Haze			9	W.	1	C. K.	7		9	N.	2	C. K.	7
	Noon	S.	2	Haze			Noon	W. SW.	2	C. K.	3		Noon	W.	1	C. K.	10
	3	S. SE.	2	Haze			3	W. SW.	2	C. K.	10		3	E.	1	C. K.	8
	6	SW.	1	C. K.	8		6	W.	1	C. K.	9		6	S.	1	C. K.	9
	9	SW.	2	C. K.	6		9	S.	1	C. K.	8		9	S. SW.	1	C. K.	10
May 28	0	NW.	1	C. K.	10	May 29	0	SE.	1	C.	4	May 30	0	SW.	1	Clear	0
	3	W.	1	C. K.	10		3	NE.	1	C. S.	6		3	SW.	1	Clear	0
	6	SE.	1	C. K.	10		6	E.	1	K.	10		6	SW.	1	Clear	9
	9	S. SE.	1	C. K.	7		9	W.	1	K.	10		9	SW.	2	C. K.	4
	Noon	S. SE.	1	C. K.	9		Noon	S. SE.	1	C. K.	6		Noon	SW.	2	C. K.	4
	3	S. SE.	1	C. K.	9		3	S. by W.	2	C. K.	3		3	SW.	3	C. K.	4
	6	SE.	1	C. K.	10		6	S.	2	C. K.	7		6	SW.	2	C. K.	8
	9	SW.	1	C.	4		9	SW.	1	C. K.	2		9	SW.	2	C. K.	10
May 31	0	W. SW.	2	C. K.	7												
	3	W. SW.	1	C. K.	6												
	6	SW.	1	C. K.	7												
	9	W.	1	C. K.	5												
	Noon	SW.	1	N.	10												
	3	SW.	1	C. K.	8												
	6	W.	2	N.	10												
	9	W.	1	K.	10												
June 1	0	NW.	1	C. K.	8	June 2	0	SE.	2	C. K.	10	June 3	0	S.	1	C. K.	10
	3	NW.	1	C. K.	6		3	SE.	1	C. K.	10		3	SW.	1	C. K.	10
	6	NW.	1	C.	4		6	SE.	2	K.	10		6	W. SW.	1	K.	10
	9	NE.	2	C. K.	9		9	E.	1	K.	10		9	S.	1	C. K.	3
	Noon	E. NE.	2	C. K.	10		Noon	E.	1	C. K.	10		Noon	W.	1	C. K.	3
	3	E. NE.	1	C. K.	9		3	S.	1	C. K.	10		3	W.	1	C. K.	3
	6	E.	2	C. K.	7		6	S.	1	C. K.	10		6	SW.	1	C.	2
	9	E.	1	C. K.	10		9	S.	1	C. K.	10		9	SW.	1	C.	2
June 4	0	S.	1	C.	1	June 5	0	NW.	1	C. K.	10	June 6	0	SW.	1	Clear	0
	3	SW.	1	C. K.	5		3	NW.	1	C. K.	10		3	SW.	1	Clear	0
	6	W.	1	C. S.	4		6	NW.	1	Haze			6	NW.	2	Haze	
	9	W.	2	C. K.	6		9	N.	1	Clear	0		9	E.	1	Haze	
	Noon	W. by S.	2	C. K.	8		Noon	E.	3	C.	1		Noon	S.	2	C. K.	2
	3	W. SW.	2	C. K.	6		3	SE.	2	C.	1		3	SE.	2	C. K.	3
	6	W.	2	C. K.	5		6	SE.	1	Clear	0		6	SE.	3	Clear	0
	9	W. NW.	1	C. K.	2		9	W.	1	Clear	0		9	S.	3	C.	2

REMARKS.

May 26. Light shower at $2^h 45^m$ p. m. Lightning in the N. at $8^h 30^m$ p. m.
27. Lightning and thunder, with very slight rain, at 8^h p. m.
31. Light showers, with lightning and thunder, during the afternoon. Amount, during the day, 0.570 inch.
June 2. Commenced observations with the new Solar Thermometer, L. Casella, 13582.
4. Rain, with lightning and thunder, at $3^h 45^m$ p. m. Amount, 0.380 inch.

Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.
		Direction.	Force.					Direction.	Force.					Direction.	Force.		
1871. June 7	0	S.	2	K.	10	1871. June 8	0	SW.	1	C. K.	10	1871. June 9	0	SW.	1	C.	1
	3	S. by W.	2	K.	10		3	W.	1	C. K.	10		3	W.	1	C. K. S.	3
	6	SW.	1	K.	10		6	W.	1	C. K.	10		6	W.	1	C.	3
	9	S.	2	C. K.	8		9	NW.	1	C. K.	10		9	W.	2	C. K.	3
	Noon	S. SW.	2	C. K.	9		Noon	W.	2	C. K.	9		Noon	W.	3	C. K.	5
	3	SW.	2	C. K.	6		3	W.	1	C. K.	8		3	W. NW.	2	C. K.	4
	6	W.	2	N.	10		6	SW.	1	C. S.	4		6	W.	1	C.	1
	9	W.	1	N.	10		9	SW.	1	C.	4		9	NW.	1	S.	1
June 10	0	NW.	1	Clear	0	June 11	0	S.	1	C. K.	5	June 12	0	SW.	2	K.	10
	3	N.	2	C.	2		3	SW.	3	C. K.	7		3	W. SW.	2	K.	10
	6	N.	2	C. K.	8		6	SW.	1	C. K.	10		6	NW.	4	K.	10
	9	NE.	1	C. K.	10		9	SW.	1	K.	10		9	N. NW.	1	N.	10
	Noon	S. by W.	1	C. K.	10		Noon	SW.	1	N.	10		Noon	NW.	3	C. K.	9
	3	SW.	1	C. K.	6		3	SW.	1	C. K.	10		3	W. NW.	3	C. K.	5
	6	S. SW.	1	. K.	8		6	SW.	1	C. K.	8		6	NW.	2	Clear	0
	9	SW.	1	C. K.	7		9	SW.	1	C. K. S.	8		9	NW.	1	Clear	0
June 13	0	NW.	1	Clear	0	June 14	0	SW.	1	C. K.	10	June 15	0	SE.	2	Clear	0
	3	NW.	2	Clear	0		3	NW.	1	C. K.	10		3	SW.	1	C. S.	2
	6	W.	2	Clear	0		6	N.	1	C. K.	10		6	W.	1	Haze	
	9	SW.	2	C. K.	5		9	SW.	1	C.	3		9	W. NW.	2	C. K.	5
	Noon	SW.	3	Clear	0		Noon	W.	2	C.	1		Noon	N. NW.	3	C. K.	7
	3	SW.	3	C. K.	2		3	W.	2	C.	2		3	NW.	3	C. K.	8
	6	W.	2	Clear	0		6	W. SW.	1	C. K.	10		6	NW.	3	C.	2
	9	W.	1	C. K.	3		9	E.	1	C. K.	3		9	N.	2	Clear	0
June 16	0	NW.	2	C. S.	3	June 17	0	SE.	1	C. K.	2	June 18	0	SE.	2	K.	10
	3	NW.	1	Clear	0		3	S.	1	C. K.	3		3	S.	1	N.	10
	6	NW.	1	Clear	0		6	NE.	1	Haze			6	SW.	1	K.	10
	9	N. NW.	2	C. K.	2		9	S.	1	C. K.	10		9	W.	1	C. K.	9
	Noon	NW.	1	C. K.	3		Noon	SE.	1	C. K.	10		Noon	W.	1	C. K.	9
	3	SW.	1	C. K.	8		3	SE.	1	N.	10		3	SW.	1	C. K.	8
	6	SW.	1	C. K.	7		6	SE.	1	K.	10		6	NW.	1	C. K.	6
	9	SE.	1	C. K.	2		9	S. SE.	2	K.	10		9	NW.	1	S.	1
June 19	0	NW.	2	C. S.	3	June 20	0	W. NW.	1	Clear	0	June 21	0	S. SW,	2	C. K.	10
	3	NW.	3	Clear	0		3	SW.	1	C. K.	4		3	NW.	2	C. K.	2
	6	NW.	2	Clear	0		6	W. SW.	1	Haze			6	NW.	2	Clear	0
	9	NW.	2	Clear	0		9	S.	1	Clear	0		9	NW.	2	Clear	0
	Noon	W. NW.	2	C. K.	2		Noon	S. SE.	2	C.	2		Noon	NW.	2	C. K.	1
	3	W.	1	C. K.	7		3	S.	2	C. K.	6		3	NW.	1	C. K.	4
	6	W.	1	C. K.	4		6	SW.	1	C. K.	6		6	W.	1	C. K.	4
	9	W. W.	1	C. K.	1		9	NW.	3	C. K. S.	10		9	NE.	1	S.	2

REMARKS.

June 7. Heavy shower, with lightning and thunder, at 5h 10m p. m. Amount, 0.902 inch.
11. Very light showers during the day.
12. Rain at 7h a. m. Amount, 0.136 inch.
18. A heavy shower at 0h 25m a. m. Amount, 1.296 inch. A fine display of the aurora borealis at 8h 30m, lasting two hours.
20. Lightning in the north at 7h p. m.

Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.
		Direction.	Force.					Direction.						Direction.	Force.		
1871. June 22	0	NW.	1	Clear	0	1871. June 23	0	SE.	1	C. K.	7	1871. June 24	0	S. SW.	1	C. K. S.	2
	3	NW.	1	Clear	0		3	W.	1	C. K.	4		3	SW.	1	C. K.	6
	6	W.	1	C. K.	6		6	W. NW.	1	C. K.	4		6	E.	1	K.	10
	9	SE.	1	C. K.	4		9	W.	1	C. K.	6		9	SW.	1	Haze	
	Noon	SW.	2	C. K.	6		Noon	S.	1	C. K.	6		Noon	S. SW.	1	C. K.	9
	3	S.	2	C. K.	8		3	SW.	1	C. K.	4		3	SW.	1	C. K.	9
	6	S.	2	C. K.	8		6	S. SW.	1	C. K.	6		6	E.	2	K.	10
	9	SE.	2	C. K.	8		9	SW.	1	Clear	0		9	SW.	1	N.	10
June 25	0	SW.	1	K.	10	June 26	0	W. SW.	1	C. K.	4	June 27	0	SW.	1	C. K. S.	4
	3	NE.	2	C. K.	10		3	NW.	1	Haze			3	SW.	1	C. K.	10
	6	N. NE.	2	K.	10		6	N.	1	C. K.	9		6	SW.	1	C. K.	7
	9	N. NE.	2	K.	10		9	S.	1	K.	10		9	S.	1	C. K.	7
	Noon	NE.	2	K.	10		Noon	W. SW.	1	C. K.	9		Noon	SE.	1	C. K.	7
	3	NE.	1	C. K.	10		3	SW.	1	C. K.	10		3	S.	1	C. K.	7
	6	E. NE.	1	C. K.	10		6	SE.	1	C. K.	10		6	S.	1	C.	2
	9	SE.	1	C. K.	2		9	SW.	1	C. K.	10		9	SW.	1	C.	2
June 28	0	S.	1	C. S.	2	June 29	0	W.	1	C. K.	6	June 30	0	W.	2	Clear	0
	3	SW.	1	Clear	0		3	W.	1	C. K.	8		3	W. NW.	2	C.	1
	6	W.	1	C. K.	4		6	W.	2	C. K.	10		6	NE.	2	C. K.	4
	9	W. NW.	1	C. K.	7		9	N. NW.	2	C. K.	6		9	E.	2	Clear	0
	Noon	SE.	1	C. K.	5		Noon	NW.	3	C.	2		Noon	SW.	1	C. K.	3
	3	SW.	2	C. K.	8		3	NW.	3	C.	2		3	S.	1	C. K.	4
	6	NW.	1	C. K.	8		6	N. NW.	2	C. K.	2		6	SW.	1	C. K.	10
	9	W.	1	C. K.	9		9	NW.	2	C.	1		9	SE.	2	C. K.	10
July 1	0	SE.	2	K.	10	July 2	0	E. NE.	1	C. K.	9	July 3	0	SW.	1	C. K.	3
	3	SE.	3	K.	10		3	E.	1	C. K.	10		3	S. SW.	1	C. K.	7
	6	SE.	1	K.	10		6	SE.	1	C. K.	9		6	SW.	1	C. K.	10
	9	E. NE.	2	N.	10		9	S.	1	C. K.	10		9	SE.	1	C. K.	3
	Noon	SE.	2	C. K.	10		Noon	S.	2	C. K.	4		Noon	S.	1	C. K.	4
	3	SE.	2	C. K.	10		3	SW.	2	C. K.	8		3	S.	2	C. K.	4
	6	E.	1	C. K.	10		6	SW.	1	C. K.	8		6	S.	1	N.	10
	9	SE.	2	C. K.	10		9	S.	1	C. K. S.	5		9	N.	1	K.	10
July 4	0	NW.	1	C.	4	July 5	0	W.	1	C. K.	4	July 6	0	NW.	1	C. K.	6
	3	NW.	1	C. K.	10		3	W. NW.	1	C. K.	8		3	SW.	1	C. K.	2
	6	NW.	1	K.	10		6	W. NW.	1	Haze			6	N.	1	C. K.	3
	9	W.	1	C. K.	7		9	W. NW.	1	C. K.	8		9	S.	1	C. K.	3
	Noon	S.	1	C. K.	9		Noon	SW.	1	C.	2		Noon	S.	1	C. K.	4
	3	S.	1	C. K.	10		3	C.	1	C. K.	4		3	S.	2	C. K.	4
	6	SW.	1	N.	10		6	SE.	2	C. K.	7		6	E.	2	C. K.	8
	9	W.	1	C. K.	3		9	S.	1	C. K. S.	2		9	SE.	2	C. K. S.	3

REMARKS.

June 24. A heavy shower, accompanied by hail, at 1h 30m p. m. Some of the pieces of ice were one inch long. Amount of rain, 0.814 inch. A second shower of rain at 9h p. m. Amount, 0.776 inch.

27. Lightning during the evening.

28. A light shower at 8h 10m a. m. Amount, 0.012 inch.

29. Rain at 6h 20m a. m.

July 1. Light showers, with lightning at intervals, during the day. Amount, 0..584 inch.

2. Shower at 4h a. m., with lightning. Amount of rain, 0.212 inch. A few auroral streamers at 8h p. m.

3. Heavy shower at 4h 45m p. m., with vivid lightning. Amount of rain, 1.534 inches.

4. Heavy shower, with lightning, from 4h 25m p. m. to 6h 10m p. m. Amount of rain, 0.612 inch.

6. Intense lightning in the north and east during the evening.

Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.
		Direction.	Force					Direction.	Force.					Direct'on.	Force.		
1871. July 7	0	SW.	1	C. K.	3	1871. July 8	0	N. NW.	2	Clear	0	1871. July 9	0	W. SW.	1	C.	1
	3	SW.	1	C. K.	6		3	NW.	1	C.	1		3	W.	1	Clear	0
	6	SW.	1	C. K.	8		6	NW.	1	C. K.	6		6	SW,	1	C. K.	6
	9	W.	2	C.	2		9	W.	1	C. S.	4		9	SW.	1	C. K.	4
	Noon	W.	3	C. K.	3		Noon	W.	1	Clear	0		Noon	SE.	1	C. K.	7
	3	W.	3	C.	2		3	W.	1	C.	1		3	S.	2	C. K,	4
	6	W. NW.	2	C.	1		6	W.	1	Clear	0		6	S.	1	C. K.	9
	9	NW.	2	C. S.	1		9	W.	1	Clear	0		9	W.	1	C. K.	4
July 10	0	SW.	1	C. K.	6	July 11	0	W.	1	C. K.	3	July 12	0	SW.	1	N.	10
	3	W.	2	C. K.	8		3	W.	1	C. K.	10		3	W.	1	C. K.	10
	6	W.	1	C. K.	8		6	W. by S.	1	C. K.	10		6	W.	1	C. K.	9
	9	W.	1	C. K.	3		9	SW.	1	C. K.	7		9	W. NW.	1	C. K.	10
	Noon	W.	1	C. K.	9		Noon	W.	1	C. K.	7		Noon	W.	1	C. K.	9
	3	W.	1	C. K.	4		3	S. SE.	1	C. K.	7		3	W.	1	C. K.	10
	6	S. by W.	1	C. K.	6		6	SW.	2	N.	10		6	W. SW.	1	C. K.	8
	9	S. SW.	2	N.	10		9	NW.	3	N.	10		9	W. by S.	1	C. K.	4
July 13	0	SW.	1	C. K.	3	July 14	0	E.	1	C. K.	8	July 15	0	NW.	1	C. K.	3
	3	NW,	1	C. S.	1		3	NE.	1	C. K.	10		3	W.	1	Haze	
	6	W.	1	C. K.	4		6	N.	1	N.	10		6	W.	1	Haze	
	9	W.	1	C. K.	4		9	NE.	1	C. K.	10		9	W.	1	C. K.	4
	Noon	S.	2	C. K.	4		Noon	NE.	1	C. K.	10		Noon	W.	2	C. K.	6
	3	E.	2	C. K.	8		3	NE.	2	C. K.	6		3	W.	2	C. K.	6
	6	S.	1	C.	6		6	NE.	1	C. K.	6		6	SW.	1	C. K.	3
	9	E.	1	C. S.	2		9	NE.	1	C. K.	3		9	NW.	2	C.	1
July 16	0	NW.	2	Clear	0	July 17	0	SW.	1	K.	10	July 18	0	NW.	2	Clear	0
	3	NW.	2	C. K.	7		3	NW.	2	K.	10		3	NW.	1	Clear	0
	6	NW.	1	C. K.	6		6	W.	1	C. K.	8		6	NW.	1	C. K.	4
	9	SW.	1	C. K.	7		9	NW.	2	C. K.	3		9	NW.	1	C. K.	3
	Noon	W.	2	C. K.	1		Noon	NW.	2	C. K.	6		Noon	SW.	1	C. K.	7
	3	SW.	3	C. K.	7		3	NW.	2	C. K.	6		3	SW.	2	C. K.	4
	6	SW.	2	C. K.	4		6	NW.	2	C. K.	3		6	SW.	1	C. K.	10
	9	SW.	2	K.	10		9	NW.	1	C, K.	1		9	SW.	1	K.	10
July 19	0	SW.	1	N.	10	July 20	0	NW.	2	Clear	0	July 21	0	NW.	1	C. K.	7
	3	W.	1	C. K.	10		3	NW.	3	Clear	0		3	W.	1	C. K.	9
	6	W. NW.	1	C. K.	7		6	NW.	3	Clear	0		6	W. NW.	1	C. K.	9
	9	NW.	2	C. K.	7		9	NW.	3	C. K.	3		9	W.	1	C. K.	6
	Noon	W.	1	C. K.	9		Noon	NW.	3	C. K.	6		Noon	W.	1	C. K.	7
	3	W.	1	C. K.	10		3	NW.	2	C. K.	5		3	S.	1	C. K.	8
	6	SW.	2	K.	10		6	NW.	2	C. K.	2		6	NW.	3	N.	10
	9	W.	2	C. K.	6		9	NW.	1	C. K. S.	2		9	NW.	1	C. S,	2

REMARKS.

July 9. Distant thunder at 8h 30m a. m.
10. Shower at 8h 30m p. m. Amount, 0.080 inch. Lightning during the evening.
11. Several showers during the afternoon. Amount, 0.882 inch.
13. Dew obtained in the rain-gauge, 0.010.
14. Light shower at 6h a. m.
17. Light shower at 2h a. m. Amount, 0.031 inch.
18. Raining at 10h 30m p. m., and continued 2h 15m. Amount, 0.830 inch. Solar thermometer No. 13583 was mounted in place of No. 13582 at 10h a. m.
19. Showers at 4h and 8h p. m. Amount, 0.102 inch.
21. Light shower at 6h p. m. Amount, 0.082 inch.

Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.
		Direction.	Force.					Direction.	Force.					Direction.	Force.		
1871. July 22	0	W.	2	Clear	0	1871. July 23	0	NW.	1	C. S.	3	1871. July 24	0	W.	1	Clear	0
	3	NW.	3	Clear	0		3	NW.	1	Clear	0		3	NW.	2	Clear	0
	6	NW.	3	Clear	0		9	W.	1	Clear	0		6	NW.	1	Haze	
	9	NW.	2	Clear	0		6	NW.	2	Clear	0		9	N.	1	Clear	0
	Noon	NW.	2	C. K.	4		Noon	N. by E.	1	C. K.	3		Noon	E.	2	C. K.	4
	3	NW.	3	C. K.	5		3	NE.	2	C. K.	4		3	E.	2	C. K.	5
	6	NW.	3	C. K.	4		6	SE.	1	C. K.	4		6	NE.	2	C. K.	10
	9	NW.	2	C.	2		9	W.	1	C. K.	1		9	NE.	2	C.	3
July 25	0	NE.	1	C.	2	July 26	0	NW.	1	N.	10	July 27	0	W.	1	C. K.	7
	3	NW.	1	C. K. S.	3		3	NW.	1	K.	10		3	W. SW.	1	C. K.	9
	6	NW.	1	Clear	0		6	W.	1	K.	10		6	NW.	1	N.	10
	9	NE.	3	C. K.	9		9	SW.	1	C. K.	8		9	SW.	1	C. K.	10
	Noon	NE.	3	C. K.	10		Noon	W.	1	C. K.	4		Noon	S.	2	C. S.	3
	3						3	SW.	2	C. K.	3		3	S.	2	C. K.	4
	6	N. NE.	2	C. K.	10		6	SW.	2	Haze			6	SW.	1	C. K.	9
	9	N.	1	K.	10		9	E.	1	C. K.	2		9	NW.	3	N.	10
July 28	0	NW.	2	K.	10	July 29	0	NW.	1	C.	4	July 30	0	W.	1	C. K.	5
	3	NW.	1	C. K.	3		3	NW.	1	C. K.	8		3	NW.	1	C. K.	10
	6	NW.	1	C. K.	10		6	NW.	1	C. K.	10		6	NW.	1	C. K.	7
	9	NW.	1	C. K.	9		9	E. NE.	1	C. K.	6		9	N.	1	C. K.	5
	Noon	W.	1	C. K.	9		Noon	N.	1	C. K.	7		Noon	SW.	1	C. K.	7
	3	SW.	1	C. K.	4		3	SW.	1	C. K.	4		3	W.	1	C. K.	10
	6	W.	1	N.	10		6	SW.	1	C. K.	5		6	N. by W.	1	C. K.	2
	9	NW.	1	C. K.	10		9	E.	2	C. K.	6		9	W. by S.	1	Clear	0
July 31	0	W.	1	C. K.	7												
	3	W. NW.	1	C. K.	10												
	6	NW.	1	C. K.	4												
	9	W.	1	Clear	0												
	Noon	W.	2	C. K.	8												
	3	S.	1	C. K.	7												
	6	E.	1	C. K.	8												
	9	SE.	1	C. K.	8												
Aug. 1	0	N.	1	C.	2	Aug. 2	0	N.	1	C. K.	5	Aug. 3	0	SW.	1	C.	2
	3	N.	1	C.	3		3	NW.	1	Fog			3	W.	1	C.	3
	6	W.	1	Fog			6	N.	1	Fog			6	NW.	1	Fog	
	9	W.	1	Haze			9	W. NW.	1	Fog			9	S. SE.	1	C. K,	2
	Noon	W. SW.	1	C. K.	8		Noon	E. SE.	1	C. K.	7		Noon	S. SE.	2	C. K.	4
	3	E. SE.	1	C. K.	6		3	S.	1	C. K.	7		3	S.	1	C. K.	9
	6	E. SE.	1	C. K.	3		6	S.	1	C.	2		6	S. SW.	1	C. K.	6
	9	E. NE.	2	C. K.	4		9	S.	1	Clear	0		9	SE.	1	C.	2

REMARKS.

July 22. Aurora borealis visible all night.

27. Several showers during the day. Amount, 0.850 inch. Solar thermometer failed to register the maximum temperature after 3^{h} p. m.

28. Raining slightly at 5^{h} 40^{m} p. m. Amount, 0.056 inch.

30. Several light showers (with hail at 1^{h} 12^{m} p. m.) during the day. Amount, 0.100 inch.

31. Shower at 2^{h} 45^{m} p. m. Amount, 0.218 inch.

Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.
		Direction.	Force.					Direction.	Force.					Direction.	Force.		
1871. Aug. 4	0	SW.	1	C. K.	8	1871. Aug. 5	0	SW.	1	C. K.	8	1871. Aug. 6	0	SW.	1	C. K.	6
	3	SW.	1	C. K.	9		3	W. SW.	1	C. K. S.	8		3	W.	1	C. K.	4
	6	SW.	1	C. K.	6		6	SW.	1	C. K.	6		6	NW.	1	C. K.	9
	9	W.	1	C. K.	9		9	W.	1	C. K.	9		9	E.	1	C. K.	9
	Noon	W.	1	C. K.	9		Noon	NW.	1	C. K.	9		Noon	SE.	1	C. K.	10
	3	W. SW.	1	C. K.	7		3	W.	1	C. K.	8		3	S.	1	C. K.	4
	6	W. NW.	5	K.	10		6	W.	1	C. K.	5		6	SW.	1	C.	2
	9	W.	1	N.	10		9	Calm	0	S.	2		9	S.	1	C. K.	10
Aug. 7	0	SW.	1	C. K.	9	Aug. 8	0	SW.	1	C. K.	8	Aug. 9	0	NW.	1	C.	2
	3	SW.	1	C. K.	10		3	SW.	1	C. K.	10		3	NW.	1	C.	2
	6	NW.	1	C. K.	10		6	SW.	1	C. K.	10		6	W. NW.	1	C.	1
	9	W. SW.	1	Fog			9	SW.	1	C. K.	9		9	W.	2	Clear	0
	Noon	S. SE.	2	C. K.	5		Noon	S.	1	C. K.	9		Noon	NW.	2	C. K.	3
	3	S.	1	C. K.	4		3	W.	1	C. K.	9		3	NW.	2	Clear	0
	6	SE.	1	C. K.	6		6	SW.	1	C. K. S.	9		6	NE.	1	Haze	
	9	SE.	1	K.	10		9	W.	2	K.	10		9	E. NE.	1	C K.	3
Aug. 10	0	NW.	1	Clear	0	Aug. 11	0	NW.	1	C. K.	6	Aug. 12	0	S. SE.	1	C.	2
	3	NW.	1	Clear	0		3	NW.	1	C.	2		3	SW.	1	Clear	0
	6	NW.	1	Haze			6	NW.	1	Fog			6	N.	1	Fog	
	9	E. NE.	2	C. K.	8		9	SE.	1	Haze			9	N.	1	C. K.	8
	Noon	E. NE.	1	Haze			Noon	S.	1	C. K.	4		Noon	S. SW.	1	C. K.	7
	3	N. NW.	1	C. K.	6		3	S.	1	C. K.	7		3	S.	2	C. K.	4
	6	E.	2	Haze			6	SW.	1	C. K.	4		6	E.	1	C. K.	3
	9	E.	1	Clear	0		9	W.	1	C.	1		9	SE.	1	C. K.	1
Aug. 13	0	SE.	1	Clear	0	Aug. 14	0	SE.	1	Clear	0	Aug. 15	0	SW.	1	C. S.	2
	3	NE.	1	C. K.	2		3	SE.	1	Clear	0		3	SW.	1	C. K. S.	2
	6	N.	1	Haze			6	SE.	1	Fog			6	S. SW.	1	C. S.	1
	9	N. by W.	1	Haze			9	S.	1	C. K.	4		9	S.	1	C.	1
	Noon	S. by W.	1	C. K.	3		Noon	S. SW.	1	C. K.	4		Noon	SE.	2	C. K.	2
	3	SE.	2	C. K.	4		3	SW.	1	C. K.	5		3	S.	1	C. K.	4
	6	E.	2	Clear	0		6	S. by E.	2	C. K.	3		6	S.	1	C. K.	7
	9	E.	1	C.	2		9	S.	2	C. K. S.	3		9	S.	1	C. K,	2
Aug. 16	0	S.	1	Clear	0	Aug. 17	0	SW.	1	C.	2	Aug. 18	0	NE.	1	K.	10
	3	SW.	1	C. z .	3		3	NW.	1	C.	4		3	NW.	1	C.	3
	6	SW.	1	Haze			6	NW.	1	C. S.	6		6	W. NW.	1	C. K.	10
	9	S. by W.	1	C. K.	3		9	N. NE.	2	C. K.	4		9	NW.	1	C. K. S.	8
	Noon	S. SE.	1	C. K.	3		Noon	N.	2	C. K.	9		Noon	NW.	1	C. S.	6
	3	SW.	1	C. K.	3		3	NW.	2	C. K.	8		3	W.	1	C. S.	3
	6	SW.	1	C. K.	5		6	E.	1	C. K. S.	10		6	S.	1	C. K.	8
	9	SW.	1	C.	2		9	NE.	1	K.	10		9	SW.	1	C. K.	3

REMARKS.

August 4. Showers at $6^h\ 0^m$ and $8^h\ 30^m$ p. m. Amount, 0.450 inch.
8. Showers at $6^h\ 0^m$ a. m. and $1^h\ 35^m$ p. m. Amount, 0.248 inch.
16. Lightning during the evening.

Day.	Hour.	WIND		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.
		Direction.	Force.					Direction.	Force.					Direction.	Force.		
1871. Aug. 19	0	NW.	1	Clear	0	1871. Aug. 20	0	NE.	1	C. K.	6	1871. Aug. 21	0	W. NW.	1	Clear	0
	3	W.	1	C. K.	5		3	NW.	1	C. K.	7		3	S.	1	Clear	0
	6	NW.	1	C. K.	8		6	W. NW.	1	Haze			6	S.	1	Haze	
	9	N. NE.	2	Haze			9	E.	1	Haze			9	S. by W.	1	Haze	
	Noon	NE.	1	C. K.	8		Noon	SE.	2	Haze			Noon	SE.	2	Haze	
	3	NW.	1	C. K.	10		3	S. SE.	1	Haze			3	S. SE.	1	Haze	
	6	NE.	2	C. K.	9		6	SE.	2	Haze			6	E.	2	Haze	
	9	NE.	1	C. K.	6		9	S.	1	C. K.	2		9	E.	1	C. K.	9
Aug. 22	0	SE.	1	C. K.	10	Aug. 23	0	E.	2	Mist	10	Aug. 24	0	SE.	1	C. K.	9
	3	N. NE.	1	C. K.	10		3	E.	2	K.	10		3	E.	1	N.	10
	6	NE.	1	C. K.	10		6	E.	2	K.	10		6	W.	1	C. K.	10
	9	NE.	2	C. K.	8		9	NE.	2	K.	10		9	SW.	1	C. K.	10
	Noon	NE.	2	C. K.	9		Noon	N.	1	K.	10		Noon	SW.	2	C. K.	9
	3	E.	2	C. K.	6		3	SW.	1	C. K.	8		3	SW.	2	C. K.	8
	6	E.	2	C. K.	7		6	NE.	1	C. K.	9		6	S.	1	C. K.	7
	9	E.	2	C. K.	10		9	NE.	1	C. K.	9		9	SW.	1	C. K.	6
Aug. 25	0	SW.	1	C. K.	8	Aug. 26	0	SW.	1	C. K.	8	Aug. 27	0	S.	2	C. K.	8
	3	S.	1	C. K.	8		3	SW.	1	Haze			3	S.	3	C. K.	8
	6	SW.	1	C. K.	10		6	SW.	1	C. K.	8		6	S.	3	C. K.	9
	9	SW.	1	C. K.	8		9	S. SW.	2	C. K.	7		9	S.	4	C. K.	10
	Noon	SW.	2	C. K.	7		Noon	S.	3	C. K.	10		Noon	S.	5	C. K.	8
	3	SW.	3	C. K.	6		3	S.	3	C. K.	10		3	S. SW.	4	K.	10
	6	S.	1	C. K.	9		6	S.	1	C. K.	10		6	SW.	3	C. K.	10
	9	S.	1	C. K.	8		9	SE.	2	C. K.	9		9	S. SW.	2	C. K.	10
Aug. 28	0	SW.	1	C. K.	10	Aug. 29	0	SW.	2	C. K.	6	Aug. 30	0	S.	2	C. K.	10
	3	SW.	1	C. K.	10		3	SW.	1	C. K.	10		3	SW.	1	C. K.	10
	6	W.	1	C. K.	10		6	SW.	1	K.	10		6	W.	1	C. K.	9
	9	N. NW.	1	Mist	10		9	S. by W.	2	C. K.	6		9	W.	1	C. K.	5
	Noon	S.	1	C. K.	10		Noon	S. by E.	3	C. K.	5		Noon	W.	1	C. K.	4
	3	E.	1	C. K.	10		3	S.	3	C. K.	7		3	W.	2	C. K.	3
	6	E.	1	C. K.	8		6	S.	1	C. K.	9		6	NW.	2	C. K. S.	4
	9	SE.	1	N.	9		9	SW.	1	C. K.	10		9	N. NW.	1	C. K.	4
Aug. 31	0	W.	1	Clear	0												
	3	W. SW.	1	C. K.	2												
	6	W. NW.	1	Clear	0												
	9	NW.	2	C. K.	2												
	Noon	NW.	2	C. K.	2												
	3	NW.	2	C. K.	3												
	6	N.	1	Clear	0												
	9	N	1	Clear	0												

REMARKS.

August 24. Rain at intervals during the night. Amount, 0.446 inch.
25. Lightning in the W. and NW. during the night.
27. Rain at 3^h 50^m p. m. Amount, 0.200 inch.
28. Rain, with lightning and thunder, at 7^h 25^m p. m. Amount, 0.102 inch.
29. Rain, with lightning and thunder, at 4^h 45^m and 9^h 25^m p. m. Amount, 0.160 inch.

Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.
		Direction.	Force.					Direction.	Force.					Direction.	Force.		
1871. Sept. 1	0	W.	1	Clear	0	1871. Sept. 2	0	NW.	1	C. K.	3	1871. Sept. 3	0	NW.	1	Clear	0
	3	W.	1	Clear	0		3	NW.	1	C. K.	5		3	NW.	1	Clear	0
	6	W.	1	Fog			6	NW.	1	Clear	0		6	W. NW.	1	Clear	0
	9	N. NE.	2	Clear	0		9	W. NW.	1	Clear	0		9	NW.	1	Clear	0
	Noon	N. by W.	1	C. K.	8		Noon	N. NW.	1	C. K.	4		Noon	NW.	1	C. K.	1
	3	N. NW.	2	C. K.	8		3	W.	1	C.	2		3	E.	1	Clear	0
	6	NW.	1	C. K.	4		6	N. by. W.	1	Clear	0		6	E.	1	C.	1
	9	NW.	1	C. K.	9		9	NW.	1	Clear	0		9	NW.	1	Clear	0
Sept. 4	0	NW.	1	Clear	0	Sept. 5	0	W.	1	Clear	0	Sept. 6	0	NW.	1	Clear	0
	3	NW.	1	Clear	0		3	W.	1	Clear	0		3	NW.	1	Clear	0
	6	NW.	1	C.	2		6	W. NW.	1	Fog			6	W.	1	Fog	
	9	W. NW.	1	C.	1		9	E. SE.	1	C. K.	4		9	W.	1	Fog	
	Noon	NW.	1	C. K.	2		Noon	N. NE.	1	C. K.	2		Noon	SE.	1	C. K.	1
	3	NE.	1	C. K.	3		3	NE.	1	C.	1		3	S. by E.	1	C. K.	5
	6	E.	1	S.	1		6	E.	1	Clear	0		6	SE.	1	C. K.	6
	9	NW.	1	Clear	0		9	N.	1	Clear	0		9	E.	1	C. K.	4
Sept. 7	0	W.	1	C. K.	4	Sept. 8	0	NE.	2	Clear	0	Sept. 9	0	NW.	1	Clear	0
	3	W.	1	C. K.	6		3	N.	2	Clear	0		3	NW.	1	Clear	0
	6	W.	1	C. K. S.	7		6	N.	2	Clear	0		6	NW.	1	C. S.	2
	9	NW.	1	C. K.	9		9	NE.	3	Clear	0		9	NE.	1	C. K.	2
	Noon	NW.	2	C. K.	9		Noon	E.	3	C. K.	4		Noon	SE.	1	C. K. S.	3
	3	N.	2	C. K.	9		3	E. SE.	2	C. K. S.	2		3	E.	1	C. K.	2
	6	NE.	2	C. K.	7		6	NE.	2	Clear	0		6	E.	1	C. K. S.	2
	9	NE.	3	C. S.	2		9	N.	1	Clear	0		9	E.	1	Clear	0
Sept. 10	0	E.	1	Clear	0	Sept. 11	0	NW.	2	Clear	0	Sept. 12	0	NE.	1	K.	10
	3	NW.	1	Clear	0		3	W.	1	Haze			3	E.	1	K.	10
	6	NW.	1	Fog			6	NW.	1	C. K.	10		6	E.	1	Mist	10
	9	NW.	1	C. K.	4		9	N. NE.	2	C. K.	10		9	E.	2	K.	10
	Noon	SW.	1	C. K.	3		Noon	N.	2	C. K.	10		Noon	E.	1	C. K.	10
	3	W.	1	C. K.	2		3	NE.	1	K.	10		3	E.	1	C. K.	8
	6	W.	1	C. S.	3		6	NE.	1	K.	10		6	NE.	2	C. K.	10
	9	W.	1	Clear	0		9	NE.	1	K.	10		9	NE.	2	C. K.	10
Sept. 13	0	NE.	1	C. K.	9	Sept. 14	0	NE.	2	C. K.	7	Sept. 15	0	E.	2	N.	10
	3	N.	1	C. K.	3		3	NE.	2	C. K.	10		3	E.	2	N.	10
	6	S.	1	C. K. S.	3		6	NE.	2	C. K.	10		6	E. NE.	2	N.	10
	9	SW.	2	C. K.	4		9	NE.	2	K.	10		9	NE.	1	N.	10
	Noon	S.	1	C. K.	8		Noo	NE.	2	K.	10		Noon	NE.	1	N.	10
	3	W.	1	C. K.	7		3	NE.	2	N.	10		3	N.	1	N.	10
	6	NE.	1	C. K.	8		6	NE.	1	N.	10		6	NW.	1	N.	10
	9	NE.	1	N.	10		9	NE.	1	N.	10		9	NW.	1	K.	10

REMARKS.

September 13. Light shower at 8h 55m p. m.
14. Rain from 3h 0m p. m. to 7h 0m p. m. on the 15th. Amount, 2.120 inches.

Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.
		Direction.	Force.					Direction.	Force.					Direction.	Force.		
1871. Sept. 16	0	NW.	2	K.	10	1871. Sept. 17	0	W.	1	Clear	0	1871. Sept. 18	0	NW.	1	Clear	0
	3	NW.	1	C. K.	10		3	W.	1	C. K.	10		3	NW.	1	Clear	0
	6	NW.	1	C. K. S.	9		6	W.	1	C. K.	10		6	NE.	2	Haze	
	9	NW.	1	C. K.	7		9	W. SW.	1	C. K.	3		9	N.	1	Clear	0
	Noon	NW.	3	C. K.	8		Noon	NW.	2	C. K.	4		Noon	E.	1	Clear	0
	3	NW.	2	C. K.	7		3	NW.	1	C. K.	6		3	NW.	1	C.	2
	6	NW.	2	C. S.	3		6	NW.	1	C. K.	9		6	W.	1	C.	1
	9	W.	1	Clear	0		9	NW.	1	C. K.	2		9	NW.	1	Clear	0
Sept. 19	0	NW.	1	S.	1	Sept. 20	0	NE.	1	C.	4	Sept. 21	0	NW.	2	C. K.	2
	3	NW.	1	K.	10		3	NE.	1	K.	10		3	NW.	2	C.	3
	6	S. SW.	1	K.	10		6	NE.	1	K.	10		6	NW.	2	C. S.	2
	9	S.	2	K.	10		9	N.	1	N.	10		9	NE.	2	C.	3
	Noon	SW.	2	C. K.	10		Noon	N.	2	K.	10		Noon	N.	2	Clear	0
	3	S.	2	C. K.	10		3	N.	1	K.	10		3	N.	2	Clear	0
	6	SW.	1	C. K.	9		6	N. NW.	1	C. K.	10		6	N. by E.	1	Clear	0
	9	NW.	1	K.	10		9	N. NW.	3	C. K.	10		9	N.	1	Clear	0
Sept. 22	0	N.	1	Clear	0	Sept. 23	0	NW.	1	Clear	0	Sept. 24	0	W.	1	Clear	0
	3	NW.	1	Clear	0		3	NW.	1	Clear	0		3	W.	1	Clear	0
	6	NW.	1	Haze			6	W.	1	Fog			6	NW.	1	Haze	
	9	NE.	2	C. K.	3		9	SW.	1	C. K.	8		9	W.	1	Haze	
	Noon	SE.	1	C. K.	5		Noon	S.	1	C. K.	2		Noon	W. SW.	2	Haze	
	3	S. SE.	1	C. K.	4		3	SW.	2	C.	3		3	SW.	2	Haze	
	6	SE.	1	Clear	0		6	SW.	1	C. K.	3		6	SW.	1	C. K. S.	7
	9	S.	1	Clear	0		9	SW.	1	Clear	0		9	SW.	1	C. K.	10
Sept. 25	0	W.	1	C. K.	10	Sept. 26	0	NE.	1	K.	10	Sept. 27	0	NW.	1	Clear	0
	3	W.	1	Haze			3	NE.	1	C. K.	10		3	NW.	1	C. K.	3
	6	NW.	1	Haze			6	E.	1	K.	10		6	NW.	1	Haze	
	9	NE.	2	Haze			9	NW.	1	C. K.	10		9	W.	2	Haze	
	Noon	N. NW.	1	Haze			Noon	NW.	1	C. K.	7		Noon	W. NW.	2	C. K.	4
	3	NE.	1	Haze			3	NW.	3	Haze			3	W. NW.	3	C.	2
	6	NE.	1	C. K.	10		6	NW.	1	Haze			6	NW.	1	C. S.	3
	9	NE.	1	C. K.	5		9	NW.	1	C. K.	3		9	NW.	2	Haze	
Sept. 28	0	NW.	2	Haze		Sept. 29	0	NW.	2	C.	3	Sept. 30	0	NW.	1	C. K.	2
	3	NW.	3	C. K.	2		3	NW.	2	Clear	0		3	NW.	1	Clear	0
	6	W. NW.	3	C. K S.	9		6	W. NW.	2	C. K. S.	4		6	NW.	1	Clear	0
	9	W.	2	C. K.	4		9	NW.	3	C. K.	2		9	W. NW.	2	Clear	0
	Noon	W.	3	C. K.	5		Noon	NW.	3	C. K.	6		Noon	N. NW.	3	Clear	0
	3	NW.	3	C. K.	9		3	W. NW.	2	C. K.	2		3	NW.	2	Clear	0
	6	NW.	2	C. K.	4		6	NW.	1	C. K.	3		6	NW.	1	Haze	
	9	NW.	1	Clear	0		9	NW.	1	C. K.	2		9	NW.	1	Haze	

REMARKS.

September 20. Shower at $9^h\ 0^m$ a. m. Amount, 0.326 inch.
22. Dew collected in rain-gauge during night of 21st and 22d, 0.006 inch.
26. Rain at 6^h 48 a. m. Amount, 0.170 inch.

Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.
		Direction.	Force.					Direction.	Force					Direction.	Force.		
1871. Oct. 1	0	NW.	2	Haze		1871. Oct. 2	0	SW.	1	Clear	0	1871. Oct. 3	0	SW.	1	C. K.	4
	3	NW.	2	Haze			3	SW.	1	Clear	0		3	W.	1	C. K.	9
	6	NW.	1	Haze			6	W.	1	Clear	0		6	W.	1	C. K.	10
	9	NW.	1	Haze			9	W. NW.	1	C. K.	6		9	NW.	1	K.	10
	Noon	NW.	1	Haze			Noon	W. NW.	1	C. K.	3		Noon	SW.	1	C. K.	8
	3	W,	1	C. K.	7		3	SW.	1	Clear	0		3	SW.	2	C. K.	4
	6	W. SW.	1	Clear	0		6	SW.	1	Haze			6	SW.	1	C. S.	2
	9	N.	1	Clear	0		9	SW.	1	C. K.	4		9	NW.	1	Haze	
Oct. 4	0	W.	1	Haze		Oct. 5	0	NW.	1	Haze		Oct. 6	0	NE.	1	N.	10
	3	S. SW.	1	Haze			3	NW.	2	Haze			3	S.	1	N.	10
	6	S.	1	Haze			6	NW.	1	Fog			6	NW.	1	N.	10
	9	S.	1	Haze			9	S. by W.	1	C.	4		9	SW.	1	N.	10
	Noon	S. SW.	1	Haze			Noon	S. by W.	1	C. K.	10		Noon	W. SW.	1	K.	10
	3	W.	1	Haze			3	S.	1	C. K.	10		3	S.	1	K.	10
	6	W.	1	C. S.	3		6	SE.	1	C. K.	9		6	W.	1	N.	10
	9	NW.	1	Haze			9	SE.	1	C. K.	8		9	W.	1	Mist	10
Oct. 7	0	NW.	4	K.	10	Oct. 8	0	NW	1	Clear	0	Oct. 9	0	S.	1	Clear	0
	3	NW.	3	C. K.	10		3	NW.	1	Clear	0		3	S.	1	Clear	0
	6	NW.	2	C. K. S.	3		6	NW.	1	Fog			6	S.	1	Clear	0
	9	NW.	2	C. K.	3		9	S. SW.	1	Fog			9	S.	1	Haze	
	Noon	NW.	2	C. K.	4		Noon	SE.	1	Haze			Noon	S.	2	Haze	
	3	NW.	2	C. K.	2		3	SE.	1	Haze			3	S.	2	Haze	
	6	NW.	1	Clear	0		6	S. SW.	1	Clear	0		6	S. by W.	1	S.	1
	9	NW.	1	Clear	0		9	SE.	1	Clear	0		9	SW.	1	Clear	0
Oct. 10	0	S.	1	Clear	0	Oct. 11	0	S.	2	K.	10	Oct. 12	0	NW.	5	N.	10
	3	S.	1	C. K.	6		3	S.	1	K.	10		3	NW.	5	N.	10
	6	S. SW.	1	C. K. S.	5		6	S.	1	K.	10		6	NW.	4	K.	10
	9	W.	1	Fog			9	SW.	1	Mist	10		9	NW.	4	C. K.	4
	Noon	S,	2	C. K.	9		Noon	SW.	1	C. K.	10		Noon	NW.	4	Haze	
	3	S.	2	C. K.	8		3	SE.	2	C. K.	10		3	NW.	4	Haze	
	6	S.	2	C.	4		6	NW.	5	N.	10		6	NW.	2	Haze	
	9	S.	1	Clear	0		9	NW.	4	K.	10		9	NW.	1	Haze	
Oct. 13	0	NW.	1	Haze		Oct. 14	0	NW.	1	Clear	0	Oct. 15	0	W.	1	C. K.	3
	3	NW.	1	Haze			3	W.	1	Clear	0		3	S.	1	C. K.	4
	6	NW.	1	Fog			6	W.	1	Fog			6	S.	1	C. K.	7
	9	NW.	1	Haze			9	W. NW.	1	C. K.	10		9	S.	3	C. K.	7
	Noon	E.	1	Haze			Noon	SE.	1	C. K.	8		Noon	SW.	4	C. K.	6
	3	SE.	1	Haze			3	S.	2	C. K.	8		3	SW.	3	C.	4
	6	SE.	1	Clear	0		6	S SW.	1	C. K.	5		6	SW.	1	C. K. S.	7
	9	SW.	1	Clear	0		9	W.	1	C. K.	4		9	W. SW.	1	N.	10

REMARKS.

October 3. Rain at 10^h 10^m a. m. Amount, 0.024 inch.
6. Rain at intervals during the day. Amount, 1.080 inch.
10. Dew collected in the rain-gauge, 0.010 inch.
11. Rain at 6^h 25^m a. m. Amount, 0.200 inch.

Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.
		Direction.	Force.					Direction.	Force					Direction.	Force.		
1871. Oct. 16	0	W.	1	Haze		1871. Oct. 17	0	W.	1	Clear	0	1871. Oct. 18	0	N.	1	C. K.	4
	3	SW.	1	C. K.	10		3	W.	1	Clear	0		3	NE.	1	C. K.	2
	6	NW.	1	N.	10		6	W.	1	Fog			6	NW.	1	C. K.	2
	9	NE.	1	N.	10		9	W.	1	Clear	0		9	NW.	1	C.	3
	Noon	N.	1	N.	10		Noon	W. by N.	1	C. K	3		Noon	NW.	3	C. K.	6
	3	S.	1	Haze			3	W. SW.	1	C. K.	5		3	NW.	4	C.	1
	6	S. SW.	1	C. K.	10		6	N. NE.	1	C. K.	4		6	NW.	2	Clear	0
	9	W.	1	C. K.	4		9	NE.	1	C. K.	5		9	NW.	1	Clear	0
Oct. 19	0	NW.	1	Clear	0	Oct. 20	0	SW.	1	Clear	0	Oct. 21	0	N.	1	Clear	0
	3	NW.	1	Clear	0		3	SE.	1	Clear	0		3	N.	1	Clear	0
	6	NW.	1	Haze			6	SW.	1	C. S.	4		6	N.	1	Clear	0
	9	SW.	1	Haze			9	NW.	2	C. K.	3		9	E.	1	Haze	
	Noon	SW.	3	Haze			Noon	N. NW.	2	C. K.	3		Noon	SW.	1	Clear	0
	3	S.	3	Haze			3	W. NW.	1	C.	1		3	S.	2	Clear	0
	6	SW.	1	Clear	0		6	NW.	1	C. S.	3		6	S.	1	C. S.	3
	9	SW.	1	Clear	0		9	NW.	1	Clear	0		9	S.	1	C. K.	6
Oct. 22	0	S.	1	C. K.	3	Oct. 23	0	W.	1	Clear	0	Oct. 24	0	SW.	1	C. K.	10
	3	S.	1	Haze			3	W.	1	Clear	0		3	S.	1	C. K.	10
	6	S. by E.	1	Haze			6	W.	1	C. S.	2		6	N. NW.	1	C. K. S.	10
	9	SW.	1	Haze			9	SW.	1	C. K.	3		9	NE.	1	K.	10
	Noon	SE.	2	C. K.	3		Noon	E.	1	C. K.	3		Noon	S.	1	K.	10
	3	S.	2	C. K.	6		3	S.	1	C. K.	7		3	SE.	1	K.	10
	6	S. by W.	1	C.	3		6	S.	1	C. K.	4		6	E.	1	N.	10
	9	SW.	1	Haze			9	S.	1	C. K.	6		9	E.	1	N.	10
Oct. 25	0	E.	2	N.	10	Oct. 26	0	NE.	2	Mist	10	Oct. 27	0	SE.	1	K.	10
	3	E.	3	N.	10		3	NE.	1	Mist	10		3	SW.	1	N.	10
	6	NE.	3	K.	10		6	NE.	1	N.	10		6	W. NW.	2	K.	10
	9	NE.	2	K.	10		9	NE.	1	Fog	10		9	NW.	3	N.	10
	Noon	NE.	2	K.	10		Noon	N.	1	Haze			Noon	NW.	2	K.	10
	3	NE.	1	K.	10		3	S.	2	C. K.	9		3	Calm	0	Clear	0
	6	NE.	1	Mist	10		6	SE.	1	N.	10		6	W.	1	Clear	0
	9	NE.	2	Mist	10		9	S. SE.	1	N.	10		9	SW.	1	C. K.	2
Oct. 28	0	S.	1	C. K.	2	Oct. 29	0	N.	1	Clear	0	Oct. 30	0	NW.	1	C.	4
	3	S.	1	C. K.	8		3	NW.	1	Clear	0		3	NW.	1	Haze	
	6	NW.	3	C. K.	8		6	NW.	1	Clear	0		6	W. NW.	1	S.	1
	9	NW.	3	Clear	0		9	NW.	2	C. K.	2		9	W.	1	C.	2
	Noon	NW.	3	Clear	0		Noon	NW.	3	C. K.	4		Noon	S.	2	C.	4
	3	NW.	3	Clear	0		3	NW.	2	C. K.	4		3	S. SE.	2	C. S.	4
	6	N.	2	Clear	0		6	N. NW.	1	S.	1		6	S.	1	C. K.	9
	9	N.	1	Clear	0		9	N. NE.	1	C.	4		9	S.	1	C. K.	9

REMARKS.

October 16. Rain during the morning. Amount, 0.252 inch.
24. Rain from $6^h\ 0^m$ p. m. to $6\ 0^m$ a. m. on the 25th. Amount, 0.946 inch.
26. Rain at intervals during the day. Amount, 0.280 inch.
27. Light showers during the morning. Amount, 0.062 inch.

Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.
		Direction.	Force.					Direction.	Force.					Direction.	Force.		
1871. Oct. 31	0	SW.	1	C. K.	10	1871.						1871.					
	3	SW.	1	C. K.	9												
	6	S.	1	C. K.	9												
	9	S. SW.	1	C. K.	10												
	Noon	S. SW	1	C. K.	10												
	3	S.	1	C. K.	10												
	6	SE.	1	C. K. S.	10												
	9	S.	2	C. K.	10												
Nov. 1	0	S.	2	N.	10	Nov. 2	0	NW.	3	Clear	0	Nov. 3	0	NW.	1	Clear	0
	3	S.	2	N.	10		3	NW.	2	Clear	0		3	NW.	1	Clear	0
	6	S.	2	N.	10		6	NW.	2	Clear	0		6	NW.	1	C. K.	2
	9	S. SW.	2	N.	10		9	W. NW.	2	Clear	0		9	W. NW.	1	Clear	0
	Noon	W.	1	C. K.	10		Noon	W. NW.	2	Clear	0		Noon	SW.	1	C.	2
	3	NW.	4	C. K.	6		3	W.	2	Clear	0		3	S. SE.	1	C. K.	5
	6	NW.	3	S.	1		6	W.	1	Clear	0		6	SE.	1	S.	1
	9	NW.	3	C. S.	2		9	W.	1	C. K.	2		9	W.	1	C. K.	9
Nov. 4	0	N.	1	K.	10	Nov. 5	0	N. NW.	2	K.	10	Nov. 6	0	N.	1	C.	2
	3	N.	1	K.	10		3	N.	1	K.	10		3	N.	1	C. K.	6
	6	NW.	1	K.	10		6	N. by W.	1	K.	10		6	N. NW.	1	C. K.	7
	9	NE.	2	C. K.	10		9	N.	1	K.	10		9	N.	1	C.	1
	Noon	N. NE.	1	N.	10		Noon	N.	1	K.	10		Noon	NW.	2	C.	2
	3	NE.	1	C. K.	10		3	NW.	1	Clear	0		3	NW.	2	C. K.	2
	6	NE.	1	K.	10		6	NW.	1	C. K.	2		6	NW.	1	S.	1
	9	NE.	2	K.	10		9	NW.	1	Haze			9	NW.	1	C. K.	4
Nov. 7	0	NW.	1	K.	10	Nov. 8	0	NW.	1	Clear	0	Nov. 9	0	NW.	1	C. K.	7
	3	NW.	1	K.	10		3	NW.	1	C. S.	1		3	W.	1	C. S.	2
	6	NW.	1	C. S.	2		6	W.	1	C. S.	7		6	NW.	1	C. S.	2
	9	NW.	3	Clear	0		9	W.	1	C. K.	8		9	S. SE.	1	C.	4
	Noon	NW.	2	C.	1		Noon	NW.	3	C. K.	10		Noon	S. by E.	1	C.	6
	3	NW.	2	Clear	0		3	NW.	3	C. K.	4		3	S. SE.	1	C. K.	10
	6	NW.	1	S.	1		6	NW.	2	C. S.	2		6	SE.	1	K.	10
	9	NW.	1	Haze			9	NW.	1	C. K.	4		9	SE.	1	K.	10
Nov. 10	0	SE.	1	N.	10	Nov. 11	0	NW.	4	K.	10	Nov. 12	0	NW.	2	Clear	0
	3	SE.	1	N.	10		3	NW.	3	C. K. S.	6		3	NW.	1	Clear	0
	6	SE.	1	N.	10		6	NW.	3	C. K. S.	5		6	NW.	2	Clear	0
	9	NE.	1	C. K.	10		9	NW.	3	C. K.	8		9	NW.	1	Clear	0
	Noon	W.	1	Haze			Noon	NW.	3	C. K.	7		Noon	N. NW.	2	Clear	0
	3	W.	1	C. K.	9		3	NW.	3	C. K.	2		3	N.	1	Clear	0
	6	W. NW.	2	S.	1		6	NW.	2	Clear	0		6	N. NW.	1	S.	1
	9	NW.	3	C. K. S.	3		9	NW.	2	Clear	1		9	NW.	1	C. K.	2

REMARKS.

November 1. Heavy rain during the morning. Amount, 1.332 inches.
4. Light shower at noon. Amount, 0.030 inch.
9. Rain from $10^h\ 35^m$ p. m., to $7^h\ 0^m$ on the 10th. Amount, 0.546 inch.
11. A display of the aurora borealis soon after sunset.

Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.
		Direction.	Force.					Direction.	Force.					Direction.	Force.		
1871. Nov. 13	0	NE.	1	C. K.	4	1871. Nov. 14	0	NE.	1	K.	10	1871. Nov. 15	0	W.	1	N.	10
	3	N.	1	C. K.	3		3	NE.	1	K.	10		3	W.	2	N.	10
	6	N.	1	C. K. S.	7		6	N. NE.	2	N.	10		6	W.	5	C. K. S.	8
	9	NE.	1	C. K.	10		9	E.	2	N.	10		9	NW.	3	C. K.	7
	Noon	S.	1	C. K.	9		Noon	E.	3	N.	10		Noon	NW.	4	C. K. S.	9
	3	SW.	1	C. K.	10		3	E.	4	N.	10		3	W. NW.	3	C. K. S.	10
	6	SW.	1	K.	10		6	S.	4	C. K.	9		6	W.	3	C. K.	10
	9	NE.	2	K.	10		9	S.	4	K.	10		9	W. NW.	3	C. K.	9
Nov. 16	0	NW.	3	C. K.	7	Nov. 17	0	NW.	3	Clear	0	Nov. 18	0	NW.	2	Clear	0
	3	NW.	3	C. K.	10		3	NW.	3	Clear	0		3	NW.	2	Clear	0
	6	NW.	3	C. K.	10		6	NW.	2	C. S.	2		6	NW.	1	Clear	0
	9	W. NW.	3	C. K.	10		9	NW.	3	C. K.	4		9	NW.	1	Clear	0
	Noon	W. NW.	3	C. K.	10		Noon	NW.	3	C. K.	9		Noon	SW.	1	Clear	0
	3	NW.	3	C. K.	8		3	NW.	2	C. K.	7		3	SW.	1	Clear	0
	6	NW.	4	C. K. S.	4		6	NW.	1	Clear	0		6	W.	1	Clear	0
	9	NW.	4	C. S.	2		9	NW.	2	Clear	0		9	W.	1	Clear	0
Nov. 19	0	W.	1	Clear	0	Nov. 20	0	E.	1	C. K.	10	Nov. 21	0	W.	1	K.	10
	3	W.	1	C. K.	2		3	E.	1	K.	10		3	W.	1	C. K.	7
	6	W.	1	C. K.	7		6	E.	1	N.	10		6	NW.	1	C. K.	6
	9	W.	1	K.	10		9	E.	1	N.	10		9	N.	1	C. K. S.	9
	Noon	W. NW.	1	K.	10		Noon	S. SW.	1	K.	10		Noon	NW.	1	C. K.	10
	3	SE.	1	K.	10		3	S.	1	N.	10		3	W. by N.	1	C. K. S.	10
	6	E.	1	C. K,	10		6	S. SW.	1	K.	10		6	W.	1	C. K.	10
	9	E.	1	C. K.	10		9	W.	1	K.	10		9	W. NW.	1	N.	10
Nov. 22	0	NW.	2	N.	10	Nov. 23	0	W.	1	Clear	0	Nov. 24	0	SE.	1	K.	10
	3	NW.	1	C. K.	8		3	W.	1	S.	1		3	SE.	1	K.	10
	6	NW.	1	C. K.	7		6	W. NW.	1	S.	1		6	SE.	1	K.	10
	9	W.	1	C. K.	8		9	NW.	2	C. K.	3		9	N. NE.	1	N.	10
	Noon	W.	1	C. K.	10		Noon	N. NW.	2	C. S.	3		Noon	N. NW.	1	N.	10
	3	W.	2	C. K.	7		3	W.	1	Haze			3	NW.	1	N.	10
	6	NW.	1	C. K. S.	10		6	SE.	1	K.	10		6	W.	1	K.	10
	9	NW.	2	K.	10		9	SE.	1	K.	10		9	W. NW.	1	C. K.	9
Nov. 25	0	W. SW.	1	Clear	0	Nov. 26	0	S.	1	K.	10	Nov. 27	0	S.	1	K.	10
	3	SW.	1	C. K.	5		3	S.	1	K.	10		3	SW.	1	N.	10
	6	NW.	1	C. K.	9		6	S.	1	K.	10		6	W.	1	C. K.	9
	9	W.	1	Clear	0		9	S.	1	C. K.	10		9	W. NW.	1	Fog	
	Noon	NW.	1	S.	1		Noon	S. SW.	2	C. K.	10		Noon	NW.	4	C. K.	6
	3	NW.	1	Clear	0		3	SW.	1	C. K.	5		3	NW.	2	C. K. S.	9
	6	N.	1	Clear	0		6	SE.	1	C. K.	4		6	NW.	2	C. K.	2
	9	SE.	1	C. K.	2		9	S.	1	K.	10		9	NW.	2	C. K.	9

REMARKS.

November 14. Heavy rain from $6^h 0^m$ a. m to $4^h 0^m$ p. m. Amount, 1.344 inch.
21. Rain from $8^h 0^m$ p m. to $1^h 30^m$ a. m. on the 22d. Amount. 0.314 inch.
24. Rain from $6^h 20^m$ a. m. to $3^h 0^m$ p. m. Amount, 0.314 inch.
26. Light shower in the morning. Amount, 0.068 inch.
27. Raining lightly at $1^h 20^m$ a. m. Amount, 0.050 inch.

Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.
		Direction.	Force.					Direction.	Force.					Direction.	Force.		
1871. Nov. 28	0	NW.	2	C. K.	9	1871. Nov. 29	0	E. SE.	1	Snow	10	1871. Nov. 30	0	NW.	2	C.	1
	3	NW.	1	C. K.	10		3	NE.	1	K.	10		3	NW.	2	C. K. S.	6
	6	N.	1	C. K.	5		6	NW.	1	C. K.	10		6	NW.	2	C. K.	10
	9	NE.	1	C. S.	3		9	NW.	2	C. K.	9		9	NW.	2	C. K. S.	8
	Noon	NE.	1	C. K.	10		Noon	NW.	4	C. K.	9		Noon	NW.	2	C. K. S.	7
	3	E. SE.	1	K.	10		3	NW.	4	C. K.	8		3	NW.	3	C. K.	6
	6	SE.	1	Snow	10		6	NW.	3	S.	1		6	NW.	1	C. K.	3
	9	SE.	1	Snow	10		9	NW.	3	Clear	0		9	NW.	2	C. K.	10
Dec. 1	0	NW.	2	C. K.	10	Dec. 2	0	NW.	1	C. K.	3	Dec. 3	0	S. SE.	1	C. K.	10
	3	NW.	1	C. K.	10		3	NW.	2	C. K.	4		3	S. by E.	1	C. K.	10
	6	NW.	1	C. K.	3		6	NW.	3	S.	1		6	S. by E.	1	K. S.	9
	9	NW.	1	C. S.	1		9	SW.	1	Clear	0		9	S.	1	Snow	10
	Noon	NW.	2	C. K.	7		Noon	W.	1	Clear	0		Noon	S.	1	K.	10
	3	NW.	2	C.	2		3	W.	1	Clear	0		3	SE,	1	N.	10
	6	NW.	1	S.	1		6	W. NW.	1	S.	1		6	SE.	1	N,	10
	9	NW.	1	C. K.	4		9	NW.	1	Clear	0		9	SE.	1	N.	10
Dec. 4	0	NW.	1	Mist	10	Dec. 5	0	NW.	4	C.	1	Dec. 6	0	NW.	2	Clear	0
	3	NW.	1	K.	10		3	NW.	4	Clear	0		3	NW.	2	S.	1
	6	NW.	1	K.	10		6	NW.	4	Clear	0		6	NW.	2	S.	1
	9	SW.	1	K.	10		9	NW.	3	Clear	0		9	W. NW.	2	S.	1
	Noon	SW.	1	K.	10		Noon	NW.	3	C. K.	3		Noon	W.	2	C. S.	1
	3	NW.	2	N.	10		3	NW.	3	C. K.	1		3	S.	1	C. K.	7
	6	NW.	5	C. K.	5		6	NW.	3	Clear	0		6	S.	2	C. K.	4
	9	NW.	5	Clear	0		9	NW.	2	Clear	0		9	S.	3	K.	10
Dec. 7	0	S.	2	C. K.	9	Dec. 8	0	S.	1	Clear	0	Dec. 9	0	N.	1	Clear	0
	3	S.	2	C.	2		3	SW.	1	Clear	0		3	NW.	2	Clear	0
	6	S.	2	C. S.	2		6	SW.	1	C. K.	2		6	NW.	1	C. K. S.	5
	9	S.	1	Clear	0		9	SW.	1	C. K.	8		9	NW.	2	C. K	4
	Noon	SE.	1	Clear	0		Noon	S. SW.	1	C. K.	7		Noon	NW.	3	C. K.	2
	3	S.	1	Clear	0		3	NW.	3	C. S.	4		3	NW.	2	Clear	0
	6	S,	1	Clear	0		6	NW.	3	C. K.	7		6	S.	1	Clear	0
	9	S.	1	Clear	0		9	SW.	2	Haze			9	S.	1	Clear	0
Dec. 10	0	W.	1	Clear	0	Dec. 11	0	W.	1	Clear	0	Dec. 12	0	W. NW.	1	S.	1
	3	W.	1	Clear	0		3	SE.	1	Clear	0		3	NW.	3	S.	2
	6	W.	1	Clear	0		6	NW.	1	C. K.	1		6	W. NW.	2	C. K. S.	8
	9	S.	1	C. S.	1		9	S.	1	C. S.	2		9	S.	1	C. K.	7
	Noon	S. by W.	1	C. K.	4		Noon	S.	1	C.	2		Noon	W.	1	C. K.	8
	3	S.	2	C. K.	7		3	S.	1	C. K.	6		3	W.	1	C. K.	9
	6	W.	1	Clear	0		6	S. SW.	1	S.	1		6	SW.	1	C. K.	4
	9	SW.	1	Clear	0		9	SW.	2	K.	10		9	S.	1	Clear	0

REMARKS.

November 28. Very light snow at $5^h\ 45^m$ p. m. Not measurable.

December 3. Snow from $7^h\ 50^m$ to $11^h\ 30^m$ a. m. Depth of snow, 0.75 inch. Rain at $3^h\ 0^m$ p. m. Amount of rain and melted snow, 0.200 inch.

4. Several showers during the day. Amount, 0.140 inch.

Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.
		Direction.	Force.					Direction.	Forc					Direction.	Force.		
1871. Dec. 13	0	S.	1	K.	10	1871. Dec. 14	0	NW.	3	C. K.	2	1871. Dec. 15	0	NW.	1	C. S.	2
	3	SE.	1	K.	10		3	NW.	2	C. K.	9		3	NW.	1	C. K.	7
	6	S.	1	K.	10		6	NW.	2	C. K.	8		6	NW.	1	K.	10
	9	W.	1	C. K.	9		9	NW.	2	C. S.	6		9	N.	1	K.	10
	Noon	W. NW.	1	C. S.	1		Noon	NW.	3	C.	2		Noon	N. NW.	1	Snow	10
	3	NW.	3	C. K.	6		3	NW.	3	Clear	0		3	NE.	1	K.	10
	6	NW.	2	C. K.	4		6	NE.	1	C. S.	2		6	E.	1	Clear	0
	9	NW.	2	C. K.	7		9	NE.	1	Haze			9	NW.	1	Clear	0
Dec. 16	0	NW.	1	Clear	0	Dec. 17	0	SW.	1	C. K.	8	Dec. 18	0	S.	1	Haze	
	3	NW.	1	Clear	0		3	SW.	1	C. K.	8		3	SE.	1	K.	10
	6	NW.	1	Clear	0		6	S.	1	K.	10		6	S.	1	K. S.	10
	9	SW.	1	C. K.	1		9	S.	1	C. K.	10		9	SE.	1	N.	10
	Noon	S.	1	C. K.	2		Noon	S.	1	C. K.	10		Noon	SW.	1	C. K.	8
	3	S. SW.	1	C.	2		3	S.	1	C. K.	10		3	NE.	1	Haze	
	6	NW.	1	Clear	0		6	S. by W.	1	K.	10		6	NW.	3	Clear	0
	9	S.	1	C. K.	2		9	S.	1	K.	10		9	NW.	2	Clear	0
Dec. 19	0	NW.	1	Clear	0	Dec. 20	0	SW.	1	K.	10	Dec. 21	0	NW.	3	C. K.	7
	3	W.	1	C.	2		3	NW.	1	K.	10		3	NW.	3	Haze	
	6	NE.	1	C. K.	9		6	NW.	3	C. K.	2		6	NW.	2	Clear	0
	9	S.	1	K.	10		9	NW.	3	S.	1		9	W.	2	Clear	0
	Noon	W.	1	Snow	10		Noon	NW.	3	C.	4		Noon	NW.	2	Clear	0
	3	N.	1	Snow	10		3	NW.	3	C.	2		3	W.	1	Clear	0
	6	NW.	1	C. K.	10		6	NW.	3	Clear	0		6	SE.	1	Clear	0
	9	NW.	1	C. K.	8		9	NW.	3	C. K.	8		9	E.	1	C. K.	6
Dec. 22	0	SE.	1	C. K.	8	Dec. 23	0	N.	1	K.	10	Dec. 24	0	S. SW.	1	C. K.	8
	3	SE.	1	K.	10		3	NE.	1	K.	10		3	W. SW.	1	C. K.	8
	6	S.	1	Snow	10		6	W.	1	K.	10		6	NW.	1	Haze	
	9	S SE.	1	Snow	10		9	S.	1	Mist	10		9	W.	2	Fog	
	Noon	SW.	1	Snow	10		Noon	SW.	1	Mist	10		Noon	W.	1	Fog	
	3	NE.	1	Snow	10		3	SW.	1	Mist	10		3	E.	1	C. K.	3
	6	NE.	1	Sleet	10		6	SW.	1	N.	10		6	E.	1	C. K.	9
	9	NE.	1	Sleet	10		9	S. SW.	1	N.	10		9	E.	1	C.	2
Dec. 25	0	NW.	1	C. K.	6	Dec. 26	0	N.	1	C. K.	6	Dec. 27	0	N. by W.	1	Mist	10
	3	NW.	1	K.	10		3	NW.	1	C. K.	10		3	NW.	1	Mist	10
	6	NW.	1	K.	10		6	NW.	1	Fog			6	NW.	1	N.	10
	9	NW.	1	Fog	10		9	N. NE.	1	Fog			9	NW.	2	C. K.	9
	Noon	SW.	1	Fog	10		Noon	NE.	1	K.	10		Noon	NW.	4	C. K. S.	3
	3	S. by W.	1	C. K.	4		3	NE.	1	K.	10		3	NW.	4	C. K.	4
	6	W.	1	C. K.	3		6	NE.	1	K.	10		6	NW.	4	S.	2
	9	NE.	1	C. K.	9		9	NE.	1	Mist	10		9	NW.	3	S.	1

REMARKS.

December 15. Very light snow at 10^{h} 0^{m} a. m.
18. Light rain at 9^{h} 0^{m} a. m. Amount, 0.090 inch
22. Snow, sleet, and rain from 4^{h} 30^{m} a. m. to 9 0 p. m. on the 23d. Amount of melted snow and rain, 0.506 inch.

Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.	Day.	Hour.	WIND.		Weather.	Portion cloudy.
		Direction.	Force					Direction.	Force.					Direction.	Force.		
1871. Dec. 28	0	NW.	3	Clear	0	1871. Dec. 29	0	SE.	1	C. K.	7	1871. Dec. 30	0	N.	1	K.	10
	3	NW.	1	Clear	0		3	S.	1	C. K.	8		3	N. NE.	1	K.	10
	6	NW.	1	Clear	0		6	S.	1	C. K.	10		6	NE.	1	K.	10
	9	NW.	1	C. K.	3		9	S.	1	C. K. S.	10		9	N. NE.	1	Mist	10
	Noon	N. by W.	1	C. K.	10		Noon	W.	1	N.	10		Noon	NE.	1	Haze	
	3	N. NW.	1	C. K.	10		3	W.	1	N.	10		3	NE.	1	Mist	10
	6	S.	1	C. K.	6		6	SE.	1	N.	10		6	NE.	1	Mist	10
	9	SE.	1	K.	10		9	N. by W.	2	Mist	10		9	N.	1	Mist	10
Dec. 31	0	NW.	1	Mist	10												
	3	W.	1	Mist	10												
	6	W.	1	Mist	10												
	9	W.	1	Fog													
	Noon	S. by W.	1	Fog													
	3	S. SE.	1	Fog													
	6	S.	1	Fog													
	9	S.	2	Fog													

REMARKS.

December 29. Rain at 9^{h} 40^{m}. Amount, 0.330 inch.

METEOROLOGICAL OBSERVATIONS.

MEAN MONTHLY AND ANNUAL RESULTS.

1871.

TABLE I.

Monthly Means of Barometric Pressure.

Date.	0^{h}.	3^{h}.	6^{h}.	9^{h}.	Noon.	3^{h}.	6^{h}.	9^{h}.
1871.	in.	in.	in.	in.	in.	in.	in.	in.
January . .	30.129	30.142	30.153	30.191	30.141	30.104	30.116	30.126
February . .	29.998	29.996	30.007	30.032	30.000	29.969	29.992	30.016
March . . .	29.940	29.926	29.941	29.963	29.931	29.881	29.908	29.938
April. . . .	29.816	29.823	29.844	29.854	29.821	29.770	29.767	29.803
May	29.885	29.897	29.918	29.933	29.912	29.868	29.858	29.889
June	29.854	29.855	29.875	29.888	29.869	29.831	29.823	29.851
July	29.880	29.874	29.890	29.906	29.897	29.850	29.879	29.874
August. . .	29.906	29.900	29.915	29.934	29.913	29.873	29.866	29.907
September .	30.039	30.036	30.053	30.075	30.050	30.010	30.015	30.039
October . .	30.053	30.053	30.067	30.100	30.060	30.019	30.028	30.051
November .	29.963	29.961	29.970	29.995	29.959	29.935	29.953	29.967
December .	30.037	30.046	30.047	30.076	30.036	30.001	30.027	30.046
Annual means.	29.958	29.959	29.973	29.996	29.966	29.926	29.936	29.959

TABLE II.

Monthly Means of Dry Thermometer.

Date.	0^{h}.	3^{h}.	6^{h}.	9^{h}.	Noon.	3^{h}.	6^{h}.	9^{h}.
1871.	°	°	°	°	°	°	°	°
January . .	29.5	28.3	27.6	28.9	35.5	37.7	34.2	31.7
February . .	36.9	35.0	34.7	36.5	39.2	39.8	37.6	34.1
March . . .	43.5	38.9	40.9	46.1	53.3	56.3	51.9	48.0
April. . . .	52.7	50.3	48.9	55.9	64.0	66.4	62.8	56.2
May	58.0	55.3	51.5	62.8	70.0	71.8	68.6	61.4
June	67.8	65.7	65.0	71.7	79.1	81.3	77.9	70.7
July	68.1	66.3	66.5	73.1	80.0	82.5	77.2	70.5
August. . .	72.2	70.0	69.2	75.4	83.4	86.7	80.3	71.3
September .	57.2	54.8	54.0	62.9	72.0	74.2	66.4	60.8
October . .	51.7	49.6	48.5	53.8	64.7	67.3	53.7	54.4
November .	39.6	38.5	38.0	40.8	49.6	48.0	42.8	40.3
December .	27.5	27.2	26.3	28.3	34.2	35.9	31.8	29.6
Annual means.	50.4	48.3	47.6	53.0	60.4	62.3	57.1	52.4

TABLE III.

Monthly Means of Wet Thermometer.

Date.	0^{h}.	3^{h}.	6^{h}.	9^{h}.	Noon.	3^{h}.	6^{h}.	9^{h}.
1871.	°	°	°	°	°	°	°	°
January . .	29.7	28.7	28.1	28.1	33.4	34.9	32.6	30.9
February . .	32.0	30.9	30.5	31.9	36.8	38.2	35.5	33.4
March . . .	42.2	41.0	40.1	43.8	48.2	49.9	47.3	44.4
April. . . .	50.2	48.3	47.2	52.0	56.2	57.4	55.3	52.5
May	56.6	54.6	54.0	58.8	63.4	64.7	63.0	59.0
June	66.6	64.6	64.2	68.1	71.6	73.1	71.1	68.1
July	66.8	65.6	65.9	69.5	73.0	74.6	72.3	68.3
August. . .	70.6	69.3	68.6	72.2	75.7	76.7	74.6	72.0
September .	55.9	54.2	53.4	59.0	63.2	63.9	60.9	57.9
October . .	51.3	49.4	48.3	52.7	58.7	59.8	55.7	53.2
November .	38.7	37.9	37.2	39.8	42.9	43.7	40.8	39.1
December .	27.4	27.6	27.2	28.8	33.8	34.2	31.0	29.0
Annual means.	49.0	47.7	47.1	50.4	54.7	55.9	53.3	50.6

TABLE IV.

Monthly Means of Sun Thermometer.

Date.	0^{h}.	3^{h}.	6^{h}.	9 .	Noon.	3^{h}.	6^{h}.	9^{h}.
1871.	°	°	°	°	°	°	°	°
January . .	30.6	28.3	29.5	37.3	72.4	76.4	58.9	33.3
February . .	33.2	31.4	30.5	50.3	76.7	81.5	70.6	36.5
March . . .								
April. . . .								
May								
June	66.5	63.6	67.0	116.2	139.8	143.5	133.8	87.2
July	66.0	64.1	67.0	114.5	139.7	138.8	116.0	80.2
August. . .	68.1	66.4	66.8	110.9	127.4	129.8	85.4	70.3
September .	53.5	51.9	53.3	98.9	116.0	108.2	62.6	56.4
October . .	48.0	46.2	46.0	86.5	103.6	88.4	53.5	50.2
November .	37.4	36.5	35.8	57.1	76.4	63.0	40.5	37.9
December .	25.6	25.6	24.5	35.8	71.2	54.7	28.9	27.4
Annual means.								

TABLE V.

Amount of Rain and Snow in 1871.

Month.	Rain and Melted Snow.	Snow.
	in.	in.
January	3.023	17.00
February	3.720	9.50
March	5.537	
April	1.104	
May	3.320	
June	4.316	
July	6.182	
August	1.606	
September	2.622	
October	2.854	
November	4.288	
December	1.266	0.75
Total	39.838	27.25

TABLE VI.

Showing the number of times that the wind blew from the NORTH *at the hours of observation.*

Month.	0^h.	3^h.	6^h.	9^h.	Noon.	3^h.	6^h.	9^h.
1871.								
January . . .	2	3	3	2	3	1	4	3
February . . .	2	2	4	3	4	3	4	5
March . . .	4	1	6	3	2	1	3	1
April	4	2	3	2	0	1	2	4
May	2	5	6	3	1	4	2	1
June	0	1	4	5	1	0	1	1
July	1	0	2	2	2	0	2	2
August . . .	1	2	3	5	2	1	1	1
September . .	1	1	1	4	8	5	3	4
October . . .	3	1	2	1	3	0	3	3
November . .	3	4	5	4	4	0	2	1
December . .	5	1	0	3	1	2	0	2
Total . . .	28	23	39	37	31	18	27	28

Showing the number of times that the wind blew from the NORTHEAST *at the hours of observation.*

Month.	0^h.	3^h.	6^h.	9^h.	Noon.	3^h.	6^h.	9^h.
1871.								
January . . .	5	3	5	3	3	4	4	6
February . . .	4	5	6	7	3	3	4	2
March . . .	3	4	5	5	4	3	3	2
April	1	1	1	3	0	2	4	1
May	2	4	3	3	3	4	5	3
June	0	1	2	2	1	1	0	1
July	1	1	0	3	2	2	2	2
August . . .	2	1	1	2	2	0	3	3
September . .	5	3	3	7	2	5	6	5
October . . .	2	2	2	4	1	1	1	2
November . .	2	2	0	4	1	1	1	2
December . .	0	1	2	0	2	5	4	4
Total . . .	27	28	30	43	24	31	37	33

Showing the number of times that the wind blew from the EAST *at the hours of observation.*

Month.	0^h.	3^h.	6^h.	9^h.	Noon.	3^h.	6^h.	9^h.
1871.								
January . . .	1	3	3	1	1	2	1	1
February . . .	5	2	0	1	1	3	5	6
March . . .	3	3	0	3	2	4	4	5
April	3	4	4	5	4	2	3	2
May	2	0	2	4	1	1	0	2
June	0	0	1	3	3	1	3	2
July	2	1	0	2	1	2	3	3
August . . .	1	2	1	3	1	3	8	6
September . .	2	2	3	2	3	4	4	2
October . . .	1	1	0	1	2	0	1	1
November . .	2	1	1	2	1	2	1	1
December . .	0	0	0	0	0	1	2	2
Total . . .	22	19	15	27	20	25	35	33

Showing the number of times that the wind blew from the SOUTHEAST *at the hours of observation.*

Month.	0^h.	3^h.	6^h.	9^h.	Noon.	3^h.	6^h.	9^h.
1871.								
January . . .	2	0	1	1	3	1	3	1
February . . .	3	3	2	1	0	1	1	1
March . . .	3	2	2	2	4	2	6	6
April	3	2	0	1	1	3	4	3
May	2	0	1	1	3	1	2	1
June	5	1	1	1	3	3	4	4
July	1	1	2	1	2	1	2	3
August . . .	4	1	1	1	4	1	2	5
September . .	0	0	0	0	3	0	2	0
October . . .	1	1	0	0	3	4	4	2
November . .	2	2	2	0	0	1	5	4
December . .	2	4	0	1	1	1	3	2
Total . . .	28	17	12	10	27	19	38	32

Showing the number of times that the wind blew from the SOUTH *at the hours of observation.*

Month.	0^h.	3^h.	6^h.	9^h.	Noon.	3^h.	6^h.	9^h.
1871.								
January . . .	4	4	2	4	6	9	4	6
February . . .	0	1	4	5	5	4	1	1
March . . .	5	4	4	4	6	8	4	4
April	3	3	4	6	7	6	7	3
May	1	1	1	8	8	7	7	5
June	7	3	0	6	6	5	5	3
July	0	1	0	2	6	9	3	3
August . . .	4	4	3	8	12	11	8	6
September . .	0	0	1	1	1	3	0	1
October . . .	5	9	7	6	7	13	9	6
November . .	3	2	2	3	4	3	2	2
December . .	6	3	7	10	7	8	7	8
Total . . .	38	35	35	63	75	86	57	48

Showing the number of times that the wind blew from the SOUTHWEST *at the hours of observation.*

Month.	0^h.	3^h.	6^h.	9^h.	Noon.	3^h.	6^h.	9^h.
1871.								
January . . .	3	3	3	6	0	2	4	2
February . . .	3	3	0	2	4	4	4	1
March . . .	2	1	1	3	7	4	0	2
April	3	3	2	3	4	5	0	6
May	10	6	3	2	4	6	6	9
June	7	9	4	4	4	10	6	9
July	7	2	3	5	3	6	10	2
August . . .	12	10	7	3	2	5	5	3
September . .	0	1	0	1	2	2	3	2
October . . .	5	4	1	5	5	3	4	6
November . .	0	2	0	0	2	3	1	0
December . .	2	4	5	9	5	1	2	3
Total . . .	54	48	29	43	42	51	45	45

TABLE VI—Continued.

Showing the number of times that the wind blew from the WEST *at the hours of observation.*

Month.	0ʰ.	3ʰ.	6ʰ.	9ʰ.	Noon.	3ʰ.	6ʰ.	9ʰ.
1871.								
January . . .	2	3	2	3	9	6	5	3
February . . .	5	4	5	5	7	1	5	2
March . . .	3	5	3	5	4	4	4	2
April	7	9	11	3	8	7	5	4
May	7	8	8	6	4	5	8	4
June	4	6	11	6	8	7	7	5
July	8	10	11	9	12	7	5	7
August . . .	1	5	8	6	3	5	2	4
September . .	5	6	8	7	4	4	2	2
October . . .	5	4	7	5	3	4	4	4
November . .	5	5	5	8	6	6	6	6
December . .	3	4	4	5	7	4	3	0
Total . . .	55	69	83	68	75	60	56	43

Showing the number of times that the wind blew from the NORTHWEST *at the hours of observation.*

Month.	0ʰ.	3ʰ.	6ʰ.	9ʰ.	Noon.	3ʰ.	6ʰ.	9ʰ.
1871.								
January . . .	12	12	13	11	6	6	6	8
February . . .	6	8	7	4	3	9	4	10
March . . .	8	11	10	6	2	5	7	9
April	6	6	5	7	6	4	5	7
May	5	7	7	4	7	3	2	6
June	7	9	7	3	4	3	4	5
July	11	15	13	7	3	3	4	9
August . . .	4	6	7	2	4	4	1	0
September . .	15	15	12	6	5	5	8	12
October . . .	9	9	12	10	7	5	5	7
November . .	13	12	15	9	12	13	12	14
December . .	13	16	17	8	7	9	10	10
Total . . .	109	126	125	77	66	69	68	97

Showing the number of times that it was CALM *at the hours of observation.*

Month.	0ʰ.	3ʰ.	6ʰ.	9ʰ.	Noon.	3ʰ.	6ʰ.	9ʰ.
1871.								
January . . .	0	0	0	0	0	0	0	0
February . . .	0	0	0	0	0	0	0	0
March . . .	0	0	0	0	0	0	0	0
April	0	0	0	0	0	0	0	0
May	0	0	0	0	0	0	0	0
June	0	0	0	0	0	0	0	0
July	0	0	0	0	0	0	0	0
August . . .	0	0	0	0	0	0	0	1
September . .	0	0	0	0	0	0	0	0
October . . .	0	0	0	0	0	1	0	0
November . .	0	0	0	0	0	1	0	0
December . .	0	0	0	0	0	0	0	0
Total . . .	0	0	0	0	0	2	0	1

TABLE VII.

Showing the number of times that it was CLEAR *at the hours of observation.*

Month.	0ʰ.	3ʰ.	6ʰ.	9ʰ.	Noon.	3ʰ.	6ʰ.	9ʰ.
1871.								
January . . .	6	6	3	3	2	3	2	5
February . . .	9	8	3	4	2	2	2	6
March . . .	9	7	4	2	1	0	1	8
April	6	7	2	1	1	2	3	9
May	11	7	4	3	2	1	1	7
June	7	6	4	5	1	0	3	5
July	6	6	4	4	1	0	1	2
August . . .	7	4	1	1	0	1	2	3
September . .	15	14	4	6	3	3	5	13
October . . .	11	10	4	2	2	4	8	10
November . .	9	5	3	6	3	6	5	4
December . .	8	7	5	5	3	5	9	9
Total . . .	104	87	41	42	21	27	42	81

Showing the number of times that CIRRUS *clouds prevailed at the hours of observation.*

Month.	0ʰ.	3ʰ.	6ʰ.	9ʰ.	Noon.	3ʰ.	6ʰ.	9ʰ.
1871.								
January . . .	1	0	2	0	1	1	2	3
February . . .	0	0	0	0	2	1	0	2
March . . .	1	1	0	3	6	5	0	3
April	0	2	1	5	4	3	1	1
May	1	1	0	2	1	0	1	2
June	2	2	2	1	4	3	4	5
July	4	1	0	1	1	2	2	3
August . . .	5	6	1	1	0	0	2	4
September . .	2	1	1	2	0	5	2	0
October . . .	3	1	1	5	1	8	4	1
November . .	2	0	0	2	4	0	0	0
December . .	1	2	0	0	3	3	0	1
Total . . .	22	17	8	22	27	31	18	25

TABLE VII—Continued.

Showing the number of times that CIRRO-CUMULUS *clouds prevailed at the hours of observation.*

Month.	0^h.	3^h.	6^h.	9^h.	Noon.	3^h.	6^h.	9^h.
1871.								
January . . .	11	13	9	12	16	15	10	7
February . .	8	9	9	10	14	15	15	11
March . . .	9	11	14	11	14	18	18	10
April	13	14	15	15	17	14	17	12
May	9	14	19	10	15	19	20	14
June	14	17	11	17	23	26	18	15
July	14	18	19	24	28	28	21	16
August . . .	16	16	14	20	27	26	20	17
September . .	6	7	7	11	20	12	12	8
October . . .	7	9	8	9	15	13	8	11
November . .	5	10	13	14	13	17	10	11
December . .	12	9	8	9	10	11	9	7
Total . . .	124	147	146	162	212	214	178	139

Showing the number of times that CIRRO-STRATUS *clouds prevailed at the hours of observation.*

Month.	0^h.	3^h.	6^h.	9^h.	Noon.	3^h.	6^h.	9^h.
1871.								
January . . .	0	1	2	3	1	1	3	0
February. . .	0	0	2	2	2	1	5	0
March . . .	1	0	3	0	0	0	5	0
April	1	0	0	0	0	2	1	0
May	0	1	1	0	0	0	1	1
June	3	1	2	0	0	0	1	0
July	1	1	0	1	1	0	1	3
August . . .	1	0	2	0	1	1	1	0
September . .	0	0	2	0	0	0	4	1
October . . .	0	0	4	0	0	1	4	0
November . .	0	2	3	1	1	0	1	2
December . .	1	0	1	4	2	1	1	0
Total . . .	8	6	22	11	8	7	28	7

Showing the number of times that CUMULUS *clouds prevailed at the hours of observation.*

Month.	0^h.	3^h.	6^h.	9^h.	Noon.	3^h.	6^h.	9^h.
1871.								
January . . .	6	6	11	3	3	2	2	7
February. . .	4	6	6	4	2	1	2	2
March . . .	6	6	4	4	5	4	1	3
April	9	5	5	2	1	1	2	1
May	4	1	2	5	2	0	1	2
June	4	2	7	4	1	0	2	1
July	3	3	3	0	0	0	1	3
August . . .	1	1	2	1	1	1	1	3
September . .	3	3	3	3	2	2	0	3
October . . .	3	1	4	3	4	3	0	1
November . .	9	8	4	2	3	2	6	8
December . .	7	8	7	3	3	2	2	4
Total . . .	59	50	58	34	27	18	20	38

Showing the number of times that CUMULO-STRATUS *clouds prevailed at the hours of observation.*

Month.	0^h.	3^h.	6^h.	9^h.	Noon.	3^h.	6^h.	9^h.
1871.								
January . . .	0	0	0	1	2	2	2	0
February. . .	0	0	0	0	0	0	0	0
March . . .	0	1	1	0	0	0	2	0
April. . . .	0	0	1	0	0	0	1	1
May	0	0	0	0	0	0	1	0
June	0	0	0	0	0	0	0	0
July	0	1	0	0	0	0	0	0
August . . .	0	1	0	1	0	0	2	1
September . .	0	0	0	0	0	0	0	0
October . . .	0	0	0	0	0	1	0	0
November . .	0	0	1	0	1	1	0	1
December . .	0	0	3	0	1	0	0	0
Total . . .	0	3	6	2	4	4	8	3

Showing the number of times that STRATUS *clouds prevailed at the hours of observation.*

Month.	0^h.	3^h.	6^h.	9^h.	Noon.	3^h.	6^h.	9^h.
1871.								
January . . .	0	0	1	1	0	0	2	0
February. . .	0	1	4	1	0	0	0	1
March . . .	0	0	0	0	0	0	0	2
April	0	0	1	0	0	0	0	1
May	0	0	0	0	0	0	0	0
June	0	0	0	0	0	0	0	3
July	0	0	0	0	0	0	0	0
August . . .	0	0	0	0	0	0	0	1
September . .	1	0	0	0	0	0	1	0
October . . .	0	0	1	0	0	0	3	0
November . .	0	1	2	0	1	0	7	0
December . .	1	2	2	1	0	0	1	1
Total . . .	2	4	11	3	1	0	14	9

Showing the number of times that NIMBUS *clouds prevailed at the hours of observation.*

Month.	0^h.	3^h.	6^h.	9^h.	Noon.	3^h.	6^h.	9^h.
1871.								
January . . .	4	3	2	4	4	5	6	8
February . .	3	1	1	2	1	4	1	3
March . . .	4	3	3	5	2	1	4	4
April	0	2	1	2	3	2	2	3
May	5	3	3	3	4	5	4	3
June	0	1	0	1	1	1	1	2
July	3	0	2	1	0	1	5	4
August . . .	0	1	0	0	0	0	0	2
September . .	1	1	1	2	1	2	2	2
October . . .	1	2	3	3	1	0	4	3
November . .	5	4	4	4	3	3	0	1
December . .	3	2	4	8	8	8	6	7
Total . . .	29	23	24	35	28	32	35	42

METEORS.

1871.

METEORS OBSERVED IN 1871.

Owing to the employment of officers and watchmen with other duties, no attempt was made to maintain a series of continuous observations during the year. Preparations were made to observe the August and November showers, and a record was made of all observations of sporadic meteors.

AUGUST SHOWER.

August 9.—N. Cahill, the watchman, counted thirteen small meteors from 8^h 20^m to 14^h 35^m. Saw no indication of a radiant.

August 10.—N. Cahill counted seven meteors from 8^h to 39^m to 9^h 1^m. Professor Eastman commenced observing at 9^h 45 and devoted his attention principally to plotting the tracks of the more conspicuous meteors on a meteor chart. At 10^h 15^m T. Hays, watchman, joined him, and was occupied with counting all the meteors he could see. Both observers counted aloud to avoid duplication.

The meteors observed were as follows:

h.	m.		h.	m.		
9	45	to	10	0	8	meteors.
10	0	to	10	15	1	"
10	15	to	10	30	11	"
10	30	to	10	45	8	"
10	45	to	11	0	15	"
11	0	to	11	15	9	"
11	15	to	11	30	7	"
11	30	to	11	45	4	"

At 11^h 15^m clouds began to form and the sky was invisible at 11^h 50^m.

These meteors moved very rapidly, and only a small portion seemed to move from the vicinity of the supposed radiant. The brightest meteors were moving quite low, and nearly parallel with the horizon.

The following data will show the position of the tracks of eight, which were deemed of sufficient importance to place on the chart:

Number.	Magnitude.	Time of Appearance.	Beginning of Track.		End of Track.	
			a	δ	a	δ
		h. m. s.	° '	° '	° '	° '
1	2	9 54 51	40 0	+ 83 0	140 0	81 0
2	4	9 55 24	40 0	81 0	325 0	85 0
3	1	10 19 15	0 0	76 0	322 0	67 30
4	2	10 24 8	358 0	46 30	12 0	29 30
5	3	10 27 23	352 0	51 0	334 0	37 0
6	2	10 38 26	0 0	41 30	342 30	26 0
7	1	10 45 6	0 0	67 30	320 0	58 0
8	2	11 5 34	6 0	+ 28 30	6 0	15 0

None of these meteors left any trains.

About 11h a very brilliant flash was seen, so bright as to be taken for lightning at first, but the observers standing on the northeast side of the dome could not see the object. It was observed by Mr. Gardner, the instrument-maker, who reported that it was very brilliant, moving southerly and nearly parallel to the southwestern horizon.

August 11.—Other duties prevented Professor Eastman from observing, but Mr. D. Horrigan, the watchman, counted forty meteors from 9h to 12h.

The following table shows the number observed each 15 minutes:

h.	m.		h.	m.	Meteors.	h.	m.		h.	m.	Meteors.
9	0	to	9	15	1	10	30	to	10	45	4
9	15	to	9	30	3	10	45	to	11	0	2
9	30	to	9	45	7	11	0	to	11	15	3
9	45	to	10	0	1	11	15	to	11	30	4
10	0	to	10	15	1	11	30	to	11	45	5
10	15	to	10	30	7	11	45	to	12	0	2

None were seen from 12h to 14h.

August 12.—Professor Eastman observed three bright meteors. The initial and terminal points of their tracks are given below:

	h.	m.		°	'	°	'		°	'	°	'
At	8	35	1st magnitude from	270	0	+ 25	0	to	262	30	0	0
At	8	50	2d magnitude from	270	0	+ 10	0	to	255	0	+ 5	0
At	8	55	2d magnitude from	278	0	+ 20	0	to	280	0	+ 10	0

From 8h 35m to 9h 30m fifteen others were seen in various directions, but they were all small.

August 13.—At 8h 20m a very brilliant meteor was observed to move from Polaris to *α* Aurigæ. Twelve small meteors were seen in various portions of the heavens.

August 14.—Between 15h and 16h Mr. Horrigan counted nineteen meteors, mostly small ones. Most of them moved from the vicinity of Draco toward Polaris.

August 16.—Professor Eastman observed at 8^h 26^m a meteor as large as Sirius move south 20° from α Aquilæ; also at 8^h 48^m one larger than Jupiter move from α Bootis south 35°. The latter was very brilliant, and had a lower velocity than the ordinary August meteors. Six others were seen between 8^h 20^m and 9^h 20^m while looking south.

Arrangements were made to observe on the 10th in connection with Paymaster H. P. Tuttle, U. S. N., who occupied a station at Laurel, Maryland, but clouds prevented any observations at Laurel that could be used in connection with observations made here.

NOVEMBER SHOWER.

Paymaster Tuttle, U. S. N., was ordered to Richmond, Virginia, to observe the November meteors in connection with the observers here, but the dense clouds effectually prevented any observations.

MISCELLANEOUS OBSERVATIONS.

The following observations of sporadic meteors were made during the year.

In the column headed "observer," E. indicates Professor Eastman, H. Professor Hall, and H$_1$. Mr. Horrigan.

Date.	Washington Mean Time.	Observer.	Magnitude.	Color.	Duration.	Appearance and Duration of Train.	Length of Path.	Course of Meteor among the Stars.
1871.	h. m.				s.		°	
May 23	9 43 p. m.	E.	1	White.	3.5	No train.	15	Westerly from a point on the meridian 55° south.
July 6	8 35 p. m.	E.	2	do.	1.0	do.	15	Westerly from a point 8° north of Antares.
6	8 38 p. m.	E.	2	do.	1.5	do.	18	Westerly from Antares.
6	8 45 p. m.	E.	4	do.	0.8	do.	10	South from a point 15° northwest of Antares.
6	8 55 p. m.	E.	1	do.	3.0	do.	35	West from ε Cassiopeæ. Very brilliant.
Aug. 8	11 55 p. m.	H$_1$.	2	do.	1.0	Short train.	12	From α to β Aurigæ. Train lasted 7 seconds.
9	10 45 p. m.	E.	2	do.	0.3	No train.	8	South from 4° north of Algol.
12	11 53 p. m.	H$_1$.	1	White and orange.	1.0	Train lasted 2^s	15	South from β Pegasi. Very brilliant.
Nov. 17	1 55 a. m.	H.	1	White.	. .	Train lasted 1^s	25	From Aldebaran passing 5° below the Pleiades.

LIST

OF

PUBLICATIONS PRESENTED TO THE LIBRARY

DURING

THE YEAR 1871.

LIST OF PUBLICATIONS PRESENTED TO THE LIBRARY IN 1871.

Date.	Publications.	From whom received.
Jan. 28	Catalogue of the Mercantile Library of New York	A. M. Palmer, Libra'n, Clinton Hall, N. Y.
	Meteorological observations taken at the Government Civil Hospital, Victoria, Hong-Kong, May to October, 1870.	R. Young, Esq., Hong-Kong.
	Meteorological observations taken at the Government Civil Hospital, Victoria, Hong-Kong, before and during the cyclone of September 26, 1870.	The same.
	Quarterly weather-report of the Meteorological Office, April to June, 1869.	R. H. Scott, Director, London.
30	Bolletino della Società geografica Italiana. Fascicolo 5°. (Parte terza.) 15 Novembre 1870. Firenze.	Comm. C. Negri, President of the Italian Geographical Society, Florence.
Feb. 6	Description of the great equatoreal at the Royal Observatory, Greenwich. Appendix III. of Observations of 1868.	Sir G. B. Airy, K. C. B., Royal Observatory, Greenwich.
14	Catalogues of books added to the Congressional Library, 1867–'69. 3 vols.	A. R. Spofford, Librarian of Congress.
	Journal of the London Statistical Society. December, 1870 ..	Mr. F. Purdy, Editor, London.
Mar. 24	Tafeln der Amphitrite, mit Berücksichtigung der Störungen durch Jupiter, Saturn, und Mars. Entworfen von Dr. E. Becker. Astronomische-Gesellschaft-Publicationen, No. X. Leipzig, 1870.	Secretary of the German Astronomical Society, Leipzig.
	Bolletino meteorologico dell' osservatorio del reale collegio Carlo Alberto in Moncalieri. Vol. V, No. 8.	P. F. Denza, Director, Turin.
27	Zeitschrift für Meteorologie und Erdmagnetismus der österreichischen Gesellschaft. Band VI, No. 5.	Dr. Ch. Jelinek, Vienna.
	Beobachtungen an der kaiserlich-königlichen Central-Anstalt für Meteorologie. Januar 1870.	The same.
	Jahresbericht der norddeutschen Seewarte für das Jahr 1870. W. von Freeden.	W. von Freeden, Director of the North German Observatory, Hamburg.
April 1	Monthly notices of the Royal Astronomical Society. Vol. 31, No. 4.	Wm. Lassell, Esq., President.
4	Proceedings of the Philosophical Society of Glasgow. Vol. VI, No. 4; Vol. VII, Nos. 1–2.	Mr. St. John Vincent Day, C. E., F. R. S. E., Hon. Librarian, Glasgow.
	Berichte über die Verhandlungen der königlich-sächsischen Gesellschaft der Wissenschaften zu Leipzig. Mathematisch-physische Classe. 1869, I–IV; 1870, I–II.	E. H. Weber, Secretary of the Royal Saxon Academy of Sciences, Leipzig.
	Schweizerische meteorologische Beobachtungen. Dr. R. Wolf, Zürich. December 1869.	Dr. R. Wolf, Zürich.
	Astronomische Mittheilungen. No. XXVI	The same.
	Meteorologische Beobachtungen. Dorpat. 1869............	Dr. Arthur von Oettingen, Dorpat, Russia.
	Mémoire sur les causes et sur les effets de la chaleur de la lumière et de l'électricité. M. Seguin aîné.	M. Seguin aîné, Paris.
	Proceedings of the Royal Geographical Society. November 10, 1870.	H. W. Bates, Assistant Secretary.
	Elektrische Untersuchungen. Hankel..........................	E. H. Weber, Secretary of the Royal Saxon Academy, Leipzig.
	Mittheilungen aus Justus Perthes' geographischer Anstalt über wichtige, neue Erforschungen auf dem Gesammtgebiete der Geographie. Von Dr. A. Petermann. Band 16, 1870, No. XII; Band 17, 1871, Nos. I–II.	Justus Perthes, Geographer, Gotha, Germany.
	Mittheilungen aus der norddeutschen Seewarte. III. Ueber die Dampferwege zwischen dem Kanal und New York nach den Journal-Auszügen der Dampfer des norddeutschen Lloyd, in den Jahren 1860–'70. W. von Freeden, Director.	W. von Freeden, Director of the North German Observatory at Hamburg.
	Mémoire sur l'aviation ou navigation aërienne. Par M. Seguin aîné. (Extrait du Cosmos.)	M. Seguin aîné, Paris.
	Proceedings of the Royal Society of Edinburgh. 19 numbers—1850–'69, except 1868.	The Secretary of the Royal Society, Edinburgh.
	Transactions of the Royal Society of Edinburgh. Vols. XX–XXVI.	The same.
	Bestimmung der Sonnenparallaxe durch Venus-Vorübergänge vor der Sonnenscheibe, mit besonderer Berücksichtigung des im Jahre 1874 entreffenden Vorüberganges. Hansen.	Dr. E. H. Weber, Secretary of the Royal Saxon Academy of Sciences, Leipzig, Germany.
	Beobachtungen an der kaiserlich-königlichen Central-Anstalt für Meteorologie.	Dr. Ch. Jelinek, Vienna.

Date.	Publications.	From whom received.
April 4	Osservazioni delle meteore luminose nel 1871–'72	Prof. P. F. Denza, Director of the Observatory of Moncalieri.
	The diurnal and annual variations of temperature at Halifax, Nova Scotia. G. T. Kingston, M. A.	G. T. Kingston, M. A., Director, Toronto, Canada.
	Monthly meteorological register of the Magnetic Observatory, Toronto. May, June, July, August, 1870.	The same.
June 1	Il sole e le aurore boreali. April, 1871. P. Tacchini	P. Tacchini, Royal University of Palermo, Sicily.
	Uebersicht der Resultate aus den meteorologischen Beobachtungen der königlich-sächsischen Stationen. 1868–'69.	Dr. C. Bruhns, Leipzig, Saxony.
	Bestimmung der Längendifferenz zwischen Berlin und Wien. Förster und Weiss.	The same.
	Transactions of the Connecticut Academy of Arts and Sciences. Vol. I, part II.	Addison Van Name, Librarian, New Haven, Connecticut.
	Fifty-third annual report of the trustees of the New York State Library.	Henry A. Homes, Librarian, Albany, New York.
	Mittheilungen aus Justus Perthes' geographischer Anstalt. Dr. A. Petermann, Band 17, No. III.	Justus Perthes, Geographer, Gotha.
	Ergänzungsheft, No. 28	The same.
12	General meteorological register of the Magnetical Observatory, Toronto, for the year 1870.	G. T. Kingston, Director Magnetical Observatory, Toronto, Canada.
	Monthly meteorological register, Toronto, September, October, November, and December.	The same.
	Osservazioni delle meteore luminose nel 1871–'72	P. F. Denza, Royal Observatory of Moncaleri, near Turin.
	Beobachtungen an der kaiserlich-königlichen Central-Anstalt. März 1871.	Dr. C. Jelinek, Vienna.
	Zeitschrift für Meteorologie. Band VI, Nos. 10–11	The same.
	Telegraphische Witterungsberichte. April 1871	The same.
	Summary of meteorological observations taken at Brisbane during October, November, and December, 1870.	E. MacDonnell, Government Observer for Australia.
	Summary, taken at Ravenswood, August, September, October, November, and December.	The same.
	Summary, taken at Toowoomba, &c., August, September, October, November, and December.	The same.
	Summary of rain-fall at various stations in Australia	The same.
	Bolletino meteorologico ed astronomico del regio osservatorio del università di Torino. 1871.	Prof. Alessandro Dorna, Director of the Royal Observ'y, University of Turin.
	Quarterly weather-reports of the Meteorological Office. Parts III–IV, 1869.	R. H. Scott, Director, London.
	Weather-reports, July to December, 1870	The same.
	Schweizerische meteorologische Beobachtungen. December, 1869, and January and February, 1870.	Prof. Dr. R. Wolf, Zürich, Switzerland.
	Tenth report of the Maine State Library for 1871	Jos. T. Woodward, Librarian, Augusta, Me.
	Osservazioni della stazione meteorologiche nell I. R. academia di marina: publicate dal R. Geo. marittimo in Fiume.	Dr. Ch. Jelinek, Vienna.
	Osservazioni dell' I. R. academia di commercio e nautica in Trieste.	The same.
30	Mémoire sur la détermination des distances polaires des étoiles fondamentales. E. Laugier. 1869.	E. Laugier, Paris.
	Bulletin météorologique mensuel de l'observatoire de l'université d'Upsal. Vol. I, No. 7; Vol. III, Nos. 1–4.	Dr. Robert Rubenson, Director, Upsala.
July 11	Smithsonian Contributions to Knowledge. Vol. XVII	Prof. Joseph Henry, LL.D., Secretary Smithsonian Institution.
	Anales del observatorio de marina de San Fernando. Seccion I. 1871.	Señor Don Cecilio Pujazon, Director.
14	Ephemerides astronomicas calculadas para ó meridiano di observatorio da universidade de Coimbra para usó di mesmo observatorio e da navegaçào Portugueza para o ano 1863–'73. [Duplicates of 1873.]	R. R. de Sousa Pinto, Director of the Observatory of the University of Coimbra, Portugal.
15	Uso do instrumento de passagens pelo primero vertical	The same.
19	Observaciones magnéticas y meteorologicas hechas por los alumnos del colegio de Belen. Noviembre 1869–Noviembre 1870. Habana, 1871.	Rev. Benito Vinez, Director Magnetical and Meteorological Observatory of the Royal College of Belen, Havana, Cuba.
20	Planet- och Komet-Observationer onstallda Ar 1870 pä Lunds Observatorium. Möller.	Prof. Axel Möller, Director of the Lund Observatory.
	Undersokning af Planeten Pandoras Rorelse. Möller	The same.
	Mélanges mathématiques et astronomiques tirés du Bulletin de l'Académie impériale des sciences de St. Pétersbourg. Tome IV:—Ueber die Erscheinung des Enckeschen Cometen im Jahre 1871. S. V. Glassenapp.	Dr. Otto von Struve, Director of the Pulkova Observatory.
	Ueber die Helligkeitsverhältnisse der Jupiters-Trabanten. Dr. Rudolph Engelman. 1871.	Dr. R. Engelman, Leipzig.

Date.	Publications.	From whom received.
Aug. 3	Circular of information by the Bureau of Education for July, 1871. (Report on system of public instruction in Sweden and Norway.)	Hon. John Eaton, jr., Commissioner of Education.
	Monthly notices of the Royal Astronomical Society. Vols. XXVIII–XXX.	Wm. Lassell, Esq., President, Maidenhead, England.
	Index to the first 29 vols. 1827–'69	The same.
	Memoirs of the Royal Astronomical Society. Vol. XXXVII, 1868–'69, Part I.	The same.
	Duplicate of same	The same.
	Astronomical and meteorological observations made at the Royal Observatory, Greenwich, in the year 1868.	Sir G. B. Airy, Astronomer-Royal, Greenwich.
	Observations de Poulkova, publiées par Otto Struve, directeur de l'observatoire central Nicolas. Vol. III. St. Pétersbourg, 1870.	Otto Struve, Director, Pulkova Observatory, St. Petersburg.
	Tabulæ refractionum in usum speculæ Pulcovensis congestæ. Petropoli, 1870.	The same.
	Jahresbricht am 29. Mai 1870 dem Comité der Nicolai-Hauptsternwarte. St. Petersburg, 1870.	The same.
	Mémoires de l'Académie impériale des sciences de St. Pétersbourg. Serie VII, Tome XVI, No. 10.	The same.
	Studien auf dem Gebiete der Störungstheorie. Entwickelung einiger Verbindungen elliptischer Functionen. Dr. H. Gyldén. St. Petersburg, 1871.	The same.
	Ascensions droites moyennes pour l'époque 1845.0 de 300 étoiles observées occasionnellement à la lunette méridienne de Poulkova. 1842–'53.	The same.
	Report on the transit of Venus. 1874. W. Döllen	The same.
	Mittheilungen aus Justus Perthes' geographischer Anstalt. Dr. A. Petermann. Band 17. 1871. No. 5.	Justus Perthes, Gotha.
	Annales de l'observatoire physique central de Russie, publiées par H. Wild, directeur.	H. Wild, Director Central Physical Observatory, St. Petersburg.
	Repertorium für Meteorologie. Dr. H. Wild. Band 1, Heft 2. St. Petersburg, 1870.	The same.
	Astronomische Mittheilungen von Dr. Rudolf Wolf. Nos. XXI–XXVII, except No. XXIII.	Dr. R. Wolf, Zürich, Switzerland.
14	Quarterly report of the Meteorological Office, London. Part 1. January to March, 1870.	R. H. Scott, Esq., A. M., Director, London.
	Report of the Meteorological Committee of the Royal Society, December 31, 1870.	The same.
	Proceedings of the American Academy of Arts and Sciences. Vol. VIII, pp. 137–296.	Prof. Jos. Lovering, Corresponding Secretary of the American Academy, Boston.
24	Verhandelingen van het Bataviaasch Genootschap van Kunsten en Wetenschappen. Deel XXX–XXXIII.	The Secretary of the Batavian Academy of Arts and Sciences, Batavia.
	Tidjschrift voor Indische Taal-, Land- en Volkenkunde. Deel XIII, Serie 5, Deel IV, Aflevering 1–6. 1863. Deel XIV, Serie 5, Deel V, Aflevering 1–6. 1863. Deel XV, Serie 5, Deel VI, Aflevering 1–6. 1865. Deel XVI, Serie 5, Deel II, Aflevering 1–6. 1866. Deel XVII, Serie 5, Deel III, Aflevering 1–6. 1868. Deel XVIII, Serie 5, Deel IV, Aflevering 1. 1868.	The same.
	Notulen van de allemeene en Bestuurs-Vergaderingen van het Bataviaasch Genootschap van Kunsten en Wetenschappen. Deel I, Aflev. 1–2; Deel II, Aflev. 1–2; Deel III, Aflev. 1–2; Deel IV, Aflev. 1–2; Deel V, Aflev. 1–2; Deel VI; Deel VII.	The same.
	Catalogus der ethnogische Afdeeling van het Museum van het Bataviaasche Genootschap van Kunsten en Wetenschappen 1864. 1868.	The same.
Sept. 1	Berechnung der Sonnenfinsternisse in den Jahren 1868 bis 1870. Dr. Edmund Weiss.	Dr. E. Weiss, Assistant Observer Imperial Observatory, Vienna.
25	Bulletin de la Société de géographie, août 1871	C. Maunoir, Secretary, Paris.
	Results of meteorological observations made in New South Wales during 1870, under the direction of H. C. Russell, B. A., F. R. S., Government Astronomer for New South Wales. Sydney, 1871.	H. C. Russell, A. M., Government Astronomer, Sydney, New South Wales, Australia.
	Extract from a geographical and physical survey made in New Grenada, Central America, Mexico, the Antilles, and the United States. From 1847 to 1868. S. A. Cornette, S. J.	Rev. S. A. Cornette, S. J., Spring Hill College, Alabama.
29	Contributions to the knowledge of the meteorology of Cape Horn and western coast of South America. Meteorological Committee, London.	R. H. Scott, A. M., Director of Meteorological Office, London.
Oct. 3	Tables des logarithmes vulgaires à dix décimales, construites d'après un nouveau mode. S. Pineto.	S. Pineto, St. Petersburg, Russia.
23	Journal of the Royal Geographical Society. Vol. XL. 1870	C. R. Markham and R. H. Major, Secretaries, London.
	Proceedings of the Royal Geographical Society. Vol. XV, No. 2.	The same.

Date.	Publications.	From whom received.
Oct. 23	Anuario del observatorio de Madrid, año IX, 1869	Señor Antonio Aguilar, Director of the Observatory, Madrid.
	Anuario del observatorio de Madrid, año X, 1870	The same.
	Resumen de las observaciones meteorologicas efectuadas en la peninsula, Diciembre 1866–'67.	The same.
	Resumen de las observaciones meteorologicas efectuadas en la peninsula, 1867–'68.	The same.
	Observationes meteorologicas: observatorio, Madrid. 1867–'68.	The same.
	Det Norske meteorologiske Instituts Storm-Atlas. H. Mohn. .	Prof. H. Mohn, Director of the Meteorological Institute of Norway, Christiania.
	Bericht über die Thätigkeit der St. Gallischen naturwissenschaftlichen Gesellschaft. 1869–'70.	Dr. Wartmann, Director of the St. Galle Academy of Natural Sciences.
	Annales de l'observatoire impériale de Paris. Tome XXIII. 1867.	M. Ch. Delaunay, Director, Paris.
	Verzeichniss von 3571 telescopischen Sternen zwischen +9° und +15° Declination. (XI. Supplement-Band, Annalen der Münchener Sternwarte.)	Dr. J. V. Lamont, Director of the Munich Observatory, Munich.
	Annalen der königlichen-Sternwarte bei München. Band XVIII	The same.
	Bulletin de l'observatoire météorologique de Montsouris. 30 juin 1870 à 31 août 1870.	M. Ch. St. Claire Deville, Director of the Meteorological Observatory, Paris.
	Astronomische Beobachtungen auf der königlichen Universitäts-Sternwarte zu Königsberg. Dr. E. Luther.	Dr. E. Luther, Director, Königsberg, Prussia.
	Mittheilungen aus Justus Perthes' geographischer Anstalt. Band 17, Nos. VI–VIII. 1871.	Justus Perthes, Gotha.
	Proceedings of the Philosophical Society of Glasgow. Vols. I–VII.	Mr. St. John Vincent Day, Hon. Librarian Glasgow Philosophical Society.
	Schweizerische meteorologische Beobachtungen. March, April, May, 1870.	Dr. R. Wolf, Director of the Observatory Zürich, Switzerland.
Nov. 10	Zeitschrift für Meteorologie. Band VI, No. 20	Dr. Ch. Jelinek, Vienna.
	Telegraphische Witterungsberichte der kaiserlich-königlichen Central-Anstalt. September 1871.	The same.
	Beobachtungen an der kaiserlich-königlichen Central-Anstalt. Juli 1871.	The same.
	Bulletin international de l'observatoire de Paris. Octobre 13–19.	Prof. Ch. Delaunay, Director Imperial Observatory, Paris.
	Observations of luminous meteors, Royal Observatory, Greenwich, 1871.	Sir G. B. Airy, Astronomer-Royal, Greenwich.
	Weather-reports of the Meteorological Office, London, January to June, 1870.	R. H. Scott, Director, London.
	Sopra talune oscillazione diurne degli instrumenti astronomico e sopra una probabile causa della loro apparenza. E. Fergola.	E. Fergola, Member Royal Academy of Sciences, Naples.
	Sulla differenza di longitudine fra Napoli di Roma determinata per mezzo della transmissione telegraphica delle osservazioni del passagi. E. Fergola.	The same.
	Osservazioni della stazione meteorologiche Reale Academia Gov. maritimo in Fiume, Luglio e Agosto 1871.	Dr. Ch. Jelinek, Vienna.
	Osservazioni meteorologiche Reale Academia commercio e nautica in Trieste, Settembre 1871.	The same.
	Indberetning om Bergens Observatorium. 1 Aarere, 1869 og 1870. Åstrand.	J. J. Åstrand, Director Observatory, Bergen, Norway.
13	Rates of chronometers on trial for purchase by the Board of Admiralty at the Royal Observatory, Greenwich.	Sir G. B. Airy, Astronomer-Royal, Greenwich.
	Meteorological observations, Government Observatory, Sydney, New South Wales. H. C. Russell.	H. C. Russell, Government Observer, Sydney, New South Wales.
	Records of magnetic phenomena at the Kew Observatory. No. IV. Disturbances shown by horizontal and vertical force magnetometers. 1859–'64. General E. Sabine.	General E. Sabine, K. C. B., President.
20	Seventh report of the Board of Visitors to the Observatory, Melbourne, Victoria.	R. J. Ellery, Esq., Government Astronomer, Melbourne, Australia.
Dec. 20	Oversigt over det kongelige danske Videnskabernes Selskabs Forhandlinger og dets Medlemmers Arbeider. 1 Aaret 1870; 1870, No. 3. 1 Aaret 1871; 1871, No. 1.	President Royal Danish Society of Sciences, Copenhagen.
	Results of astronomical observations made at the Royal Observatory, Cape of Good Hope, 1856.	Edward J. Stone, M. A., F. R. A. S., Cape Town.
	Journal of the Scottish Meteorological Society. New series, No. XXXI.	A. Buchan, Esq., Secretary, Edinburgh.
	Kleine Schriften der naturforschenden Gesellschaft zu Emden, XV. 1871.	Prof. Dr. Prestel, Director der naturforschenden Gesellschaft.
	Results of astronomical and meteorological observations made at the Radcliffe Observatory, Oxford, in the year 1868.	Rev. Robert Main, M. A., Radcliffe Observer, Oxford, England.
	Sitzungsberichte der mathematisch-physikalischen Classe der kaiserlich-königlichen Akademie der Wissenchaften zu München, 1871. Hefte I–II.	Der Sekretär der mathematisch-physicalischen Classe der kaiserlich-königlichen Akademie, München.
	Annalen der königlichen Sternwarte bei München. Band XVIII.	Dr. J. von Lamont, Conservator der königlichen Sternwarte, München.

Date.	Publications.	From whom received.
Dec. 20	Verzeichniss von 3571 telescopischen Sternen zwischen +9° und +15° Declination. (XI. Supplement-Band zu den Annalen der Münchener Sternwarte.)	Dr. J. von Lamont, Conservator der königlichen Sternwarte, München.
	Sitzungsberichte der kaiserlichen Akademie der Wissenchaften: Mathematisch-naturwissenschaftliche Classe. Band IX, Heft III, erste und zweite Abtheilung. Band IX, Heft IV, erste Abtheilung; Heft IV–V, zweite Abtheilung. Band IX, Heft V. Band LXI, Heft I, erste und zweite Abtheilung.	Der Sekretär der mathematisch-naturwissenschaftlichen Classe der kaiserlichen Akademie der Wissenchaften, Wien.
	Register zu den Banden 51 bis 60 der Sitzungsberichte der kaiserlichen Akademie zu Wien.	The same.
	Mittheilungen aus Justus Perthes' Geographischer Anstalt, Band 17. 1871. IX–X.	Justus Perthes, Gotha.
	Jahrbücher der kaiserlich-königlichen Central-Anstalt für Meteorologie und Erdmagnetismus. Neue Folge, Band V. Jahrgang 1868.	Dr. Ch. Jelinek, Vienna.
	Phänologische Beobachtungen ans dem Pflanzen- und Thierreiche. Carl Fritsche. Heft VIII. Jahrgang 1857.	Dr. Carl Fritsche, Vice-Director Central-Anstalt, Vienna.
	Repertorium für Meteorologie. Band II, Heft I	Dr. H. Wild, St. Petersburg.
	Jahresbericht des physikalischen Central-Observatoriums für 1870. St. Petersburg.	The same.
	Annales de l'observatoire central physique de Russie, année 1867–'68.	The same.
	Bolletino meteorologico del reale osservatorio di Palermo. Vol. VI, Nos. 3, 6–7, 9–12. 1870. Vol. VII, Nos. 3–4. 1871.	G. Cacciatore, Director, Palermo.
	Proceedings of the Royal Geographical Society. Vol. XV, Nos. 3–4.	C. Markham and R. Major, Secretaries, London.
	Rendiconti del reale istituto Lombardo di scienze e lettere. Serie II, vol. II, fascicola 17–20. Vols. III and IV, fascicolo 1–13.	Cav. Dotte C. Castiglioni, President, Royal Institute of Science and Letters, Milan.
	Proceedings of the Imperial Geographical Society of Russia, No. 1, 1871.	The Secretary of the Imperial Geographical Society, St. Petersburg.
	Proceedings of the London Mathematical Society. Nos. 35–39.	Professor A. Cayley, Vice-President, Cambridge.
	Resumen de las observaciones hechas en el mes de Agosto 1870. Estacion meteorologica de la universidad de Valencia.	Don José Monserrat, Observer, Valencia.
	Meteorological observations, Government Observatory, Sydney, New South Wales. April, May, June, August, 1871. Results for 1870.	H. C. Russell, Government Observer, Sydney, New South Wales.
	Report of Government Astronomer, Government Observatory, Sydney, New South Wales.	The same.
	The sun and its office in the universe. F. Abbott, F. R. S. Royal Society, Tasmania, October 11, 1870.	F. Abbott, F. R. S., Hobart Town, Tasmania.
	Meteorological observations made at Brisbane, Queensland, Australia, and at Toowoomba, Warwick, and Cape Moreton, January to June, 1871.	E. MacDonnell, Government Meteorological Observer, Brisbane, Australia.
	Die Temperatur-Verhältnisse in der untersten die Erdoberfläche unmittelbar berührenden Schicht des Luftmeers. Prestel. Emden, 1871.	Professor Dr. Prestel, Director der naturforschenden Gesellschaft, Emden.

APPENDIX I.

WASHINGTON ZONES.

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Zones 1–162

INTRODUCTION.

§ 1.

The zones of stars contained in the following pages were observed with the Meridian Circle in the years 1847, 1848, 1849, and form a continuation of those reduced and published by Mr. James Ferguson, assistant astronomer, in the year 1860. The zones reduced by Mr. Ferguson are those which were observed with this instrument in the year 1846. In his introduction Mr. Ferguson has given a description of the Meridian Circle, and a detailed account of the methods of making and reducing the observations. The description of the instrument will be found also in the annual volume for 1846, page XXXVII. The object-glass of the telescope was 4.5 inches in aperture, and 58.2 inches in focal length. The diaphragm contained eleven transit-wires, and seven micrometer-wires for declination. The transit-wires were designated 1, 2, I, II, III, IV, V, VI, VII, 10, 11; and the micrometer-wires **1, 2, 3, 4, 5, 6, 7.** The first of the transit-wires was that first passed by a star, circle east; and the first of the micrometer-wires was that uppermost in the field, circle east, and the observer looking southward.

The equatorial intervals of the transit-wires from the mean were as follows:

Date.	I.	II.	III.	IV.	V.	VI.	VII.
	s.	s.	s.	s.	s.	s.	s.
1847	+ 32.937	+ 21.838	+ 10.980	− 0.043	− 10.919	− 21.921	− 32.861
1848	+ 32.876	+ 21.793	+ 10.947	+ 0.136	− 10.913	− 21.960	− 32.869
1849. January 1 to May 31 .	+ 32.887	+ 21.795	+ 10.942	+ 0.152	− 10.940	− 21.947	− 32.889
1849. May 31 to June 11 . .	+ 32.963	+ 21.834	+ 11.011	+ 0.021	− 11.035	− 21.819	− 32.974
1849. June 11 to November 28	+ 32.927	+ 21.884	+ 10.940	− 0.016	− 10.996	− 21.891	− 32.848

The following intervals of the micrometer-wires are given in the introductions to the annual volumes for the several years:

Date.	**4 − 1.**	**4 − 2.**	**4 − 3.**	**4 − 5.**	**4 − 6.**	**4 − 7.**
	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″
1847. January 1 to March 29 .	− 20 30.25	− 14 38.54	− 5 55.42	+ 5 46.13	+ 14 28.94	+ 20 19.03
1847. March 29 to December 30	− 20 31.32	− 14 40.37	− 5 55.95	+ 5 46.58	+ 14 28.19	+ 20 18.65
1848. January 1 to January 4 .	− 20 31.32	− 14 40.47	− 5 55.95	+ 5 46.58	+ 14 28.19	+ 20 18.65
1848. January 4 to Decem'r 30	− 20 24.30	− 14 35.06	− 5 52.18	+ 5 47.94	+ 14 29.23	+ 20 23.37
1849. January 1 to February 1	− 20 27.16	− 14 38.50	− 5 52.45	+ 5 48.33	+ 14 29.13	+ 20 23.08
1849. February 1 to March 1 .	− 20 26.00	− 14 36.10	− 5 52.04	+ 5 49.45	+ 14 30.45	+ 20 23.46
1849. March 1 to June 11 . .	− 20 24.84	− 14 33.71	− 5 51.63	+ 5 50.56	+ 14 31.76	+ 20 23.73
1849. June 18 to December 31	− 20 24.54	− 14 33.72	− 5 46.44	+ 5 49.46	+ 14 37.04	+ 20 23.86

A fixed horizontal wire was placed near the center of the field at the fortieth division of the scale. To this were referred all the angular measurements of the circle. The relation of the fixed wire to the micrometer-scale was determined by bringing the fourth micrometer-wire into coincidence with it, and this reading is recorded as the micrometer coincidence. The above intervals, expressed in revolutions of the micrometer-screw, furnish each a constant to be applied to the micrometer-reading whenever the corresponding wire has been used in the observation. The micrometer correction to be applied to the circle-reading is $Cf + m - C$, where Cf denotes the above constant, m denotes the micrometer-reading corresponding to wire 4, and C the coincidence of wire 4 with the fixed wire.

The adopted values of one revolution of the micrometer-screw were as follows:

″
1847. January 1 to March 29 R = 34.433
1847. March 29 to December 31 R = 34.406
1848. . . . . . R = 34.447
1849. . . . . . R = 34.515

§ 2.

The observers were Professor James Major, U. S. N., who determined the values of the instrumental corrections, the values of a revolution of the micrometer-screw and the wire intervals; Lieutenant Lafayette Maynard, U. S. N., and Lieutenant William B. Muse, U. S. N. The observers are distinguished by the letters *Maj.*, *M.*, and *Ms.*, placed at the heading of the zones.

The proofs were compared with the hand-books of the observers, and in all cases were made to correspond with the original record. The results for right ascension and declination, and the notes given by Dr. Gould, are printed without any change. A few cases occur where, through a fault of the copyist, Dr. Gould has been led to an erroneous reduction, but these may be seen by a comparison of the observation and the right ascension or declination deduced. In reading the proofs I have been assisted by Mr. A. N. Skinner from page 1 to 112, and from page 112 to the end by Professor Holden.

In arranging the page for printing, as two extra transit-wires were used in these observations, it was found necessary to omit the sign of the quantity, i. It is always negative.

The publication of these zones completes the work undertaken more than two years ago of printing the zones observed at the Naval Observatory in the years 1846, 1847, 1848, and 1849. On account of the inexperience of some of the observers and the lack of good organization these observations contain many errors, and the whole work needs a careful revision. In order to facilitate this revision, and the final arrangement of the stars into a catalogue, a list of 415 stars has been selected from the Mural Zones, and these stars will be observed anew with the Pistor and Martin's Meridian Circle. With this new data, combined with the results obtained from southern observatories, it is hoped that we may have the means of deriving from these zones a valuable catalogue of southern stars.

A. HALL,
Professor of Mathematics, United States Navy.

SEPTEMBER 19, 1873.

INDEX OF ZONES.

In the following index, D denotes the declination of the middle of the zone, and the following columns give the extent in right ascension, and the number of the zone, the page on which it will be found, and the number of stars it contains.

The whole number of observations of stars in these zones is 7,390; of which—

Professor Major made 4,701
Lieutenant Maynard made 615
Lieutenant Muse made 2,074

D=−40° 50′.			
Right Ascension.	Zone.	Page.	No. Stars.
h. m. h. m.			
11 47 to 12 43	181	158	16
D=−38° 40′.			
10 40 to 13 58	173	143	122
D=−36° 20′.			
7 7 to 8 30	171	139	33
D=−35° 50′.			
8 4 to 11 5	168	133	121
D=−33° 50′.			
7 39 to 10 2	166	131	99
5 59 to 6 55	167	133	33
6 52 to 8 1	169	136	73
12 34 to 14 39	170	138	85
D=−32° 30′.			
2 2 to 4 57	81	3	52

D=−31° 30′.			
Right Ascension.	Zone.	Page.	No. Stars.
h. m. h. m.			
7 38 to 12 52	90	21	121
17 59 to 21 43	134	80	183
4 59 to 8 3	159	118	120
3 1 to 5 1	160	120	53
11 40 to 14 58	172	140	137
16 39 to 16 56	185	161	14
D=−30° 40′.			
4 8 to 4 32	82	4	12
3 31 to 8 6	83	4	175
8 9 to 10 53	87	16	65
6 1 to 8 27	165	128	137
13 34 to 15 6	182	158	46
D=−3 ° ′.			
9 46 to 15 13	88	17	125
14 50 to 17 59	96	34	82
4 54 to 6 39	162	123	69
D=−29° 40′.			
7 34 to 9 43	89	20	60
9 51 to 12 59	95	32	96
12 42 to 18 22	97	35	170
6 6 to 7 40	155	113	80
4 41 to 6 28	161	121	67

D=−29° 0'.

Right Ascension.	Zone.	Page.	No. Stars.
h. m. h. m.			
9 26 to 13 52	91	24	120
15 18 to 18 14	94	30	92

D=−28° 20'.

8 5 to 10 6	86	14	96
9 33 to 14 6	92	27	121

D=−27° 40'.

5 29 to 10 10	84	8	236
10 45 to 11 58	85	13	44
16 23 to 19 6	101	44	38
3 50 to 6 0	158	116	47
10 5 to 11 3	178	154	36

D=−27° 0'.

9 46 to 11 3	93	29	25
11 21 to 14 56	99	40	113
16 2 to 18 16	100	43	61
19 17 to 23 57	107	49	89
1 38 to 2 53	108	51	27
2 41 to 3 58	154	112	52
8 54 to 10 18	174	146	62
14 44 to 15 22	180	157	24

D=−26° 15'.

12 5 to 15 29	98	39	70
18 3 to 20 16	102	45	36
19 29 to 21 54	105	47	48
23 51 to 1 2	106	48	20
23 4 to 0 0	110	53	26
1 1 to 2 59	111	53	49
4 47 to 6 12	163	124	51

D=−25° 40'.

13 15 to 16 1	124	65	104
16 12 to 17 47	125	67	90
17 42 to 19 15	139	90	81

D=−25° 10'.

Right Ascension.	Zone.	Page.	No. Stars.
h. m. h. m.			
18 10 to 18 38	103	46	11
18 39 to 21 2	104	46	46
20 59 to 0 1	109	51	62
13 21 to 13 56	126	68	23
10 55 to 12 13	176	149	59
9 39 to 13 24	177	150	174

D=−24° 40'.

21 3 to 21 19	112	54	9
21 23 to 23 56	113	55	62
1 41 to 2 39	114	56	26
15 46 to 16 58	128	70	45
19 6 to 20 40	138	89	60
20 43 to 21 42	140	92	43
13 24 to 15 19	175	147	76
9 57 to 13 38	179	154	141

D=−23° 50'.

16 35 to 20 8	129	71	119
17 4 to 20 0	132	79	126

D=−23° 10'.

9 13 to 11 1	120	61	48
11 50 to 13 8	121	62	24
17 47 to 18 9	130	73	15
17 12 to 19 24	131	74	61
18 50 to 22 6	148	102	149
13 0 to 13 30	183	159	10

D=−22° 30'.

0 0 to 0 48	115	57	22
23 39 to 4 0	116	57	73
2 30 to 3 4	117	59	17
6 6 to 7 48	118	59	58
9 17 to 10 47	119	61	30
11 20 to 14 20	122	63	68
14 49 to 15 17	123	64	12
17 5 to 19 13	127	69	58
20 16 to 21 49	135	84	51
20 13 to 21 59	136	85	51

Right Ascension.	Zone.	Page.	No. Stars.
D=−**22° 0**′.			
h. m. h. m.			
23 1 to 0 42	156	114	59
3 11 to 4 1	157	116	32
6 0 to 8 4	164	125	112
D=−**21° 15**′.			
17 45 to 20 47	133	78	127
20 8 to 21 57	144	96	70
22 41 to 23 46	145	98	34
22 35 to 23 56	152	109	46
D=−**20° 30**′.			
23 20 to 23 33	143	96	8
19 13 to 22 0	146	99	107
D=−**20° 0**′.			
18 27 to 21 58	137	86	125
22 39 to 23 24	142	96	15

Right Ascension.	Zone.	Page.	No. Stars.
D=−**19° 20**′.			
h. m. h. m.			
19 15 to 21 51	141	93	120
23 9 to 0 59	147	101	61
17 56 to 19 1	186	162	50
D=−**18° 50**′.			
22 45 to 0 37	151	108	50
D=−**18° 20**′.			
19 22 to 21 56	149	105	75
D=−**17° 30**′.			
22 49 to 23 34	150	107	24
D=−**16° 50**′.			
20 27 to 0 0	153	110	93
D=uncertain.			
15 4 to 17 17	184	160	73

ZONES OF STARS

OBSERVED AT THE NAVAL OBSERVATORY

WITH

THE MERIDIAN CIRCLE

IN THE

YEARS 1847-'48-'49.

ZONES OF STARS

OBSERVED WITH THE

MERIDIAN CIRCLE AT THE NAVAL OBSERVATORY IN THE YEARS 1847–'48–'49.

ZONE 81. JANUARY 6. M. D₀=−31° 48′ 40″.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
1	7.8	. .	. .	41.5	54.5	. .	. .	. .	. .	. .	2 2 54.51	−31.01	−1.01	IV.	3	35.46	38 31.74	− 5.61	− 6.29	2 2 21.59	32 27 23.65
2	8.9	. .	. .	. .	. .	. .	. .	49.6	. .	. .	3 10.52	31.92	1.01	VII.	2	44.18	42 14.23	5.63	6.89	2 37.59	31 6.75
3	9.10	. .	. .	. .	3.	. .	28.5	. .	. .	. .	12 2.75	32.07	0.99	VII.	6	41.20	14 49.36	6.69	2.71	11 29.69	3 38.76
4	8	19.2	. .	45.5	58.3	11.	. .	. .	. .	. .	16 58.26	32.15	0.99	IV.	6	38.64	16 17.73	7.34	2.90	16 25.12	5 7.97
5	9	. .	16.8	30.5	42.7	. .	. .	. .	. .	. .	19 42.99	32.19	1.01	VII.	3	33.39	39 42.65	7.70	6.50	19 9.79	28 36.85
6	9	. .	. .	. .	. .	6.	19.	32.	. .	. .	20 53.04	32.21	1.00	VII.	5	40.56	23 54.21	7.86	4.07	20 19.83	32 12 46.14
7	8	4.4	17.8	30.3	43.5	. .	. .	. .	. .	. .	24 43.36	32.28	0.98	V.	7	43.10	7 54.19	8.41	1.65	24 10.10	31 56 44.25
8	8	. .	. .	. .	. .	4.	17.	30.	. .	. .	24 50.90	32.28	1.02	VII.	1	34.45	53 40.98	8.42	8.70	24 17.60	32 42 38.10
9	8	. .	. .	. .	. .	37.	50.8	. .	. .	. .	27 24.38	32.32	1.00	VI.	4	33.29	33 50.89	8.79	5.59	26 51.06	22 45.29
10	7	. .	. .	. .	. .	. .	45.4	58.1	. .	. .	28 19.28	32.33	0.99	VII.	5	43.77	22 3.68	8.92	3.78	27 45.96	10 56.39
11	8.9	7.	20.	33.	. .	. .	. .	25.	. .	. .	30 46.05	32.37	1.01	IV.	2	45.63	41 24.69	9.26	6.92	30 12.67	30 20.87
12	9	. .	. .	. .	. .	. .	2.5	. .	. .	. .	32 36.35	32.40	1.02	VII.	1	34.39	53 43.05	9.55	8.70	32 2.93	42 41.30
13	7	. .	. .	. .	. .	54.5	7.5	20.5	. .	. .	34 41.58	32.42	0.99	VII.	6	36.00	17 48.41	9.86	3.13	34 8.17	6 41.40
14	7	44.7	57.7	10.5	23.5	36.3	49.4	2.1	. .	. .	42 23.46	32.56	0.99	IV.	6	42.78	13 55.34	11.09	2.54	41 49.91	2 48.97
15	9	. .	. .	42.7	. .	8.8	. .	. .	. .	. .	46 55.82	32.63	0.99	I.	5	43.88	21 59.89	11.82	3.77	46 22.20	10 55.48
16	8	. .	. .	. .	. .	33.3	46.1	59.	. .	. .	2 47 20.26	32.64	0.98	VII.	6	45.69	12 14.77	11.89	2.29	2 46 46.64	1 8.95
17	7	. .	58.3	11.5	24.5	37.	50.4	3.5	. .	. .	3 2 24.35	32.87	0.99	VII.	5	40.24	24 5.23	14.53	4.09	3 1 50.49	13 3.85
18	8	. .	. .	. .	35.1	47.8	. .	. .	. .	. .	5 35.93	32.91	1.02	V.	1	40.53	50 11.96	15.12	8.15	5 2.00	39 15.23
19	8	. .	. .	. .	46.7	59.	12.5	25.3	. .	. .	6 46.38	32.93	1.00	VII.	4	45.21	27 0.23	15.35	4.54	6 12.45	16 0.12
20	9.10	58.2	11.5	24.5	37.4	. .	. .	. .	. .	. .	20 37.29	33.13	0.98	IV.	6	43.40	13 33.99	18.03	2.50	20 3.18	2 34.52
21	9	10.8	24.	36.7	50.	. .	. .	. .	. .	. .	23 49.80	33.18	0.99	VII.	5	43.27	22 20.90	18.69	3.82	23 15.63	11 23.41
22	7.8	28.	41.1	53.5	. .	. .	. .	. .	. .	. .	26 6.75	33.21	0.99	IV,	5	43.91	21 59.24	19.15	3.77	25 32.55	11 2.16
23	8.9	. .	. .	31.8	44.5	57.3	10.7	23.6	. .	. .	26 44.64	33.22	0.98	VII.	6	39.40	15 51.34	19.28	2.84	26 10.44	4 53.46
24	7	28.3	41.3	53.4	7.1	20.	33.	46.	. .	. .	29 7.01	33.25	1.00	V.	3	44.15	33 32,49	19.78	5.54	28 32.76	22 37.81
25	9.10	. .	. .	. .	. .	. .	28.5	. .	. .	. .	32 2.52	33.29	0.99	VII.	5	48.55	19 19.09	20.39	4.36	31 28.24	8 22.84
26	8	. .	6.5	. .	32.5	45.	. .	. .	. .	. .	35 32.31	33.34	1.00	V.	4	36.42	32 3.23	21.14	5.31	34 57.97	21 9.68
27	5	. .	. .	25.5	38.5	51.5	4.4	17.3	. .	. .	36 51.37	33.36	1.01	IV.	3	39.80	36 2.31	21.43	5.93	36 17.00	32 25 9.67
28	6.7	. .	. .	. .	. .	. .	. .	7.	. .	. .	38 28.25	33.38	0.97	VII.	7	46.52	5 56.09	21.78	1.36	37 53.90	31 54 59.23
29	7	. .	39.8	53.	5.5	18.8	31.8	44.7	. .	. .	41 5.74	33.41	1.02	IV.	1	38.20	51 32.23	22.36	8.36	40 31.31	32 40 42.95
30	9	31.5	44.5	57.	10.3	23.	36.	. .	. .	. .	43 10.19	33.44	0.99	VI.	5	38.22	25 14.84	22.83	4.26	42 35.76	14 21.93
31	7	. .	. .	38.	51.1	3.7	16.8	29.8	. .	. .	45 50.93	33.47	0.98	VII.	6	37.04	17 12.58	23.41	3.05	45 16.48	6 19.04
32	9.10	. .	. .	35.	48.	0.1	. .	. .	. .	. .	3 49 47.72	−33.52	−1.02	V.	2	42.52	43 11.73	−24.33	− 7.04	3 49 13.18	32 32 23.10

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847.	h.	s.	s.	s.	s.	s.	° ′ ″	r.
Jan. 6,	5	− 40.73	g 0.027	. .	− 0.043	+ 0.294	0 0 0.44	0.216

INSTRUMENT READINGS.

	Date.		CIRCLE.						Barom.	Attached Thermom.	External Thermom.
			A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1847.	h. m.	° ′ ″				″	″	in.	°	°
Zone 81	Jan. 6,	2	288 49 23.3	19.3	19.0	23.8	21.73	21.85			
		3	22.								
		5	22.	18.	16.8	23.3	19.91	20.02			

REMARKS.

(81) 1. Blurred; imperfect.
(81) 12. Hardly visible; observation very indifferent.
(81) 27. Transits over T.'s II–VI assumed to have been recorded over T.'s III–VII.
(81) 30. Double or triple star.

Zone 81. January 6. M. $D_{\circ}=-31^{\circ}\ 48'\ 40$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
33	8.9	. .	. .	55.7	8.7	21.3	34.5	47.2	. .	. .	3 51 8.50	−33.54	−0.99	VII.	5	49.44	18 48.44	−24.63	−3.29	3 50 33.97	32 7 56.36
34	9.10	. .	. .	. .	. .	. .	. .	. .	. .	55.8	3 59 44.38	33.63	0.99	IX.	5	43.50	22 12.09	26.40	3.81	3 58 9.76	11 22.30
35	9	. .	. .	33.7	46.5	59.5	12.4	. .	. .	. .	4 1 46.55	33.67	0.98	VI.	5	48.43	19 23.45	27.15	3.38	4 1 11.90	32 8 33.96
36	7	. .	. .	. .	5.8	18.	31.	44.	. .	. .	8 5.31	33.76	0.97	IV.	7	41.86	8 36.93	28.67	1.73	7 30.58	31 57 47.33
37	6.7	. .	. .	. .	. .	. .	11.3	24.	. .	. .	8 45.06	33.76	1.01	III.	3	39.61	36 8.71	28.82	5.91	8 10.29	32 25 23.44
38	8	. .	. .	. .	. .	. .	23.7	36.5	. .	. .	9 57.63	33.77	0.99	VII.	5	46.09	20 43.79	29.09	3.55	9 22.87	9 56.43
39	8.9	. .	. .	. .	. .	. .	. .	. .	40.8	54.3	10 42.58	33.78	1.00	IX.	3	45.72	32 37.21	29.30	5.40	10 7.80	21 51.91
40	6.7	. .	41.1	54.	7.	20.	33.	46.	. .	. .	18 6.99	33.86	1.01	V.	2	46.65	40 49.52	31.15	6.65	17 32.12	30 7.32
41	6	. .	. .	18.5	31.5	44.6	. .	. .	. .	. .	22 31.56	33.90	1.04	IV.	1	31.45	55 24.66	32.26	8.96	21 56.62	44 45.88
42	9	. .	. .	. .	. .	. .	. .	. .	46.8	0.5	23 48.60	33.91	1.02	IX.	2	40.48	44 20.76	32.70	7.21	23 13.67	33 40.67
43	9	. .	. .	8.8	. .	. .	. .	. .	. .	. .	25 21.90	33.93	1.03	III.	1	40.52	50 12.31	33.01	8.13	24 46.94	33 39.35
44	9	. .	. .	6.6	19.3	32.1	45.6	58.	. .	. .	26 19.39	33.94	0.97	VII.	7	36.52	11 40.42	33.93	2.16	25 44.48	0 56.51
45	9	50.7	2.8	16.4	29.3	42.1	. .	. .	. .	. .	31 29.41	34.00	0.98	V.	6	37.05	17 17.60	34.59	3.02	30 54.43	6 30.21
46	9	14.7	27.6	40.5	53.5	6.5	19.6	32.8	. .	. .	35 53.60	34.04	1.02	VII.	2	45.15	41 40.84	25.75	6.79	35 18.54	32 31 3.36
47	7	. .	. .	33.8	46.8	59.7	12.4	25.2	. .	. .	37 46.66	34.06	0.97	VII.	7	38.91	10 18.13	36.25	1.99	37 11.63	31 59 36.37
48	8	. .	. .	. .	. .	. .	. .	. .	33.5	47.	38 35.21	34.06	1.02	VII.	2	42.93	43 57.27	36.46	7.19	38 0.13	32 33 20.92
49	9	. .	. .	. .	. .	. .	. .	. .	4.5	. .	40 6.15	34.08	1.00	VIII.	4	41.79	28 57.52	36.86	4.83	39 31.07	18 19.21
50	6	36.5	49.6	2.4	15.5	28.2	41.3	54.4	. .	. .	54 15.41	34.21	1.01	IV.	3	35.30	38 37.25	40.72	6.29	53 40.19	28 4.26
51	8.9	. .	. .	. .	. .	. .	. .	. .	17.	30.	55 18.87	34.22	0.97	IX.	6	44.64	12 50.04	41.01	2.27	54 43.68	32 2 13.32
52	5	. .	. .	. .	17.5	30.5	43.5	56.5	. .	. .	4 57 17.60	−34.24	−0.97	V.	6	49.32	10 10.10	−41.57	−1.97	4 56 42.39	31 59 33.64

Zone 82. January 22. M. $D_{\circ}=-30^{\circ}\ 11'\ 10''$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0	Mean South Declination, 1850.0.
1	8	. .	. .	. .	. .	58.	11.3	23.8	. .	. .	4 8 45.56	−38.52	−0.99	VII.	6	34.96	18 24.26	−6.20	−4.38	4 8 6.05	30 29 44.84
2	7.8	. .	. .	. .	. .	. .	14.	26.5	. .	. .	9 48.40	38.54	0.98	VII.	6	39.71	15 40.70	6.43	3.99	9 8.88	27 1.12
3	8	. .	. .	. .	. .	. .	. .	. .	. .	35.8	10.25.32	38.54	1.02	IX.	2	40.12	44 33.23	6.56	8.08	9 45.76	55 57.87
4	8	20.	33.	45.4	58.2	. .	24.	. .	. .	. .	19 58.29	38.65	1.00	IV.	4	41.70	29 1.47	8.72	5.86	20 18.64	40 26.05
5	8	. .	. .	. .	34.	46.6	. .	. .	. .	. .	21 33.96	38.67	0.97	VII.	7	41.13	9 1.71	9.10	3.07	20 54.32	20 23.88
6	8	. .	. .	. .	. .	. .	. .	48.7	. .	. .	22 10.61	38.68	0.97	VII.	7	45.41	6 34.23	9.23	2.74	21 30.96	17 56.20
7	7	. .	. .	57.5	9.3	22.8	35.5	. .	. .	. .	25 9.88	38.71	1.01	IV.	3	41.69	34 57.24	9.93	6.71	24 30.16	46 23.88
8	8.9	. .	. .	. .	. .	18.	31.	33.7	. .	. .	27 5.46	38.73	0.98	VII.	6	42.96	14 23.20	10.38	3.82	26 25.75	25 47.40
9	7.8	. .	31.	43.5	56.4	9.	. .	. .	. .	. .	28 56.38	38.75	1.01	V.	2	43.92	41 49.09	10.80	7.69	28 16 62	53 16.58
10	4	. .	57.5	10.	23.	. .	. .	. .	. .	. .	30 22.94	38.77	1.01	IV.	2	46.54	40 53.35	11.14	7.55	29 43.16	30 52 22.04
11	7	3.	15.7	28.7	41.2	. .	. .	. .	. .	. .	31 41.38	38.78	1.02	IV.	1	41.9	49 59.26	11.46	8.86	31 1.58	31 1 29.58
12	7.8	. .	. .	. .	. .	. .	. .	33.	. .	. .	4 31 54.64	−38.78	−1.00	VII.	3	45.56	32 43.63	−11.51	−6.38	4 31 14.86	30 44 11.52

Zone 83. February 1. M. $D_{\circ}=-30^{\circ}\ 10'\ 50''$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0	Mean South Declination, 1850.0.
1	7.8	. .	16.	28.2	. .	. .	. .	. .	. .	. .	3 31 41.08	−38.59	−0.98	.	7	41.98	8 32.63	−6.72	−3.14	3 31 1.51	30 19 32.49
2	8.9	. .	. .	. .	. .	. .	18.5	. .	. .	. .	31 52.84	38.59	1.00	VI.	4	40.28	29 50.21	6.76	5.97	31 13.25	40 52.94
3	9	. .	19.	31.8	44.2	. .	. .	. .	. .	. .	35 44.32	38.65	0.99	VI.	6	43.4	13 33.84	7.54	3.82	35 4.68	24 35.20
4	8.9	. .	. .	28.5	41.6	. .	. .	. .	. .	. .	36 41.42	38.66	1.00	IV.	3	44.28	33 28.05	7.75	4.48	36 1.76	44 30.28
5	9.10	. .	. .	. .	. .	. .	. .	42.2	. .	. .	37 3.88	38.66	1.00	VII.	4	43.12	28 12.22	7.81	5.75	36 24.22	39 15.78
6	8	40.3	53.	5.7	18.5	. .	. .	. .	. .	. .	40 18.47	38.70	0.99	IV.	5	42.63	22 43.31	8.49	5.00	39 38.78	33 46.80
7	6	58.	11.	. .	. .	. .	. .	. .	. .	. .	41 36.28	38.72	0.99	III.	5	47.6	19 52.14	8.76	4.61	40 56.57	30 55.51
8	7	. .	. .	40.6	. .	. .	. .	. .	. .	. .	41 53.40	38.72	0.99	III.	3	47.97	10 56.60	8.82	3.38	41 13.67	21 58.80
9	5	. .	. .	. .	32.	44.8	. .	. .	. .	. .	3 42 32.04	−38.73	−0.99	V.	4	46.37	26 20.62	−8.95	−5.50	3 41 52.32	30 37 25.07

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	*m*	*n*	*c*	Zenith Point.	Mic. Co.
1847. h.	s.	s.	s.	s.	s.	° ′ ″	r.
Jan. 22, 2*	− 45.92	*g* 0.007	. .	− 0.212	+ 0.294	0 0 14.42	40.206
Feb. 1, 10	46.65	0.000	. .	− 0.212	+ 0.294	16.54	40.201

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	h. m.	° ′ ″				″	″	in.	°	°
Zone 82	Jan. 22,*	290 27 15.6	20.6	22.	18.	19.11	19.05			
Zone 83	Feb. 1, 3 30	290 27 22.4	29.8	30.	20.3	25.73	25.62	30.036	43.5	37.9
	4	. .	. .	. .	. .	. .	. .	30.040	42.8	35.8
	4 50	. .	. .	. .	. .	. .	. .	. .	. .	34.1
	5 10	. .	. .	. .	. .	. .	. .	. .	. .	32.9
	5 30	. .	. .	. .	. .	. .	. .	30.060	41.	32.8
	6 50	. .	. .	. .	. .	. .	. .	30.086	39.	31.5
	7 4	. .	. .	. .	. .	. .	. .	30.086	38.2	30.8

REMARKS.

(81) 34. Minutes of transit assumed as 58 instead of 59.

(82) 4. Minutes of transit assumed as 20 instead of 19.

(82) 8. Time of transit over T. VII assumed as at 43^{s}.7 instead of 33^{s}.7; micrometer reading assumed as 41^{r}.96 instead of 42^{r}.96.

(82) 9. Micrometer reading assumed as 44^{r}.9 instead of 43^{r}.9.

(82) 11. Micrometer reading assumed as 40^{r}.9 instead of 41^{r}.9.

(82) 12. Time of transit over T. VII assumed 33 instead of 23.

(83) 8. Micrometer thread assumed as 6 instead of 3.

*No hour noted for observations or for circle reading, but it was evidently 4^{h}, as shown by comparison with the Zone of February 1.

Zone 83. February 1. M. $D_0=-30^\circ\ 10'\ 50''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
10	8.9	. .	. .	. .	. .	. .	. .	. .	29.8	42.5	3 42 32.42	−38.73	−0.99	IX.	5	42.64	22 41.79	− 8.95	− 5.01	3 41 52.70	30 33 45.75
11	9.10	. .	. .	58.5	11.8	. .	. .	. .	. .	. .	45 11.56	38.77	1.02	V.	1	41.22	49 48.21	9.52	8.71	44 31.77	31 0 56.44
12	9	. .	. .	. .	1.6	14.	26.7	. .	. .	. .	46 1.34	38.78	0.99	V.	5	46.2	20 40.34	9.72	4.75	45 21.57	30 31 44.81
13	9	32.1	45.1	57.8	. .	23.2	. .	. .	. .	. .	51 10.46	38.84	0.98	V.	6	41.07	14 54.18	10.80	3.97	50 30.64	25 58.95
14	9	. .	. .	. .	15.3	28.	. .	. .	. .	. .	52 15.32	38.86	0.97	V.	7	44.42	7 8.74	11.03	2.95	51 35.49	18 12.72
15	10	. .	. .	. .	17.	29.8	. .	. .	. .	. .	53 17.00	38.87	1.02	V.	1	43.03	48 45.89	11.25	8.58	52 37.11	59 55.72
16	5	43.	56.	8.5	21.2	34.1	47.	59.3	. .	. .	55 21.30	38.89	1.01	IV.	2	41.38	43 51.03	11.70	7.90	54 41.40	55 0.63
17	9	. .	. .	30.	42.8	55.8	. .	. .	. .	. .	56 42.89	38.91	1.01	V.	2	43.99	42 21.12	12.00	7.69	56 2.97	53 30.81
18	8	55?.5	8.5	21.	. .	. .	. .	. .	. .	. .	59 33.83	38.95	0.99	II.	4	45.37	26 54.95	12.64	5.58	58 53.89	38 3.17
19	9	. .	. .	28.3	. .	53.8	. .	. .	. .	. .	3 59 41.10	38.95	0.99	IV.	5	39.70	24 24.20	12.67	5.24	3 59 1.16	30 35 32.11
20	9.10	. .	. .	. .	. .	. .	. .	6.	. .	. .	4 1 27.54	38.97	1.03	VII.	1	36.71	53 23.19	13.06	9.22	4 0 47.54	31 4 35.47
21	9.10	. .	. .	. .	. .	. .	26.8	39.6	. .	. .	3 1.17	38.99	1.01	VII.	3	33.11	39 52.31	13.40	7.34	2 21.17	30 51 3.05
22	9	. .	. .	55.3	21.	32.7	. .	. .	. .	. .	5 20.56	39.02	1.00	V.	4	41.04	29 24.15	13.91	5.92	4 40.54	40 33.98
23	8	16.	29.	41.8	. .	. .	. .	. .	. .	. .	6 54.41	39.04	1.01	IV.	3	35.71	38 23.14	14.28	7.15	6 14.46	49 34.59
24	8	. .	. .	21.4	34.	46.8	59.8	. .	. .	. .	7 34.10	39.05	1.00	V.	4	38.38	30 55.75	14.43	6.13	6 54.05	42 6.31
25	7	. .	. .	. .	46.	58.8	. .	. .	. .	. .	8 46.06	39.06	0.99	IV.	6	44.45	18 42.17	14.71	4.44	8 6.01	29 51.32
26	7.8	. .	. .	. .	. .	1.7	14.3	27.	. .	. .	9 48.89	39.07	0.98	VII.	6	39.26	15 56.19	14.95	4.06	9 8.84	27 5.20
27	9.10	. .	40.	52.	5.4	. .	. .	. .	. .	. .	12 5.24	39.10	1.01	IV.	3	33.64	38 25.55	15.47	7.16	11 25.13	49 38.18
28	8.9	20.3	33.5	46.	59.	. .	. .	. .	. .	. .	20 58.83	39.20	1.00	IV.	4	41.27	29 16.28	17.54	5.90	20 18.63	40 29.72
29	8.9	. .	. .	. .	34.3	46.4	. .	. .	. .	. .	21 34.02	39.21	0.98	V.	7	40.61	9 19.93	17.69	3.24	20 53.83	20 30.86
30	8	. .	. .	. .	. .	. .	36.5	49.	. .	. .	22 10.99	39.22	0.97	VII.	7	45.10	6 45.01	17.84	2.89	21 30.80	17 55.74
31	7.8	32.2	45.	58.	10.7	23.	35.7	48.8	. .	. .	25 10.49	39.25	1.01	IV.	3	41.29	35 11.01	18.55	6.72	24 30.23	46 26.28
32	9.10	. .	40.7	53.7	6.	18.5	. .	. .	. .	. .	27 6.06	39.28	0.98	IV.	6	41.56	14 37.35	19.02	3.93	26 25.80	25 50.30
33	9	18.7	31.4	43.7	56.6	9.8	. .	. .	. .	. .	28 56.85	39.29	1.01	IV.	2	44.46	42 4.97	19.46	7.65	28 16.55	53 22.08
34	3	55.	7.8	20.5	33.4	46.	59.	. .	. .	. .	30 33.36	39.31	1.01	IV.	2	35.8	41 18.84	19.85	7.56	29 43.04	30 52 36.25
35	6	. .	16.5	29.	. .	. .	. .	. .	. .	. .	31 41.99	39.32	1.03	III.	1	40.55	50 11.27	20.13	8.78	31 1.64	31 1 30.18
36	7	. .	. .	. .	. .	. .	21.	33.3	. .	. .	31 55.14	39.33	1.00	VII.	3	45.22	32 55.34	20.18	6.41	31 14.81	30 44 11.93
37	9	27.	40.	. .	. .	. .	. .	. .	. .	. .	34 5.48	39.35	1.02	II.	2	44.3	42 10.33	20.72	7.68	33 25.11	53 28.93
38	9	. .	. .	. .	. .	. .	38.7	51.	. .	. .	34 12.84	39.35	1.01	VII	3	43.21	34 4.54	20.74	6.56	33 32.48	30 45 21.84
39	4.5	23.2	36.1	49.	1.7	14.5	. .	. .	. .	. .	38 1.76	39.39	1.03	IV.	1	38.09	51 36.02	21.68	8.97	37 21.34	31 2 56.67
40	9.10	. .	3.8	16.8	29.5	. .	. .	. .	. .	. .	40 29.49	39.42	1.02	IV.	2	39.23	45 5.05	22.30	8.07	39 49.05	30 56 25.42
41	8	21.	33.8	46.	59.2	. .	24.7	37.3	. .	. .	44 59.10	39.46	0.99	VII.	6	32.15	20 1.01	23.43	4.62	44 18.65	31 19.06
42	7	53.	6.1	18.8	31.5	44.	57.	10.	. .	. .	47 31.49	39.49	1.02	IV.	2	42.06	43 27.61	24.06	7.85	48 50.98	54 49.52
43	7	21.9	34.8	47.5	0.1	12.9	25.8	38.5	. .	. .	50 0.21	39.51	0.99	IV.	5	46.40	20 33.50	24.70	4.70	49 19.71	31 52.90
44	9.10	. .	. .	. .	. .	31.	44.	56.	. .	. .	51 18.20	39.53	0.98	VII.	6	36.98	17 14.70	25.03	4.25	50 37.68	28 33.98
45	10	. .	. .	. .	13.6	. .	38.9	. .	. .	. .	53 13.42	39.55	1.00	VI.	4	44.24	27 33.86	25.51	5.66	52 32.87	38 55.03
46	9	. .	. .	. .	20.8	33.2	46.3	58.5	. .	. .	4 56 20.60	39.58	0.98	VII.	6	39.08	16 2.39	26.32	4.09	4 55 40.04	27 22.80
47	7	45.6	58.2	10.8	23.6	36.2	. .	. .	. .	. .	5 6 23.59?	30.67	0.98	IV.	6	43.73	13 22.63	28.95	3.73	5 5 42.94	24 45.31
48	9.10	. .	. .	. .	. .	. .	. .	31.9	. .	. .	6 53.58	39.68	1.00	VII.	4	43.98	27 42.61	29.08	5.67	6 12.90	39 7.36
49	10	. .	. .	. .	. .	. .	5.	17.4	. .	. .	8 39.19	39.69	1.00	VII.	3	45.43	32 48.11	29.55	6.38	7 58.50	44 14.04
50	10	39.3	. .	4.8	. .	. .	. .	. .	. .	. .	20 17.64	39.79	1.00	IV.	3	44.2	33 30.80	32.63	6.47	19 36.85	44 59.90
51	9	. .	. .	. .	2.4	14.5	27.8	40.4	. .	. .	21 1.08	39.79	1.01	VII.	3	38.20	36 57.05	32.82	6.97	20 20.28	48 26.84
52	9.10	. .	. .	. .	. .	. .	. .	. .	40.2	53.	21 42.76	39.80	1.00	.	4	38.54	30 49.10	32.99	6.11	21 1.96	30 42 18.20
53	8.9	. .	57.?5	10.8	24.4	37.3	50.	. .	. .	. .	24 24.00	39.82	1.03	VI.	1	35.19	53 15.73	33.73	9.22	23 43.15	31 4 48.68
54	9.10	56.	9.3	21.7	34.5	47.	. .	. .	. .	. .	26 34.53	39.84	1.02	V.	2	34.26	47 56.15	34.33	8.47	25 53.67	30 59 28.95
55	9	. .	56.2	. .	22.	. .	. .	. .	. .	. .	28 21.84	39.85	1.01	IV.	3	31.10	41 1.88	34.80	7.52	27 40.98	52 34.20
56	8.9	4.8	17.5	30.	. .	. .	. .	. .	. .	. .	30 43.05	39.87	1.02	IV.	2	41.4	43 50.34	35.44	7.91	30 2.16	55 23.69
57	7.8	. .	. .	. .	. .	6.7	19.	31.8	. .	. .	30 53.62	39.87	0.99	IV.	5	35.89	26 35.40	35.50	5.54	30 12.76	38 6.44
58	8	18.8	31.8	44.1	57.2	. .	22.2	35.	. .	. .	5 32 56.93	−39.89	−0.99	VII.	5	38.61	25 1.39	−36.05	− 5.32	5 32 16.05	30 36 32.76

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847.	h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1847. h. m.	° ′ ″				″	″	in.	°	°
Zone 83	Feb. 1, 7 6	. .	. .	. .	. .	. .	. .	30.092	38.	30.9
	7 25	. .	. .	. .	. .	. .	. .	30.086	38.2	30.8
	7 36	. .	. .	. .	. .	. .	. .	30.092	38.	30.9
	8 7	. .	. .	. .	. .	. .	. .	30.104	37.8	30.5

REMARKS.

(83) 22. Transit over T. II assumed to have been recorded as over T. III.

(83) 25. Micrometer reading assumed as 34ʳ.45 instead of 44ʳ.45.

(83) 27. Micrometer reading assumed as 35ʳ.64 instead of 33ʳ.64.

(83) 34. Times of transits assumed as 10ˢ too large for all the threads; micrometer reading assumed as 45.ʳ8 instead of 35ʳ.8.

ZONE 83. FEBRUARY 1. M. $D_0 = -30^\circ\ 10'\ 50''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
59	9	. .	. .	. .	. .	28.	. .	. .	. .	. .	5 34 15.37	−39.90	−0.97	VI.	7	36.96	11 25.50	−36.41	− 3.48	5 33 34.50	30 22 55.39
60	7	. .	. .	. .	. .	. .	21.	33.3	. .	. .	34 55.14	39.91	1.00	VII.	4	37.08	31 40.20	36.58	6.23	34 14.23	43 13.01
61	5.6	31.	43.8	56.3	9.4	21.8	35.	47.6	. .	. .	37 9.27	39.92	0.99	IV.	5	38.35	25 10.69	37.20	5.35	36 28.36	36 43.24
62	9	. .	37.	49.	2.2	14.6	. .	. .	. .	. .	39 2.06	39.93	1.00	IV.	4	41.34	29 13.87	37.72	5.89	38 21.13	30 40 47.48
63	10	. .	. .	. .	. .	. .	. .	28.2	. .	. .	39 49.76	39.94	1.03	VII.	1	42.88	48 50.74	37.94	8.61	39 8.79	31 0 27.29
64	8.9	. .	. .	. .	. .	. .	. .	18.	. .	. .	40 39.57	39.95	1.02	VII.	2	36.22	46 48.35	38.18	8.33	39 58.60	30 58 24.86
65	10	. .	. .	. .	. .	. .	. .	. .	30.5	. .	41 33.20	39.95	0.99	VIII.	5	37.00	25 56.38	38.42	5.44	40 52.26	37 30.24
66	9.10	. .	. .	. .	. .	. .	. .	40.9	. .	. .	43 2.47	39.96	1.02	VII.	2	36.8	46 53.18	38.83	8.34	42 21.49	58 30.4
67	5.6	. .	27.3	39.4	52.3	. .	. .	. .	. .	. .	44 52.38	39.98	1.00	IV.	4	42.54	28 32.54	39.34	5.79	44 11.40	40 7.67
68	9.8	. .	. .	. .	. .	. .	. .	49.	. .	. .	45 10.60	39.98	1.02	VII.	2	45.70	41 21.93	39.41	7.57	44 29.60	52 58.91
69	9	. .	. .	. .	. .	. .	5.7	18.	. .	. .	46 40.06	39.99	0.97	VII.	6	49.77	18 37.46	39.83	4.54	45 59.10	30 11.83
70	8	. .	. .	. .	. .	12.3	25.	37.7	. .	. .	47 59.46	40.00	0.99	VII.	4	48.80	24 56.65	40.20	5.31	47 18.47	36 32.16
71	8	. .	. .	. .	. .	. .	. .	. .	. .	37.1	48 26.83	40.00	1.01	IX.	3	36.81	37 44.08	40.32	7.06	47 45.82	49 21.46
72	6.7	. .	. .	. .	. .	. .	. .	. .	53.4	6.5	50 56.46	40.01	0.97	IX.	7	41.86	8 35.75	41.01	3.10	50 15.48	30 20 9.86
73	9	47.	0.	. .	25.5	. .	. .	. .	. .	. .	53 25.53	40.03	1.03	IV.	1	39.99	50 30.60	41.71	8.85	52 44.47	31 2 11.16
74	8	. .	45.5	58.	. .	. .	. .	. .	. .	. .	55 10.93	40.04	1.02	IV.	3	31.40	40 51.55	42.20	7.49	54 29.87	30 52 31.24
75	8	. .	. .	. .	. .	38.5	51.1	4.	. .	. .	55 25.56	40.04	1.03	VII.	1	37.71	51 48.76	42.26	9.03	54 44.49	31 3 30.05
76	10	. .	9.3	. .	35.2	. .	. .	. .	. .	. .	5 58 34.99	40.06	1.02	IV.	2	45.32	41 35.36	43.16	7.60	5 57 53.91	30 53 16.12
77	9	46.4	59.2	11.9	. .	37.	. .	. .	. .	. .	6 2 24.56	40.08	0.99	IV.	5	38.55	25 3.80	44.25	5.33	6 1 43.49	30 36 43.38
78	8	51.1	4.1	16.7	. .	. .	. .	. .	. .	. .	4 29.61	40.09	1.03	IV.	2	33.56	48 20.29	44.81	8.55	3 48.49	31 0 3.65
79	9	. .	. .	. .	. .	19.9	. .	. .	. .	. .	5 7.17	40.10	1.02	V.	3	30.55	41 20.77	44.98	7.56	4 26.05	30 53 3.31
80	9	. .	. .	. .	. .	. .	. .	7.	. .	. .	5 28.63	40.10	1.01	VII.	4	31.71	34 45.11	45.08	6.66	4 47.52	46 26.85
81	8.9	. .	. .	7.8	20.5	. .	. .	. .	. .	. .	7 20.52	40.11	0.98	V.	6	40.47	15 14.84	45.60	3.99	6 39.43	26 54.43
82	9.6	. .	. .	. .	. .	. .	28.8	41.1	. .	. .	8 3.04	40.12	0.98	VII.	5	46.72	20 22.13	45.81	4.68	7 21.94	32 2.62
83	7.8	. .	. .	42.3	54.7	7.6	. .	. .	. .	. .	9 54.89	40.12	1.01	VI.	3	38.35	36 52.09	46.33	6.95	9 13.76	48 35.37
84	6.7	13.3	26.4	39.3	51.8	4.7	. .	. .	. .	. .	12 51.92	40.14	1.02	IV.	2	38.40	45 33.64	47.17	8.16	12 10.76	57 18.97
85	9.10	20.1	32.8	45.	. .	. .	. .	. .	. .	. .	14 58.04	40.15	0.97	IV.	7	36.25	11 50.09	47.76	3.53	14 16.92	23 31.38
86	8	. .	23.3	35.3	48.2	1.2	14.	. .	. .	. .	15 48.36	40.15	0.99	V.	5	42.86	22 35.35	46.00	5.00	15 7.22	34 18.35
87	7.8	. .	. .	48.3	1.	13.5	26.5	39.	. .	. .	17 0.94	40.16	0.98	V.	6	38.78	16 13.04	48.34	4.13	16 19.80	27 55.51
88	7.8	. .	. .	. .	15.	28.3	41.2	54.	. .	. .	18 15.42	40.16	1.02	VII.	3	31.94	40 33.64	48.69	7.46	17 34.24	30 52 19.79
89	9.10	. .	. .	. .	. .	. .	42.5	55.3	. .	. .	19 16.82	40.17	1.04	VII.	1	35.30	53 11.74	48.99	9.23	18 35.61	31 4 59.96
90	9	. .	. .	. .	. .	39.3	52.	5.	. .	. .	20 26.46	40.18	1.03	VII.	1	36.54	52 29.04	49.31	9.13	19 45.25	31 4 17.48
91	9	. .	. .	3.4	. .	. .	. .	. .	. .	. .	22 16.22	40.18	1.01	III.	3	40.61	35 34.38	49.84	6.75	21 35.03	30 47 20.97
92	9	. .	. .	. .	. .	. .	. .	57.2	. .	. .	22 18.85	40.18	1.00	VII.	4	38.34	30 56.82	49.85	6.12	21 37.67	30 42 42.79
93	7	. .	39.3?	48.3	1.	13.8	. .	. .	. .	. .	25 1.03	40.19	1.04	IV.	1	35.96	52 49.20	50.61	9.17	24 19.80	31 4 38.98
94	9	. .	. .	44.8	. .	10.	. .	. .	. .	. .	27 57.46	40.21	1.01	V.	3	44.29	33 27.67	51.43	6.48	27 16.24	30 45 15.58
95	9	. .	. .	. .	. .	. .	. .	. .	9.8	22.8	28 12.40	40.21	1.02	IX.	1	47.44	46 12.89	51.52	8.25	27 31.17	58 2.66
96	9.10	. .	. .	. .	. .	16.	28.8	. .	. .	. .	30 3.20	40.22	1.01	VII.	3	37.27	37 29.08	52.04	7.04	29 21.97	49 18.16
97	9.10	. .	. .	. .	. .	. .	. .	. .	34.	47.	30 36.64	40.22	1.00	IX.	4	34.14	33 20.60	52.20	6.45	29 55.42	45 9.25
98	9	. .	. .	38.	. .	13.4	. .	. .	. .	. .	32 50.76	40.23	0.98	VI.	6	34.42	18 43.05	52.84	4.46	32 9.55	30 30.35
99	5	. .	. .	. .	39.	51.1	. .	. .	. .	. .	34 38.72	40.24	0.96	V.	7	42.99	7 57.98	53.35	3.01	33 57.52	19 44.34
100	10	. .	. .	. .	56.5	. .	. .	. .	. .	. .	35 56.46	40.24	0.98	V.	6	44.12	13 9.16	53.74	3.70	35 15.24	24 56.60
101	5.6	. .	. .	. .	. .	. .	. .	. .	. .	14.9	36 4.83	40.24	0.98	IX.	5	49.72	18 38.00	53.77	4.44	35 23.61	30 26.21
102	8.9	. .	. .	. .	. .	. .	. .	24.3	. .	. .	37 45.94	40.25	1.01	VII.	3	43.78	33 44.92	54.23	6.51	37 4.68	45 35.66
103	5	. .	. .	14.8	. .	. .	. .	. .	. .	. .	39 27.65	40.25	1.02	IV.	2	42.13	43 25.10	54.72	7.86	38 46.38	55 17.77
104	6	. .	. .	. .	59.	. .	. .	. .	. .	. .	39 58.96	40.25	0.98	IV.	6	42.17	14 16.34	54.86	3.86	39 17.73	26 5.06
105	5	. .	. .	. .	. .	41.6	54.3	7.8	. .	. .	40 28.98	40.25	1.01	IV.	3	40.15	35 50.26	55.00	6.82	39 47.72	47 42.08
106	7.8	. .	42.	55.1	. .	. .	. .	. .	. .	. .	42 7.69	40.26	1.01	IV.	3	39.78	36 3.00	55.47	6.83	41 26.42	47 55.30
107	10	36.5	49.	2.	15.	. .	. .	. .	. .	. .	6 44 14.75	−40.26	−1.00	III.	4	42.24	28 42.83	−56.07	− 5.82	6 43 33.49	30 40 34.72

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847.	h.	s.	s.	s.	s.	s.	° ′ ″	s.

REMARKS.

(83) 66. Micrometer reading assumed as $36^{\mathrm{r}}.08$ instead of $36^{\mathrm{r}}.8$.

(83) 69. Micrometer reading assumed as 5 $49^{\mathrm{r}}.77$ instead of 6 $49^{\mathrm{r}}.77$.

(83) 93. Transit over T. II assumed as at $35^{\mathrm{s}}.3$ instead of $39^{\mathrm{s}}.3$.

(83) 98. Transit over T. V assumed as at $3^{\mathrm{s}}.4$ instead of $13^{\mathrm{s}}.4$.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1847. h. m.	° ′ ″				″	″	in.	°	°

ZONE 83. FEBRUARY 1. M. $D_0 = -30° 10' 50''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a^1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
108	8.9	. .	. .	. .	. .	. .	. .	18.	. .	. .	6 44 39.54	−40.27	−1.04	VII.	1	34.56	53 37.22	−56.19	− 9.29	6 43 58.23	31 5 32.70
109	6.7	. .	. .	. .	. .	. .	3.8	16.8	. .	. .	45 38.22	40.27	1.04	VII.	1	33.11	54 27.14	56.47	9.42	44 56.91	31 6 23.03
110	7.8	28.6	41.6	54.	7.	. .	. .	. .	. .	. .	49 6.82	40 27	0.98	V.	6	42.89	13 51.51	57.47	3.81	48 25.57	30 25 42.79
111	8	. .	. .	. .	. .	. .	12.	24.5	. .	. .	49 46.20	40.28	1.02	VII.	2	38.17	45 41.21	57.65	8.18	49 4.90	30 57 37.04
112	8	. .	. .	. .	18.1	. .	. .	. .	. .	. .	51 18.06	40.28	1.03	IV.	1	38.32	51 28.10	58.09	9.00	50 36.75	31 3 25.19
113	9	. .	. .	. .	. .	9.7	. .	. .	. .	. .	51 57.01	40.28	1.00	V.	4	39.89	30 3.75	58.28	6.01	51 15.73	31 41 58.04
114	7	. .	. .	. .	4.2	. .	. .	. .	. .	. .	53 4.16	40.28	0.98	IV.	5	45.85	20 52.44	58.59	4.76	52 22.90	30 32 45.79
115	5	. .	. .	. .	. .	53.1	. .	18.8	. .	. .	53 40.41	40.29	1.01	VII.	3	39.94	35 57.14	58.76	6.82	52 59.11	47 52.72
116	5	. .	. .	. .	. .	. .	. .	45.2	. .	. .	55 6.58	40.29	1.02	VII.	2	40.54	44 19.60	59.18	7.98	54 25.27	56 16.76
117	7	. .	. .	. .	. .	. .	. .	. .	. .	21.5	55 11.06	40.29	1.02	IX.	3	33.13	39 50.79	59.21	7.36	54 29.75	51 47.36
118	8.9	. .	. .	. .	27.	39.7	. .	. .	. .	. .	58 39.73	40.30	0.96	VI.	7	38.30	10 39.36	60.21	3.36	57 58.47	22 32.93
119	7	. .	. .	. .	. .	. .	41.	. .	. .	. .	6 59 15.43	40.30	0.99	VII.	5	45.05	21 19.63	60.37	4.81	6 58 34.14	33 14.81
120	5.6	. .	. .	. .	55.	7.5	. .	. .	. .	. .	7 0 54.92	40.30	0.97	IV.	6	42.92	13 50.51	60.84	3.78	7 0 13.65	25 45.13
121	8	. .	. .	53.	. .	. .	. .	. .	. .	. .	3 5.78	40.31	0.90	IV.	5	43.97	21 67.18	61.47	4.90	2 24.48	33 53.55
122	9	. .	38.1	51.	3.8	. .	. .	. .	. .	. .	4 3.69	40.31	1.00	IV.	4	38.20	31 1.98	61.74	6.14	3 22.38	42 59.86
123	8.9	28.5	41.6	. .	. .	. .	. .	. .	. .	. .	5 7.02	40.31	1.02	IV.	3	33.19	39 49.91	62.03	7.36	4 25.69	51 49.30
124	7	. .	. .	. .	. .	. .	49.6	2.3	. .	. .	6 24.13	40.31	0.97	VII.	7	33.64	13 19.62	62.12	3.71	4 42.85	25 15.45
125	5	. .	. .	46.	58.	. .	24.2	. .	. .	. .	6 58.45	40.31	0.99	.	5	43.01	22 30.23	62.58	4.98	6 17.15	34 27.79
126	7.8	. .	. .	. .	7.5	. .	. .	. .	. .	. .	6 7.46	40.32	1.00	IV.	4	38.36	30 56.48	62.90	6.13	7 26.14	42 55.51
127	9	. .	. .	. .	. .	. .	52.7	. .	. .	. .	8 27.04	40.32	1.01	VI.	4	36.72	32 52.79	63.01	6.40	7 45.71	44 52.20
128	6	. .	. .	. .	. .	. .	. .	. .	39.8	52.5	8 42.27	40.32	1.01	VII.	3	36.78	37 45.95	63.08	7.09	8 0.94	49 46.12
129	7	. .	. .	. .	. .	. .	. .	. .	. .	40.8	9 30.86	40.32	0.97	IX.	7	35.69	12 8.21	63.31	3.58	8 49.57	24 5.10
130	5	. .	. .	. .	. .	. .	. .	24.3	. .	. .	10 16.13	40.32	0.97	IX.	7	32.94	13 42.89	63.67	3.77	9 34.84	25 40.33
131	7	. .	. .	. .	. .	3.7	16.	. .	. .	. .	11 50.76	40.32	0.99	VII.	5	37.16	25 51.31	63.98	5.43	11 9.45	37 50.72
132	8.9	. .	. .	. .	. .	9.3	. .	. .	. .	. .	12 56.61	40.32	1.00	V.	4	42.12	28 12.53	64.29	5.78	12 15.29	40 12.60
133	7	. .	. .	. .	. .	. .	52.	. .	. .	. .	13 26.45	40.32	0.98	VI.	5	47.89	19 42.05	64.44	4.59	12 45.15	30 31 41.08
134	8	. .	. .	. .	. .	. .	. .	. .	36.7	. .	13 39.42	40.32	1.03	VIII.	1	38.98	51 4.59	64.50	8.91	12 58.07	31 3 8.00
135	9	. .	. .	. .	. .	. .	. .	. .	43.8	. .	14 46.75	40.32	0.96	VIII.	7	46.28	6 3.94	64.81	2.76	14 5.47	30 18 1.51
136	8.9	. .	. .	. .	. .	. .	. .	34.8	. .	. .	15 56.51	40.32	0.99	VII.	5	41.68	23 15.68	65.14	5.08	15 15.20	35 15.90
137	9	. .	. .	. .	. .	. .	. .	. .	24.7	. .	16 27.36	40.32	1.01	VIII.	3	40.59	35 34.32	65.30	6.75	15 46.03	47 36.37
138	8	. .	. .	. .	. .	. .	. .	. .	30.6	. .	17 33.28	40.32	1.02	VIII.	2	38.20	45 39.73	65.61	8.17	16 51.94	30 57 43.51
139	8.9	. .	. .	. .	. .	. .	. .	. .	26.3	39.5	18 29.00	40.32	1.03	VIII.	2	32.75	48 47.39	65.88	8.61	17 47.65	31 0 51.88
140	8.9	. .	. .	. .	. .	. .	. .	25.	. .	. .	19 46.74	40.33	0.98	VIII.	5	45.78	20 54.06	66.25	4.76	19 5.43	30 32 55.07
141	8	. .	39.5	52.	4.4	. .	. .	. .	. .	. .	24 4.59	40.33	0.97	IV.	7	42.46	8 16.26	67.48	3.06	23 23.29	20 16.80
142	4	55.8	8.	21.	33.9	46.5	. .	. .	. .	. .	25 33.80	40.33	0.99	IV.	4	45.26	26 58.89	67.90	5.59	24 52.48	39 2.38
143	9	. .	9.7	22.	. .	. .	. .	. .	. .	. .	27 35.05	40.33	1.02	IV.	2	39.80	44 45.43	68.48	8.05	26 53.70	56 51.96
144	8	. .	0.	12.2	. .	. .	. .	. .	. .	. .	31 25.32	40.33	1.02	IV.	2	35.43	47 15.90	69.57	8.39	30 43.97	30 59 23.86
145	9.10	. .	. .	. .	. .	57.5	10.6	23.	. .	. .	31 44.76	40.33	1.03	VII.	2	34.02	48 4.10	69.66	8.51	31 3.40	31 0 12.27
146	7.8	. .	. .	. .	. .	. .	. .	. .	. .	6.5	31 56.50	40.33	0.98	VIII.	7	29.84	15 30.46	69.72	4.03	31 15.19	30 27 34.21
147	9.8	. .	. .	. .	. .	. .	1.8	. .	. .	. .	33 36.13	40.33	1.01	VI.	3	38.38	36 51.06	70.20	6.95	32 54.79	48 58.21
148	8	. .	. .	. .	. .	. .	. .	48.3	. .	. .	34 9.88	40.33	1.02	VI.	2	38.25	45 38.65	70.35	8.18	33 28.53	30 57 47.18
149	8	. .	58.3	10.6	24.	. .	. .	. .	. .	. .	36 23.78	40.33	1.03	IV.	1	40.15	50 25.09	70.99	8.87	35 42.42	31 2 34.95
150	7.8	16.8	29.6	. .	. .	. .	. .	. .	. .	. .	38 55.23	40.32	1.02	II.	2	36.77	46 29.61	71.71	8.31	38 13.89	30 58 39.63
151	8	. .	. .	. .	. .	. .	20.2	33.1	. .	. .	38 54.62	40.32	1.02	VII.	3	33.64	39 33.07	71.71	7.33	38 13.28	51 43.11
152	9	. .	. .	. .	. .	. .	. .	22.6	. .	. .	39 44.24	40.32	1.01	VII.	4	34.65	33 3.87	71.93	6.42	39 2.91	45 12.22
153	9.10	. .	. .	. .	. .	. .	. .	. .	. .	0.9	39 50.44	40.32	1.02	IX.	3	29.95	41 40.29	71.96	7.63	39 9.10	53 49.88
154	7	44.8	57.7	9.8	23.	. .	. .	. .	. .	. .	43 22.86	40.32	0.97	IV.	7	37.67	11 1.20	72.94	3.41	42 41.57	23 7.55
155	9.10	1.9	14.8	27.7	40.4	. .	. .	. .	. .	. .	47 40.34	40.31	1.00	IV.	4	38.34	30 57.17	74.14	6.14	46 59.03	43 7.45
156	9.10	. .	. .	21.	. .	46.2	. .	. .	. .	. .	7 48 33.66	−40.31	−0.99	V.	5	36.7	26 7.46	−74.38	− 5.48	7 47 52.36	30 38 17.32

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847.	h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1847. h. m.	° ′ ″				″	″	in.		

REMARKS.

(83) 118. Transits over T.'s III and IV assumed to have been recorded as over T.'s IV and V.

(83) 124. Minutes of transit assumed as 5 instead of 6.

(83) 130. Transit over T. VII assumed as $54^s.3$, not $24^s.3$.

(83) 132. Micrometer reading assumed as $43^r.12$, not $42^r.12$.

(83) 133. Minutes of transit assumed as 13 instead of 14.

(83) 153. Minute doubtful.

Zone 83. February 1. M. $D_0 = -30^\circ\ 10'\ 50''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
157	9.10	. .	. .	. .	4.8	. .	. .	. .	. .	. .	7 50 4.76	−40.31	−1.00	IV.	4	39.48	30 17.91	−74.81	− 6.04	7 49 23.45	30 42 28.76
158	6.7	. .	. .	. .	. .	. .	. .	37.5	. .	. .	49 59.25	40.31	0.98	VII.	6	33.08	19 28.99	74.79	4.57	49 17.96	31 38.35
159	9.10	. .	. .	. .	. .	. .	. .	30.	. .	. .	50 51.77	40.31	0.98	VII.	6	34.31	18 46.64	75.02	4.47	50 10.48	30 56.13
160	9	. .	. .	. .	. .	. .	. .	. .	. .	19.7	51? 9.68	40.31	0.98	IX.	6	38.74	16 13.27	75.11	4.13	50 28.39	28 22.51
161	9	. .	. .	. .	. .	5.8	. .	. .	. .	. .	52 53.08	40.31	1.02	V.	3	34.87	38 52.03	75.60	7.24	52 11.75	30 51 4.87
162	9	. .	. .	. .	. .	. .	. .	58.6	. .	. .	53 20.16	40.31	1.03	VII.	2	31.14	49 43.27	75.72	8.77	52 38.82	31 1 57.76
163	8.9	. .	. .	. .	. .	. .	. .	. .	. .	4.5	52 54.20	40.31	1.00	VIII.	5	33.17	28 8.26	75.60	5.74	52 12.89	30 40 19.60
164	8	. .	. .	. .	. .	. .	. .	39.	. .	. .	54 0.63	40.31	1.01	VII.	4	30.84	35 15.06	75.89	6.73	53 19.31	47 27.68
165	8	. .	. .	. .	. .	. .	. .	. .	24.	. .	55 26.68	40.30	1.00	VIII.	5	33.84	27 45.19	76.30	5.69	54 45.38	30 39 57.18
166	7.8	. .	. .	. .	. .	8.1	. .	. .	. .	. .	56 55.34	40.30	1.03	V.	2	32.23	49 6.04	76.71	8.68	56 14.01	31 1 21.43
167	7.8	. .	. .	. .	. .	. .	. .	. .	57.	. .	56 59.67	40.30	1.00	VIII.	4	37.97	31 9.12	76.72	6.16	56 18.37	30 43 22.00
168	9.10	. .	. .	. .	3.3	. .	. .	. .	. .	. .	59 3.26	40.29	1.02	IV.	2	35.86	47 1.09	77.28	8.38	58 21.95	59 16.75
169	9.10	. .	. .	. .	. .	. .	. .	. .	8.5	. .	7 59 11.16	40.29	1.02	VIII.	2	44.83	41 51.44	77.32	7.65	58 29.85	54 6.41
170	7.8	. .	. .	. .	. .	. .	. .	. .	11.	. .	8 0 13.91	40.29	0.97	VIII.	7	38.63	10 27.36	77.60	3.33	7 59 32.65	22 38.29
171	8	. .	. .	. .	. .	. .	56.8	8.8	. .	. .	1 30.80	40.29	1.00	VII.	4	36.22	32 9.81	77.94	6.29	8 0 49.51	30 44 24.04
172	7.8	. .	. .	. .	. .	. .	8.8	21.2	. .	. .	2 42.94	40.28	1.03	VII.	2	32.39	49 0.23	78.27	8.67	2 1.63	31 1 17.17
173	7.8	. .	. .	. .	. .	. .	. .	50.	. .	. .	3 11.68	40.28	0.99	VII.	5	35.62	26 44.34	78.40	5.55	2 30.41	30 38 58.29
174	8	. .	. .	. .	. .	. .	40.	52.6	. .	. .	4 14.44	40.28	0.98	VII.	6	39.38	15 52.06	78.68	4.08	3 33.18	28 4.82
175	9	. .	. .	. .	3.5	. .	29.	. .	. .	. .	8 7 3.42	−40.27	−0.99	VII.	5	38.29	25 12.41	−79.43	− 5.35	8 6 23.16	30 37 27.19

Zone 84. February 5. M. $D_0 = -27^\circ\ 2'\ 50''$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	9	47.	. .	11.7	. .	36.5	. .	. .	. .	. .	5 30 24.19	−38.91	−1.01	V.	3	33.61	39 35.41	− 6.78	− 9.02	5 29 44.27	27 42 41.21
2	7	. .	. .	. .	1.3	13.5	. .	. .	. .	. .	32 1.20	38.92	1.03	IV.	1	32.73	54 40.58	7.20	10.62	31 21.25	57 48.40
3	9	. .	. .	. .	. .	. .	. .	53.	. .	. .	32 15.78	38.92	1.01	VII.	3	37.21	37 31.18	7.26	8.79	31 35.85	40 37.23
4	7	. .	. .	. .	. .	. .	. .	. .	43.7	. .	32 48.26	38.93	0.98	VIII.	6	40.81	15 2.47	7.41	6.43	32 8.35	18 6.31
5	9	. .	. .	. .	. .	. .	. .	. .	33.5	. .	33 37.94	38.93	1.02	VIII.	2	37.77	45 54.63	7.62	9.69	32 57.99	49 1.94
6	8	. .	. .	. .	. .	18.1	30.7	. .	. .	. .	35 5.77	38.94	1.03	VI.	2	35.12	47 26.43	8.01	9.85	34 25.80	50 34.29
7	9	. .	. .	. .	. .	. .	3.6	. .	. .	. .	36 38.71	38.95	1.02	VI.	2	42.66	43 6.81	8.42	9.39	35 58.74	46 14.62
8	8	. .	. .	. .	. .	. .	. .	. .	59.8	12.2	37 4.08	38.96	1.02	VII.	2	41.43	43 49.00	8.55	9.46	36 24.10	46 57.01
9	8	. .	. .	. .	6.	18.	. .	. .	. .	. .	39 5.83	38.97	1.01	IV.	3	43.94	33 39.76	9.07	8.40	38 15.85	36 47.23
10	9	. .	. .	. .	. .	. .	7.7	. .	. .	. .	39 42.96	38.98	0.98	VI.	6	43.30	13 37.31	9.23	6.29	39 3.00	16 42.83
11	8	. .	. .	. .	. .	. .	. .	50.	. .	. .	40 12.81	38.98	1.00	VIII.	4	40.33	29 47.94	9.36	7.98	39 32.83	32 55.28
12	7	. .	. .	. .	. .	15.1	27.8	. .	. .	. .	42 2.98	38.99	0.97	VI.	7	42.36	8 19.57	9.85	5.75	41 23.02	11 25.17
13	9	3.9	. .	28.8	. .	. .	. .	. .	. .	. .	44 41.18	39.01	1.01	III.	3	44.88	33 7.35	10.56	8.34	44 1.16	36 16.25
14	9	. .	35.	. .	. .	. .	. .	. .	. .	. .	51 59.52	39.06	0.98	II.	6	35.19	17 55.88	12.52	6.72	51 19.43	21 5.12
15	9	. .	. .	. .	. .	. .	38.	50.	. .	. .	52 12.93	39.06	1.02	VII.	2	41.34	43 52.10	12.58	9.48	51 32.85	47 4.16
16	7	. .	. .	. .	. .	. .	. .	12.5	. .	. .	5 56 35.41	39.09	0.98	VII.	6	34.80	18 29.81	13.77	6.80	55 55.34	21 40.38
17	8	. .	. .	0.	. .	24.6	. .	. .	. .	. .	6 0 12.36	39.11	0.97	V.	7	43.31	7 46.96	14.75	5.70	5 59 32.28	10 57.41
18	9	. .	20.	31.1	44.7	. .	. .	. .	. .	. .	3 44.31	39.13	1.01	IV.	3	38.03	37 3.26	15.73	8.74	6 3 4.17	40 17.73
19	9	. .	57.7	. .	22.5	. .	. .	. .	. .	. .	5 22.40	39.14	1.00	IV.	4	41.27	29 16.28	16.18	7.93	4 42.26	32 30.39
20	7.8	. .	59.	11.6	23.8	. .	. .	. .	. .	. .	6 23.73?	39.15	0.97	IV.	7	41.85	8 37.28	16.47	5.78	5 43.61	11 49.53
21	7	. .	. .	. .	. .	. .	. .	. .	17.7	. .	6 22.16	39.15	1.03	VIII.	1	39.75	50 38.16	16.47	10.20	5 41.98	53 54.83
22	7	. .	. .	. .	. .	. .	. .	2.8	. .	. .	7 25.58	39.15	1.01	VII.	3	36.12	38 8.71	16.74	8.85	6 45.42	41 24.30
23	7	. .	. .	. .	. .	. .	. .	. .	. .	47.5	7 39.22	39.15	1.01	IX.	3	35.33	38 35.18	16.82	8.90	6 59.06	41 50.90
24	7.8	. .	20.3	32.6	45.5	57.4	. .	. .	. .	. .	10 45.12	39.17	0.99	V.	5	39.74	24 22.78	17.66	7.40	10 4.96	27 37.84
25	8	. .	28.7	40.8	53.	. .	. .	. .	. .	. .	12 53.08	39.18	0.97	V.	7	43.70	7 33.53	18.27	5.66	12 12.93	10 47.46
26	7	. .	. .	. .	. .	6.	. .	. .	. .	. .	6 13 53.77	−39.18	−0.96	V.	7	49.77	4 4.52	−18.55	− 5.31	6 13 13.63	27 7 18.38

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847.	h.	s.	s.	s.	s.	s.	° ′ ″	r.
Feb. 5,	4	− 46.00	g 0.009	. .	− 0.212	+ 0.294	0 0 20.38	40.199

INSTRUMENT READINGS.

	Date.			CIRCLE.						Barom.	Attached Thermom.	External Thermom.
				A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1847.	h.	m.	° ′ ″				″	″	in.	°	°
Zone 84	Feb. 5,	5	15	293 35 28.7	33.7	35.8	33.	32.67	32.80			
		5	20	. .	. .	. .	. .	. .	. .	29.870	37.1	30.3
		5	50	. .	. .	. .	. .	. .	. .	29.870	36.2	30.
		7	10	. .	. .	. .	. .	. .	. .	29.882	34.4	28.3
		7	30	. .	. .	. .	. .	. .	. .	29.88	34.	27.
		8		. .	. .	. .	. .	. .	. .	29.888	33.3	26.7
		8	15	. .	. .	. .	. .	. .	. .	29.888	33.	26.8
		9		. .	. .	. .	. .	. .	. .	29.878	33.	26.

REMARKS.

(83) 163. Minutes doubtful; 54′ or 55′.
(83) 173. Minutes assumed as 3 instead of 4.
(83) 174. Minutes assumed as 4 instead of 5.
(84) 9. Times of transit over both threads assumed as 10^s earlier than recorded.
(84) 11. Minutes assumed as 40 instead of 41.
(84) 13. Micrometer reading assumed as $44^r.88$ instead of $42^r.88$.
(84) 14. Micrometer reading assumed as $35^r.79$ instead of $35^r.19$.
(84) 22. Double.

ZONE 84. FEBRUARY 5. M. D$_0$=−27° 2′ 50″—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
27	8	. .	. .	. .	. .	. .	. .	24.	. .	. .	6 14 47.04	−39.19	−0.96	VII.	7	45.22	6 40.92	−18.80	− 5.57	6 14 6.89	27 9 55.29
28	8	. .	. .	. .	. .	. .	. .	. .	16.	29.	15 20.80	39.19	0.98	IX.	6	37.46	16 57.48	18.93	6.63	14 40.63	20 13.04
29	7.8	. .	. .	. .	. .	. .	. .	. .	22.	. .	16 26.48	39.20	0.99	VIII.	5	42.22	22 56.73	19.24	7.26	15 46.29	26 13.23
30	8	. .	. .	. .	. .	. .	18.8	. .	. .	. .	17 53.91	39.21	1.01	VIII.	3	42.49	34 28.98	19.66	4.48	17 13.69	37 43 12
31	7	. .	. .	. .	. .	19.	. .	. .	. .	. .	19 6.62	39.21	1.03	V.	1	34.88	53 26.51	20.00	10.50	18 26.38	56 47.01
32	7.8	. .	. .	. .	. .	. .	. .	. .	. .	14.	19 6.18	39.21	0.97	IX.	7	37.15	11 18.07	19.99	6.05	18 26.00	14 34.11
33	9	44.	56.5	9.	. .	. .	. .	. .	. .	. .	22 21.34	39.23	1.02	III.	2	41.02	44 3.38	20.89	9.49	21 41.09	47 23.76
34	9	. .	51.	3.5	. .	. .	. .	. .	. .	. .	23 15.84	39.23	1.01	III.	3	34.32	39 10.96	21.15	8.97	22 35.60	42 31.08
35	9	. .	. .	. .	. .	39.5	. .	. .	. .	. .	23 27.20	39.23	1.00	V.	4	38.85	30 39.57	21.21	8.07	22 46.97	33 58.85
36	7	. .	. .	. .	. .	. .	. .	. .	26.3	. .	23 30.76	39.23	1.03	VIII.	1	39.15	50 58.82	21.22	10.23	22 50.50	54 20.27
37	9	. .	. .	. .	. .	. .	. .	10.	. .	. .	24 32.94	39.24	0.98	VII.	6	38.87	16 9.67	21.51	6.54	23 52.72	19 27.72
38	6	. .	. .	. .	. .	. .	. .	7.	. .	. .	25 29.78	39.24	1.01	VII.	3	38.57	36 44.36	21.78	8.70	24 49.53	40 4.84
39	8	. .	. .	. .	. .	57.5	. .	. .	. .	. .	26 45.12	39.25	1.03	V.	1	37.12	52 9.38	22.13	10.36	26 4.84	55 31.87
40	8	. .	. .	. .	45.	. .	. .	. .	. .	. .	26 44.97	39.25	0.99	IV.	5	37.15	25 52.01	22.13	7.56	26 4.73	29 11.70
41	6	. .	. .	. .	. .	. .	. .	. .	22.2	. .	26 26.76	39.24	0.98	VIII.	6	41.39	14 42.51	22.03	6.40	25 46.54	18 0.94
42	9	. .	. .	. .	. .	. .	. .	. .	26.1	. .	28 30.54	39.26	1.02	VIII.	1	45.63	47 15.70	22.63	9.84	27 50.26	50 38.17
43	8	. .	. .	. .	. .	. .	. .	18.8	. .	. .	29 41.84	39.26	0.97	VII.	7	44.92	6 51.25	22.97	5.59	29 1.61	10 9.81
44	7.8	. .	. .	. .	. .	. .	16.	28.	. .	. .	30 51.00	39.27	0.99	VII.	5	36.66	26 8.57	23.29	7.58	30 10.74	29 29.44
45	7.8	. .	18.	. .	. .	. .	. .	. .	. .	. .	32 42.71	39.27	1.01	II.	3	38.28	36 54.51	23.81	8.72	32 2.43	40 17.04
46	8	. .	. .	57.5	. .	. .	. .	. .	. .	. .	33 9.96	39.28	1.02	III.	2	37.13	46 17.32	23.94	9.73	32 29.66	49 40.99
47	7.8	. .	. .	. .	. .	44.5	. .	. .	. .	. .	33 32.19	39.28	1.01	IV.	4	34.22	33 19.03	24.04	8.36	32 51.90	36 41.43
48	8	. .	. .	. .	46.	58.1	. .	. .	. .	. .	34 45.88	39.28	1.01	IV.	3	39.98	35 56.11	24.39	8.62	34 5.59	39 19.12
49	7.8	. .	. .	15.5	. .	. .	. .	. .	. .	. .	36 27.90	39.29	0.99	III.	5	41.23	23 31.48	24.87	7.32	35 47.62	26 53.67
50	7.8	. .	. .	. .	. .	. .	. .	57.8	. .	. .	36 20.57	39.29	1.02	VII.	2	46.39	40 58.21	24.84	9.16	35 40.26	44 22.21
51	7	. .	11.	23.	. .	. .	. .	. .	. .	. .	38 35.49	39.30	0.99	II.	5	41.75	23 13.50	25.47	7.29	37 55.20	26 36.26
52	6.7	. .	. .	20.5	33.	45.	. .	. .	. .	. .	39 32.87	39.30	0.97	IV.	7	41.58	8 46.57	25.73	5.77	38 52.60	12 8.07
53	8.9	. .	. .	. .	. .	. .	12.	. .	. .	. .	40 47.33	39.30	0.97	VI.	7	46.46	5 58.39	26.09	5.47	40 7.06	9 19.95
54	8	38.5	50.7	3.	. .	. .	. .	. .	. .	. .	43 15.37	39.31	0.97	III.	7	40.21	9 33.70	26.79	5.84	42 35.09	12 56.33
55	9	. .	. .	. .	. .	. .	4.8	. .	. .	. .	43 39.90	39.31	1.03	VI.	1	38.93	51 6.96	26.91	10.27	42 59.56	54 34.14
56	8.9	49.5	. .	. .	. .	. .	. .	. .	. .	. .	45 26.80	39.32	1.02	II.	2	41.42	43 49.51	27.41	9.48	44 46.46	47 16.40
57	6	. .	. .	. .	. .	. .	. .	. .	41.	. .	44 45.64	39.32	0.97	VIII.	7	45.69	6 24.35	27.22	5.51	44 5.35	9 47.08
58	8.9	. .	. .	. .	48.	. .	. .	. .	. .	. .	46 47.97	39.33	1.02	IV.	2	39.92	44 41.29	27.79	9.57	46 7.62	48 8.65
59	9	. .	. .	. .	. .	33.	. .	. .	. .	. .	47 20.65	39.33	1.02	V.	2	42.83	43 1.05	27.94	9.39	46 40.30	46 28.38
60	9	. .	. .	. .	. .	. .	. .	. .	. .	23.	47 54.06	39.33	1.00	IX.	4	36.16	32 11.18	28.11	8.22	47 13.73	35 37.51
61	8.9	. .	. .	. .	. .	. .	. .	. .	. .	19.	48 10.72	39.33	1.01	IX.	3	38.96	36 30.20	28.20	8.68	47 30.38	39 57.08
62	8.9	. .	. .	. .	. .	. .	. .	. .	9.6	. .	49 14.12	39.33	0.98	VIII.	6	34.1	18 53.52	28.50	6.82	48 33.81	22 18.84
63	6	45.8	57.8	10.7	23.	. .	. .	. .	. .	. .	52 22.82	39.34	0.98	IV.	6	37.42	16 59.90	29.39	6.62	51 42.50	20 25.91
64	8	. .	. .	. .	. .	. .	44.5	. .	. .	. .	53 19.60	39.35	1.03	VI.	2	33.42	48 24.97	29.66	9.98	52 39.22	51 54.61
65	8	. .	. .	. .	. .	29.5	. .	. .	. .	. .	54 17.17	39.35	1.01	V.	3	36.18	37 46.27	29.94	8.82	53 36.81	41 15.03
66	8	. .	. .	. .	. .	5.8	. .	. .	. .	. .	54 53.49	39.35	1.00	IV.	4	36.28	32 8.09	30.11	8.22	54 13.14	35 36.42
67	8	. .	. .	. .	. .	. .	53.5	. .	. .	. .	55 28.62	39.35	1.00	VI.	4	39.18	30 28.09	30.28	8.05	54 48.27	33 56.42
68	8	. .	. .	. .	. .	. .	. .	29.7	. .	. .	55 52.55	39.35	0.99	VII.	5	38.27	25 13.14	30.39	7.49	55 12.21	28 41.02
69	5	. .	. .	. .	. .	. .	. .	. .	20.3	33.	56 24.72	39.36	1.01	IX.	3	33.1	39 51.97	30.54	9.05	55 44.35	43 21.56
70	8	. .	. .	. .	. .	. .	16.	28.5	. .	. .	57 51.18	39.36	1.02	VII.	2	35.17	47 24.54	30.96	9.86	57 10.80	50 55.36
71	8	. .	. .	. .	. .	. .	. .	. .	33.	. .	58 37.58	39.36	0.98	VIII.	7	32.96	13 42.68	31.18	6.28	57 57.24	17 10.14
72	8	. .	. .	. .	. .	. .	. .	. .	29.	. .	6 59 33.62	39.36	0.97	VIII.	7	39.15	10 9.54	31.43	5.91	6 58 53.29	13 36.88
73	8	. .	. .	. .	52.5	. .	. .	. .	. .	. .	7 1 52.47	39.37	1.03	IV.	1	34.2	53 49.96	32.11	10.57	7 1 12.07	57 22.64
74	8.9	. .	. .	. .	. .	36.5	. .	. .	. .	. .	2 24.15	39.37	1.02	V.	2	38.58	45 27.40	32.26	9.66	1 43.76	48 59.32
75	7.8	. .	. .	. .	. .	. .	. .	. .	32.4	. .	7 2 36.79	−39.37	−1.00	VIII.	4	44.13	29 20.39	−32.31	− 7.93	7 1 56.42	27 32 50.63

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847. h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1847. h. m.	° ′ ″				″	″	in.	°	°
Zone 84	Feb. 5, 9 45	293 35	. .	. .	. .	. .	. .	29.878	32.	25.5
	10 10	. .	. .	. .	. .	. .	. .	29.89	32.	25.8
	10 45	. .	. .	. .	. .	. .	. .	.884	32.	26.2

REMARKS.

(84) 65. Micrometer reading assumed as 36ʳ.78 instead of 36ʳ.18.

(84) 68. Declination 1′ difference from Arg. Z. 349, 21; micrometer reading perhaps 36ʳ.27.

ZONE 84. FEBRUARY 5. M. $D_0 = -27° 2' 50''$—Continued.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	′ ′	″	″	h. m. s.	° ′ ″
76	7.8	. .	. .	. .	. .	35.7	. .	. .	. .	. .	7 4 23.38	−39.37	−1.01	V.	3	41.54	35 2.36	−32.83	− 8.53	7 3 43.00	27 38 33.72
77	6	. .	. .	. .	. .	. .	. .	35.	. .	. .	4 58.00	39.37	0.97	VII.	7	36.79	11 31.19	33.00	6.04	4 17.66	15 0.23
78	7	. .	. .	. .	. .	18.7	. .	. .	. .	. .	6 6.41	39.38	0.99	V.	5	37.48	25 40.61	33.32	7.54	5 26.04	29 11.47
79	7	. .	. .	. .	2.5	. .	. .	. .	. .	. .	7 2.47	39.38	0.97	IV.	7	39.40	10 1.63	32.58	5.89	6 22.12	13 30.10
80	9	. .	. .	. .	. .	. .	. .	. .	14.	. .	7 18.39	39.38	1.00	VIII.	4	40.34	29 47.60	32.66	7.98	6 38.01	33 18.24
81	8.9	. .	. .	. .	55.	. .	. .	. .	. .	. .	8 54.97	39.38	0.99	IV.	5	39.32	24 37.28	34.12	7.43	8 14.60	28 8.83
82	8	. .	. .	. .	. .	. .	. .	. .	53.4	. .	8 57.87	39.38	1.03	VIII.	1	38.61	51 17.42	34.13	10.29	8 17.46	54 51.84
83	9	. .	37.2	. .	. .	. .	. .	. .	. .	. .	11 1.80	39.39	0.99	II.	5	36.14	26 26.64	34.72	7.62	10 21.42	29 58.98
84	5	. .	. .	. .	14.7	26.5	. .	. .	. .	. .	11 14.42	39.39	1.01	IV.	4	33.62	33 39.68	34.78	8.39	10 34.02	37 12.85
85	9	. .	. .	. .	. .	. .	. .	. .	32.6	. .	11 36.99	39.39	1.00	IX.	4	40.94	29 26.60	34.89	7.94	10 56.60	32 59.43
86	9	. .	. .	. .	. .	27.7	. .	. .	. .	. .	13 15.41	39.39	0.99	V.	5	39.19	24 41.72	35.37	7.44	12 35.03	28 14.53
87	8.9	. .	. .	. .	. .	. .	. .	10.5	. .	. .	13 33.30	39.39	1.00	VII.	3	43.76	33 45.65	35.46	8.40	12 52.91	37 19.51
88	8.9	. .	. .	. .	. .	. .	56.5	. .	. .	. .	14 31.61	39.39	1.01	VI.	3	37.68	37 15.17	35.74	8.77	13 51.21	40 49.68
89	8.9	. .	. .	. .	. .	48.8	. .	. .	. .	. .	15 36.43	39.39	1.02	V.	2	32.82	48 45.73	36.05	10.01	14 56.02	52 21.79
90	7	. .	. .	. .	. .	. .	33.2	45.8	. .	. .	16 8.42	39.39	1.03	VII.	1	39.10	51 0.95	36.20	10.26	15 28.00	54 37.41
91	6	. .	42.2	54.3	6.7	. .	. .	. .	. .	. .	18 6.74	39.40	1.00	IV.	4	41.28	29 15.93	36.78	7.92	17 26.34	32 50.63
92	9.8	. .	. .	51.7	. .	. .	. .	. .	. .	. .	19 4.17	39.40	1.03	III.	1	41.14	49 50.96	37.06	10.13	18 23.74	53 28.15
93	8	. .	. .	. .	. .	27.5	. .	. .	. .	. .	19 15.14	39.40	1.02	V.	2	37.51	46 4.24	37.11	9.73	18 34.72	49 41.08
94	7.8	. .	. .	. .	. .	. .	21.6	. .	. .	. .	19 56.70	39.40	1.03?	VI.	1	41.61	49 55.35	37.31	10.14	19 16.27	53 32.80
95	7.8	. .	. .	. .	. .	7.8	. .	. .	. .	. .	20 55.44	39.40	1.03	V.	1	43.76	48 20.76	37.58	9.96	20 15.01	51 58.30
96	9	2.5	. .	. .	. .	. .	. .	. .	. .	. .	22 39.70	39.40	1.00	I.	4	41.78	28 58.41	38.08	7.89	21 59.30	32 34.38
97	8.9	. .	. .	. .	19.5	. .	. .	. .	. .	. .	23 19.47	39.40	1.00	IV.	3	46.42	32 14.36	38.27	8.24	22 39.07	35 50.87
98	8	46.8	59.5	. .	. .	. .	. .	. .	. .	. .	25 24.18	39.41	1.02	II.	2	42.00	43 29.53	38.86	9.45	24 43.75	47 7.84
99	8	. .	. .	. .	. .	. .	49.3	. .	. .	. .	25 24.40	39.41	1.02	VI.	2	39.44	44 57.68	38.86	9.61	24 43.97	48 36.15
100	8.9	. .	. .	. .	50.3	. .	. .	. .	. .	. .	26 50.27	39.41	1.00	IV.	4	36.42	32 3.27	39.28	8.23	26 9.86	35 40.78
101	9	. .	. .	. .	3.	. .	. .	. .	. .	. .	28 2.97	39.41	1.03	IV.	2	33.98	48 5.83	39.61	9.98	27 22.53	51 45.42
102	9	. .	. .	. .	. .	. .	. .	. .	7.	. .	28 11.42	39.41	1.01	VIII.	4	30.7	35 19.53	39.66	8.56	27 31.00	38 57.75
103	9	. .	. .	. .	. .	9.3	. .	34.	. .	. .	29 56.86	39.41	1.02	VII.	2	41.84	43 34.88	40.15	9.48	29 16.43	47 14.51
104	6	. .	. .	. .	. .	. .	. .	. .	38.3	. .	30 42.94	39.41	0.97	VIII.	7	45.1	6 44.66	40.37	5.53	30 2.56	10 20.56
105	9	. .	. .	. .	. .	. .	. .	35.5	. .	. .	31 58.27	39.41	1.02	VII.	2	45.21	41 38.84	40.72	9.26	31 17.84	45 18.82
106	7	29.8	. .	. .	. .	. .	. .	. .	. .	. .	35 7.12	39.41	1.03	I.	1	42.87	48 51.13	41.60	10.06	34 26.68	52 32.79
107	6.7	. .	. .	. .	19.	31.3	. .	. .	. .	. .	35 18.98	39.41	1.00	VI.	3	46.21	32 21.45	41.65	8.25	34 38.57	36 1.35
108	8	17.3	. .	. .	. .	. .	. .	. .	. .	. .	36 54.51	39.41	1.00	I.	3	48.10	31 16.21	42.10	8.14	36 14.10	34 56.45
109	7.8	. .	. .	. .	0.4	. .	. .	. .	. .	. .	37 0.37	39.41	0.98	IV.	5	49.6	19 1.91	42.13	6.83	36 19.98	22 40.87
110	7	. .	. .	. .	. .	. .	1.8	14.2	. .	. .	37 37.09	39.41	0.98	VII.	6	40.27	15 21.46	42.29	6.42	36 56.70	19 0.17
111	8	. .	. .	. .	. .	. .	10.7	. .	. .	. .	38 45.92	39.41	0.98	VI.	6	35.95	17 50.37	42.61	6.70	38 5.53	21 29.68
112	8	. .	. .	. .	. .	3.5	. .	. .	. .	. .	39 51.24	39.41	0.98	V.	7	33.84	13 13.04	42.93	6.21	39 10.85	16 52.18
113	8.9	. .	. .	. .	. .	. .	56.8	. .	. .	. .	40 31.90	39.41	1.02	VI.	2	35.47	47 14.38	43.11	9.87	39 51.47	50 57.36
114	8	. .	. .	58.	. .	. .	. .	. .	. .	. .	42 10.40	39.41	0.99	III.	5	36.44	26 16.41	43.57	7.61	41 30.00	29 57.59
115	8.9	. .	. .	. .	. .	. .	45.1	. .	. .	. .	42 20.38	39.41	0.97	VI.	7	36.77	11 32.05	43.62	6.04	41 40.00	15 11.71
116	8.9	. .	37.6	. .	. .	. .	. .	. .	. .	. .	44 2.18	39.41	0.99	II.	5	40.56	23 54.45	44.08	7.35	43 21.78	27 35.88
117	9	. .	. .	. .	. .	. .	46.	. .	. .	. .	44 21.10	39.41	1.03	VI.	1	43.18	48 40.62	44.17	10.04	43 40.66	52 24.83
118	7	. .	. .	. .	. .	. .	. .	. .	48.8	. .	44 53.20	39.41	1.00	VIII.	3	46.82	31 59.89	44.32	8.22	44 12.79	35 42.43
119	8	. .	4.5	. .	. .	. .	. .	. .	. .	. .	47 29.28	39.41	1.02	II.	2	39.39	44 59.41	45.04	9.63	46 48.85	48 44.08
120	8.9	. .	. .	. .	. .	. .	. .	9.5	. .	. .	47 32.44	39.41	0.98	VII.	6	37.74	16 48.57	45.05	6.58	46 52.05	20 30.20
121	8	. .	. .	. .	. .	. .	. .	54.	. .	. .	48 16.80	39.41	1.00	VII.	4	36.70	31 53.32	45.25	8.20	47 36.39	35 36.77
122	6.7	. .	. .	. .	. .	. .	. .	35.8	. .	. .	48 58.58	39.41	1.01	VII.	3	34.17	39 15.86	45.44	9.01	48 18.16	43 0.31
123	6.7	. .	. .	. .	. .	. .	20.5	. .	. .	. .	49 55.60	39.41	1.02	VI.	2	36.5	46 38.93	45.72	9.81	49 15.17	50 24.46
124	7	. .	. .	. .	. .	. .	11.8	. .	. .	. .	7 50 46.91	−39.41	−1.02	VI.	2	42.16	43 24.02	−45.95	− 9.45	7 50 6.48	27 47 9.42

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847. h. m.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.	CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1847. h. m.	° ′ ″				″	″	in.	°	°

REMARKS.

(84) 94. Micrometer reading assumed as 41r.01 instead of 41r.61.

(84) 109. Micrometer reading assumed as 49r.06 instead of 49r.6.

(84) 117. Right ascension indifferent.

(84) 123. Declination differs 3′ from Arg. Z. 352, 50; 396, 118; micrometer reading perhaps 31r.5.

ZONE 84. FEBRUARY 5. M. $D_0=-27^\circ\ 2'\ 50''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
125	7.8	. .	. .	. .	. .	18.7	. .	. .	. .	. .	7 52 6.32	−39.41	−1.03	V.	1	35.66	52 59.66	−46.30	−10.51	7 51 25.88	27 56 46.47
126	7	. .	. .	12.9	. .	. .	. .	. .	. .	. .	53 25.30	39.41	0.99	III.	5	36.19	26 25.02	46.66	7.62	52 44.90	30 9.30
127	7	. .	. .	. .	. .	. .	43.	. .	. .	. .	54 18.11	39.41	1.01	VI.	3	36.01	38 12.67	46.90	8.88	53 37.69	41 58.45
128	8	. .	. .	. .	. .	56.	. .	. .	. .	. .	55 43.71	39.40	0.99	V.	5	39.31	24 37.59	47.28	7.43	55 3.32	28 22.30
129	8	. .	. .	. .	. .	. .	. .	39.	. .	. .	55 1.98	39.40	0.97	VII.	7	34.79	12 40.06	47.37	6.15	55 21.61	16 23.58
130	9	. .	. .	. .	. .	. .	. .	33.5	. .	. .	56 56.24	39.40	1.03	VII.	2	32.88	48 43.39	47.62	10.04	56 15.81	52 31.05
131	8	. .	. .	. .	. .	. .	31.5	. .	. .	. .	58 6.60	39.40	1.03	VI.	1	33.79	54 3.94	47.93	10.62	57 26.17	57 52.49
132	7.8	. .	. .	45.3	. .	. .	. .	. .	. .	. .	7 59 57.73	39.40	1.01	III.	3	43.24	34 3.82	48.43	8.42	7 59 17.32	37 50.67
133	7	21.1	. .	. .	58.4	. .	. .	. .	. .	. .	8 17 58.37	39.37	0.98	IV.	6	38.14	16 35.11	53.21	6.56	8 17 18.02	20 24.88
134	9	. .	. .	. .	. .	. .	48.1	0.3	. .	. .	18 23.14	39.37	1.02	VII.	2	43.24	42 46.67	53.31	9.39	17 42.75	46 39.37
135	9	. .	. .	. .	. .	58.	. .	. .	. .	. .	19 45.70	39.36	1.00	V.	4	43.40	28 2.89	53.67	7.79	19 5.34	31 54.35
136	9	51.7	. .	. .	. .	. .	. .	. .	. .	. .	21 29.00	39.36	1.02	I.	2	39.81	44 44.77	54.12	9.61	20 48.62	48 38.50
137	7.8	. .	29.6	. .	. .	. .	. .	. .	. .	. .	21 54.37	39.36	1.02	II.	2	41.56	43 44.69	54.22	9.49	21 13.99	47 38.40
138	8.9	19.3	. .	. .	. .	. .	. .	. .	. .	. .	22 56.62	39.35	1.03	I.	1	44.36	47 59.82	54.49	9.96	22 16.24	51 54.27
139	8.9	. .	. .	. .	. .	. .	. .	21.8	. .	. .	22 44.52	39.35	1.03	VII.	1	34.94	53 24.18	54.44	10.58	22 4.14	57 19.20
140	9	. .	. .	. .	. .	. .	. .	30.8	. .	. .	23 53.58	39.35	1.01	VII.	3	35.53	38 29.02	54.74	8.92	23 13.22	42 22.68
141	7.8	. .	. .	. .	. .	12.1	. .	. .	. .	. .	24 59.83	39.35	0.98	V.	6	38.95	16 7.18	55.02	6.51	24 19.50	19 58.71
142	8	. .	. .	. .	. .	. .	6.7	. .	. .	. .	25 41.80	39.35	1.03	VI.	1	38.65	51 16.60	55.20	10.32	25 1.42	55 12.12
143	8	. .	. .	. .	. .	. .	46.3	. .	. .	. .	26 21.50	39.34	0.99	VI.	5	44.90	21 25.01	55.36	7.08	25 41.17	25 17.45
144	8	. .	. .	55.	. .	. .	. .	. .	. .	. .	28 7.42	39.34	1.01	III.	3	43.10	34 8.64	55.82	8.44	27 27.07	38 2.90
145	8	. .	. .	. .	42.7	. .	. .	. .	. .	. .	28 42.67	39.34	1.00	IV.	4	42.57	28 31.51	55.97	7.84	28 2.33	32 25.32
146	8	. .	. .	. .	24.	. .	. .	. .	. .	. .	29 23.97	39.34	0.99	IV.	5	38.57	25 3.12	56.16	7.47	28 43.64	28 56.75
147	6	. .	. .	. .	10.7	. .	. .	. .	. .	. .	30 10.67	39.33	1.03	IV.	1	34.51	53 39.29	56.36	10.59	29 30.31	57 36.24
148	8	. .	. .	. .	. .	59.	. .	. .	. .	. .	30 46.70	39.33	1.00	V.	4	40.05	29 58.24	56.51	8.00	30 6.37	33 52.75
149	7.8	. .	. .	41.2	. .	. .	. .	. .	. .	. .	31 53.63	39.33	1.01	III.	3	40.98	35 21.64	56.79	8.56	31 13.29	39 16.99
150	8	. .	. .	. .	51.5	. .	. .	. .	. .	. .	32 51.47	39.33	1.01	IV.	3	36.78	37 46.30	57.02	8.84	32 11.13	41 42.16
151	7.8	. .	. .	. .	46.4	. .	. .	. .	. .	. .	33 46.37	39.32	1.02	IV.	2	35.54	47 12.11	57.28	9.88	33 6.03	51 9.27
152	8	. .	. .	. .	34.6	. .	. .	. .	. .	. .	34 34.57	39.32	1.02	IV.	2	32.6	49 11.94	57.46	10.10	33 54.23	53 9.50
153	9	. .	. .	. .	. .	. .	. .	22.1	. .	. .	34 45.01	39.32	0.98	VII.	6	36.25	17 39.87	57.51	6.66	34 4.71	21 34.04
154	8	. .	. .	. .	. .	. .	. .	57.5	. .	. .	35 20.37	39.32	0.99	VII.	5	42.55	22 45.75	57.64	7.22	34 40.06	26 40.61
155	9	. .	. .	. .	. .	. .	. .	39.	. .	. .	35 2.01	39.32	0.98	VII.	7	41.14	9 1.41	57.82	5.76	35 21.71	12 54.99
156	9	. .	. .	. .	. .	. .	. .	. .	. .	21.5	36 13.23	39.31	1.01	IX.	3	39.33	36 17.45	57.87	8.68	35 32.91	40 14.00
157	8.9	. .	. .	. .	. .	. .	9.6	. .	. .	. .	37 44.87	39.31	0.98	VII.	7	35.80	12 5.29	58.24	6.07	37 4.58	15 59.60
158	9	. .	. .	. .	. .	. .	. .	9.8	. .	. .	38 32.59	39.31	1.01	VII.	3	41.21	35 13.45	58.47	8.56	37 52.27	39 10.48
159	9	. .	. .	. .	. .	3.	. .	. .	. .	. .	39 50.68	39.30	1.01	V.	3	40.63	35 33.69	58.80	8.60	39 10.37	39 31.09
160	8.9	. .	. .	. .	. .	. .	. .	45.7	. .	. .	40 8.65	39.30	0.98	VII.	6	41.18	14 50.12	58.87	6.35	39 28.37	18 45.34
161	8.9	. .	33.2	. .	. .	. .	. .	. .	. .	. .	41 57.99	39.29	1.02	II.	2	38.64	45 25.24	59.34	9.68	41 17.68	49 24.26
162	9	. .	. .	. .	. .	45.8	. .	. .	. .	. .	42 33.55	39.29	0.98	V.	7	41.3	9 5.48	59.46	5.74	41 53.28	13 0.68
163	7	24.5	37.	49.	. .	. .	. .	. .	. .	. .	44 1.64	39.28	1.01	IV.	3	36.22	38 5.58	59.84	8.89	43 21.35	42 4.31
164	9	. .	23.	. .	. .	. .	. .	. .	. .	. .	44 47.79	39.28	1.02	II.	2	37.62	46 0.35	60.03	9.75	44 7.49	50 0.13
165	4	. .	. .	. .	. .	. .	14.6	26.8	. .	. .	44 49.88	39.28	0.97	VII.	7	47.46	5 23.79	60.03	5.35	44 9.63	9 19.17
166	8.9	. .	. .	31.	43.5	. .	. .	. .	. .	. .	46 43.45	39.27	1.01	IV.	3	42.20	34 39.66	60.50	8.50	46 3.17	38 38.66
167	7.8	. .	. .	. .	. .	38.1	. .	. .	. .	. .	47 25.75	39.27	1.02	V.	2	41.69	43 40.32	60.68	9.46	46 45.46	47 40.49
168	8	. .	. .	. .	. .	. .	43.8	. .	. .	. .	48 18.91	39.27	1.01	VI.	3	33.50	39 39.09	60.90	9.05	47 38.63	43 39.04
169	8.9	. .	. .	. .	. .	. .	. .	. .	31.2	. .	48 35.68	39.26	1.03	VIII.	1	33.68	54 7.17	60.97	10.66	47 55.39	58 8.80
170	7.8	. .	. .	. .	. .	. .	. .	. .	14.7	. .	49 19.10	39.26	0.99	VIII.	5	35.46	26 49.50	61.15	7.65	48 38.85	30 48.30
171	8	. .	. .	. .	. .	. .	. .	. .	6.	. .	50 10.47	39.26	0.99	VIII.	5	45.29	21 11.02	61.36	7.04	49 30.22	25 9.42
172	7.8	. .	. .	. .	. .	. .	. .	24.4	. .	. .	51 47.47	39.25	0.97	VII.	7	49.27	4 21.47	61.76	5.24	51 7.25	8 18.47
173	6.7	. .	. .	. .	57.5	9.5	22.4	. .	. .	. .	8 53 57.47	−39.24	−0.98	VI.	6	49.60	10 0.36	−62.29	− 5.84	8 53 17.25	27 13 58.49

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847.	h.	s.	s.	s.	s.	s.	° ′ ″	s.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1847. h. m.	° ′ ″				″	″	in.	°	°

REMARKS.

(84) 152. Micrometer reading assumed as $32^r.06$ instead of $32^r.6$.

(84) 161. Two stars; first observed.

(84) 162. Micrometer reading assumed as $41^r.03$ instead of $41^r.3$.

ZONE 84. FEBRUARY 5. M. $D_0=-27^\circ\ 2'\ 50''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s,			r.	′ ″	″	″	h. m. s.	° ′ ″
174	7.8	. .	. .	24.8	. .	. .	. .	. .	. .	. .	8 55 37.25	−39.24	−1.01	III.	2	47.57	40 17.85	−62.67	− 9.12	8 54 57.00	27 44 19.64
175	7.8	. .	. .	. .	. .	31.	. .	. .	. .	. .	56 18.75	39.23	0.98	V.	6	50.49	9 29.82	62.84	5.79	55 38.54	13 28.45
176	7	. .	. .	. .	. .	17.5	. .	. .	. .	. .	57 5.19	39.23	1.00	V.	3	46.3	32 18.45	63.04	8.25	56 24.96	36 19.74
177	8	. .	. .	. .	. .	. .	. .	. .	2.2	. .	57 6.60	39.23	1.01	VIII.	2	52.30	37 34.31	63.04	8.82	56 26.36	41 36.17
178	8	20.1	. .	. .	. .	. .	. .	. .	. .	. .	8 59 57.27	39.21	0.99	I.	5	37.36	25 44.47	63.73	7.54	8 59 17.07	29 45.74
179	8	. .	16.3	28.2	. .	. .	. .	. .	. .	. .	9 0 40.72	39.21	0.98	III.	6	34.95	18 24.91	63.90	6.74	9 0 0.53	22 25.55
180	7	. .	36.8	. .	. .	. .	. .	. .	. .	. .	2 1.46	39.20	1.00	II.	4	36.92	31 45.91	64.22	8.19	1 21.26	35 48.32
181	8	. .	. .	15.	. .	. .	. .	. .	. .	. .	2 27.45	39.20	1.01	III.	3	32.52	48 56.06	64.33	10.07	1 47.24	53 0.46
182	7.8	. .	. .	. .	. .	5.4	. .	. .	. .	. .	2 53.11	39.20	0.99	V.	5	37.66	25 34.41	64.44	7.52	2 12.92	29 36.37
183	7	. .	. .	. .	. .	. .	45.3	. .	. .	. .	3 20.42	39.20	1.00	VI.	4	40.81	29 31.97	64.55	7.95	2 40.22	33 34.47
184	8	. .	. .	. .	. .	. .	. .	. .	45.1	. .	3 49.55	39.19	1.02	VIII.	1	43.10	48 42.82	64.67	10.05	3 9.34	52 47.54
185	7.8	. .	. .	31.	. .	. .	. .	. .	. .	. .	5 43.46	39.19	1.02	III,	2	39.54	44 54.34	65.09	9.63	5 3.26	48 59.06
186	7	. .	. .	. .	. .	16.	. .	. .	. .	. .	6 3.67	39.18	1.01	V.	3	35.99	38 13.46	65.15	8.90	5 23.48	42 17.51
187	7	16.5	. .	. .	. .	. .	. .	. .	. .	. .	7 53.75	39.17	1.01	I.	3	37.69	37 14.66	65.60	8.78	7 13.57	41 19.04
188	7	. .	. .	. .	58.	. .	. .	. .	. .	. .	7 57.97	39.17	0.99	IV.	5	39.82	24 20.07	65.62	7.39	7 17.81	28 23.08
189	7	. .	. .	. .	. .	. .	43.5	55.5	. .	. .	8 18.50	39.17	0.99	VI.	5	37.17	25 51.18	65.71	7.56	7 38.34	29 54.45
190	7.8	. .	39.	51.3	. .	. .	. .	. .	. .	. .	10 3.68	39.16	1.00	IV.	4	38.47	30 52.69	66.11	8.10	9 23.52	34 56.90
191	8	. .	. .	48.5	. .	. .	. .	. .	. .	. .	11 0.96	39.16	1.02	III.	2	39.65	44 50.55	66.34	9.62	10 20.78	48 56.51
192	8	. .	. .	42.5	. .	. .	. .	. .	. .	. .	11 54.88	39.15	0.98	III.	7	39.1	10 11.92	66.53	5.86	11 14.75	14 14.31
193	8	. .	55.2	. .	. .	. .	. .	. .	. .	. .	13 19.80	39.14	0.99	II.	5	35.92	26 34.22	66.87	7.63	12 39.67	30 38.72
194	8	. .	. .	. .	. .	51.7	. .	. .	. .	. .	18 39.43	39.11	0.98	V.	6	36.55	17 29.81	68.08	6.64	17 59.34	21 34.53
195	8	. .	. .	. .	. .	. .	31.	43.	. .	. .	19 6.04	39.11	0.99	VII.	6	29.12	21 10.96	68.18	7.04	18 25.94	25 16.24
196	8	. .	. .	34.	. .	. .	. .	. .	. .	. .	20 46.44	39.10	1.01	III.	3	33.74	39 30.93	68.55	9.04	20 6.33	43 38.52
197	8	. .	. .	22.	. .	. .	. .	. .	. .	. .	21 34.45	39.00	1.01	III.	3	31.74	40 39.80	68.73	9.16	20 54.34	44 47.69
198	9	. .	. .	. .	. .	. .	29.	. .	. .	. .	22 64.10	39.09	1.02	VI.	2	42.42	43 15.07	69.05	9.45	22 23.99	47 23.57
199	9	. .	. .	26.	. .	. .	. .	. .	. .	. .	23 38.45	39.08	1.02	III.	2	42.90	42 58.64	69.17	9.42	22 58.35	47 7.23
200	7	. .	. .	. .	. .	15.8	. .	. .	. .	. .	24 3.50	39.08	1.00	V.	4	38.6	30 48.17	69.27	8.09	23 23.42	34 55.53
201	6	. .	. .	. .	. .	. .	. .	. .	. .	19.5	24 11.11	39.08	1.02	IX.	1	37.17	52 6.66	69.30	10.45	23 31.00	56 16.41
202	8	. .	. .	. .	. .	. .	. .	. .	18.3	. .	25 22.76	39.08	0.99	VIII.	5	38.49	25 5.17	69.57	7.46	24 42.69	29 12.20
203	8	. .	. .	. .	. .	. .	. .	. .	59.4	. .	26 3.79	39.07	1.00	VIII.	4	40.94	29 26.94	69.71	7.94	25 23.71	33 34.59
204	8	. .	. .	. .	. .	28.5	. .	. .	. .	. .	28 16.13	39.05	1.02	V.	1	41.43	49 40.98	70.22	10.17	27 36.05	53 51.37
205	8	. .	. .	. .	. .	. .	22.1	. .	. .	. .	28 57.20	39.05	1.01	VI.	3	35.38	38 34.36	70.37	8.94	28 17.14	42 43.67
206	7.8	. .	9.4	. .	. .	. .	. .	. .	. .	. .	30 57.88	39.04	0.98	II.	7	33.25	13 33.25	70.80	6.21	30 17.86	17 40.26
207	8	. .	. .	7.5	. .	. .	. .	. .	. .	. .	31 19.96	39.03	1.01	III.	2	36.69	46 32.48	70.87	9.82	30 39.92	50 43.17
208	8	. .	. .	. .	. .	45.5	. .	. .	. .	. .	31 33.12	39.03	1.02	V.	1	35.65	53 0.00	70.92	10.55	30 53.07	57 11.47
209	8	. .	. .	. .	. .	43.5	. .	. .	. .	. .	32 31.23	39.03	0.98	V.	6	41.75	14 30.77	71.13	6.32	31 51.22	18 38.22
210	9	42.8	55.3	7.3	. .	. .	. .	. .	. .	. .	36 19.88	39.00	1.00	.	4	41.67	29 2.50	71.95	7.89	35 39.88	33 12.34
211	9	49.	2.	. .	. .	. .	. .	. .	. .	. .	37 26.52	38.99	1.01	II.	2	44.79	41 53.47	72.21	9.30	36 46.52	46 4.98
212	8	50.7	2.8	15.4	. .	. .	. .	. .	. .	. .	39 27.77	38.98	1.01	IV.	3	34.95	38 49.31	72.63	8.97	38 47.78	43 0.91
213	8	. .	. .	. .	. .	23.	. .	. .	. .	. .	40 10.63	38.97	1.02	V.	1	43.15	48 41.76	72.78	10.07	39 30.64	52 54.61
214	7	. .	15.	. .	. .	. .	. .	. .	. .	. .	41 39.71	38.96	1.01	II.	3	38.10	37 0.71	73.09	8.77	40 59.74	41 12.57
215	7.8	. .	. .	. .	. .	11.8	. .	. .	. .	. .	41 59.54	38.96	0.98	V.	7	34.10	13 4.09	73.16	6.17	41 19.60	17 13.42
216	7.8	. .	. .	. .	15.	. .	. .	. .	. .	. .	43 14.97	38.95	1.02	IV.	2	37.28	46 12.20	73.42	9.78	42 35.00	50 25.40
217	7.8	27.3	39.5	. .	4.5	. .	. .	. .	. .	. .	45 4.45	38.94	1.01	IV.	2	42.6	42 53.18	73.77	9.42	44 24.50	47 6.37
218	8	. .	. .	. .	13.7	. .	. .	. .	. .	. .	46 13.67	38.93	1.02	IV.	1	35.3	53 12.09	74.01	10.58	45 33.72	57 26.68
219	6	23.4	36.	47.7	0.4	. .	. .	. .	. .	. .	48 0.36	38.92	0.98	IV.	7	33.55	13 23.06	74.37	6.20	47 20.46	17 33.63
220	7.8	. .	. .	. .	52.3	. .	. .	. .	. .	. .	48 52.27	38.91	0.99	IV.	6	35.71	17 58.78	74.55	6.69	48 12.37	22 10.02
221	7	. .	. .	. .	. .	. .	. .	45.2	. .	. .	49 7.95	38.91	1.01	VJI.	2	38.46	45 31.26	74.60	9.70	48 28.03	49 45.56
222	8	. .	. .	. .	50.1	2.6	. .	. .	. .	. .	9 50 50.16	−38.89	−1.01	V.	2	38.47	45 31.19	−74.96	− 9.70	9 50 10.26	27 49 45.85

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847.	h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1847. h. m.	° ′ ″				″	″	in.	°	°

REMARKS.

(84) 181. Hor. thread assumed as 2 instead of 3.

(84) 195. Micrometer reading assumed as 30^r.12 instead of 29^r.12.

(84) 217. Micrometer reading assumed as 43^r.06 instead of 42^r.6.

ZONE 84. FEBRUARY 5. M. $D_\circ = -27° 2' 50''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.				′ ″	″	″	h. m. s.	° ′ ″
223	8.9	. .	. .	. .	. .	. .	. .	. .	41.5	. .	9 51 45.94	−38.89	−1.02	VIII.	2	36.3	46 45.24	−75.11	− 9.85	9 51 6.03	27 51 0.20
224	8	. .	. .	. .	. .	52.8	. .	17.3	. .	. .	53 40.28	38.87	1.00	VII.	4	34.81	32 58.40	75.52	8.33	53 0.41	37 12.25
225	7.8	. .	21.	33.5	45.8	. .	. .	. .	. .	. .	55 45.87	38.85	1.02	IV.	1	35.38	53 9.34	75.90	10.58	55 6.00	57 25.82
226	8	. .	. .	. .	. .	11.8	. .	. .	. .	. .	56 59.42	38.84	1.02	V.	1	37.12	52 9.38	76.17	10.47	56 19.56	56 26.02
227	7	. .	. .	. .	. .	1.	. .	. .	. .	. .	57 48.66	38.84	1.01	V.	2	44.1	42 17.33	76.32	9.35	57 8.81	46 33.00
228	7	. .	. .	. .	. .	. .	. .	. .	5.8	. .	58 10.20	38.84	1.00	VIII.	3	41.68	34 56.88	76.40	8.54	57 30.36	39 11.82
229	7	. .	. .	. .	. .	. .	. .	. .	. .	48.8	9 58 40.88	38.83	0.98	IX.	6	41.31	23 27.71	76.49	7.30	9 58 1.07	27 41.50
230	9.8	. .	. .	. .	. .	. .	. .	39.8	. .	. .	10 1 2.61	38.81	1.00	VII.	4	38.9	31 5.46	76.93	8.11	10 0 22.80	35 20.51
231	8	. .	. .	. .	8.2	. .	. .	. .	. .	. .	3 8.17	38.80	0.98	IV.	7	46.97	5 40.98	77.33	5.36	2 28.39	9 53.67
232	8	. .	. .	. .	. .	15.5	. .	. .	. .	. .	4 3.21	38.79	0.99	V.	5	40.93	23 41.81	77.48	7.31	3 23.43	27 56.60
233	5	15.	27.6	40.	52.2	. .	. .	. .	. .	. .	5 52.34	38.77	1.02	IV.	2	34.53	47 46.89	77.82	9.98	5 12.55	52 4.69
234	9	. .	. .	. .	. .	54.4	. .	19.	. .	. .	6 41.92	38.77	1.01	VII.	2	44.56	42 1.22	77.97	9.32	6 2.14	46 18.51
235	8	. .	. .	. .	. .	. .	. .	. .	24.9	. .	7 29.52	38.76	0.98	VIII.	7	41.13	9 1.36	78.12	5.71	6 49.78	13 15.19
236	7	. .	. .	41.8	. .	6.5	. .	. .	. .	. .	10 9 5.20	−38.74	−1.02	V.	1	44.39	47 59.06	−78.57	− 9.99	10 9 14.44	27 52 17.62

ZONE 85. FEBRUARY 5. M. $D_\circ = -27° 2' 50''$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	8	. .	. .	. .	. .	. .	. .	16.1	. .	. .	10 46 38.91	−38.39	−1.00	VII.	4	39.10	30 30.68	−84.61	− 8.05	10 45 59.52	27 34 53.34
2	8	57.	9.3	. .	. .	. .	. .	. .	. .	. .	50 34.12	38.35	1.00	IV.	3	39.55	36 10.91	85.20	8.69	49 54.77	40 34.80
3	8	. .	. .	15.8	28.	. .	. .	. .	. .	. .	51 28.09	38.34	1.00	IV.	5	35.99	26 31.96	85.32	7.61	50 48.75	30 54.89
4	8	. .	. .	. .	. .	49.	. .	. .	. .	. .	52 36.68	38.33	1.00	V.	3	41.97	34 47.56	85.47	8.54	51 57.35	39 11.57
5	8	. .	53.5	6.	18.2	30.5	. .	. .	. .	. .	10 56 18.28	38.29	1.01	IV.	1	39.63	50 42.99	86.01	10.33	55 38.98	55 9.33
6	6	27.	39.1	51.8	. .	. .	. .	. .	. .	. .	11 0 4.18	38.25	1.01	IV.	1	39.85	50 35.42	86.54	10.32	10 59 24.92	55 2.28
7	7	. .	27.3	39.6	52.	. .	. .	. .	. .	. .	0 52.00	38.24	1.00	IV.	3	39.4	36 16.08	86.65	8.70	11 0 12.76	40 41.43
8	6	. .	43.1	55.8	8.	20.	. .	. .	. .	. .	2 7.87	38.23	0.99	IV.	7	36.45	11 43.21	86.81	5.99	1 28.65	16 6.01
9	8	. .	. .	. .	50.8	. .	. .	. .	. .	. .	2 50.77	38.22	1.00	IV.	5	39.43	24 33.50	86.90	7.39	2 11.55	28 57.79
10	7.8	. .	. .	. .	40.8	52.8	5.7	. .	. .	. .	3 40.72	38.21	1.00	V.	5	42.17	22 59.11	87.01	7.22	3 1.51	27 23.34
11	8	29.3	42.1	. .	. .	. .	. .	. .	. .	. .	8 6.58	38.16	1.00	II.	5	38.48	25 6.08	87.60	7.45	7 27.42	29 31.13
12	8	. .	. .	. .	. .	22.3	. .	. .	. .	. .	8 9.98	38.16	1.00	V.	3	38.51	36 46.69	87.61	8.76	7 30.82	41 13.06
13	7.8	. .	27.8	40.	52.2	4.5	. .	. .	. .	. .	9 52.27	38.14	0.99	IV.	6	42.3	14 11.86	87.84	6.25	9 13.14	18 35.95
14	9	. .	. .	. .	. .	. .	45.3	. .	. .	. .	10 20.41	38.14	1.01	VI.	2	47.80	40 9.83	87.89	9.14	9 41.26	44 36.86
15	7	. .	. .	. .	. .	45.5	. .	. .	. .	. .	11 33.19	38.12	1.00	V.	3	45.71	32 38.78	88.04	8.29	10 54.07	37 5.11
16	7	. .	. .	32.7	. .	. .	. .	. .	. .	. .	12 45.13	38.11	1.00	III.	3	41.78	34 54.10	88.18	8.55	12 6.02	39 20.83
17	7	. .	. .	. .	. .	18.5	. .	. .	. .	. .	13 6.23	38.11	0.99	VI.	6	36.21	17 41.42	88.22	6.64	12 27.13	22 6.28
18	8	. .	. .	. .	. .	. .	. .	. .	2.8	. .	13 7.24	38.11	1.01	VIII.	2	42.21	43 21.74	88.22	9.49	12 28.12	47 49.45
19	7	. .	. .	. .	. .	. .	. .	. .	. .	47.9	13 39.66	38.10	1.00	IX.	4	46.44	26 17.21	88.29	7.58	13 0.56	30 43.08
20	8.9	17.	. .	. .	. .	. .	. .	. .	. .	. .	16 54.23	38.06	1.00	I.	3	44.34	33 25.68	88.69	8.38	16 15.17	37 52.75
21	8.9	. .	. .	. .	2.	. .	. .	. .	. .	. .	17 1.97	38.06	1.00	IV.	3	38.69	36 40.54	88.70	8.75	16 22.91	41 7.99
22	9	. .	. .	10.7	. .	. .	. .	. .	. .	. .	18 23.16	38.05	1.01	III.	2	37.36	46 9.41	88.87	9.80	17 44.10	50 38.08
23	9	. .	46.8	. .	. .	. .	. .	. .	. .	. .	21 11.50	38.01	1.00	II.	3	40.51	35 37.72	89.20	8.63	20 32.49	40 5.55
24	9	. .	. .	. .	18.9	. .	. .	. .	. .	. .	21 18.87	38.01	1.00	IV.	4	41.20	29 18.68	89.21	7.92	20 39.86	33 45.81
25	7	. .	26.5	. .	51.2	3.3	. .	. .	. .	. .	22 51.06	37.99	0.99	IV.	7	43.23	7 49.75	89.39	5.56	22 12.08	12 14.70
26	7.8	. .	. .	4.7	17.1	29.2	. .	. .	. .	. .	24 17.02	37.98	1.01	V.	1	34.44	53 41.66	89.54	10.68	23 38.03	58 11.88
27	8.9	. .	. .	39.9	. .	. .	. .	. .	. .	. .	25 52.35	37.96	1.01	IV.	2	44.7	41 56.71	89.71	9.33	25 13.38	46 25.75
28	9	59.5	. .	. .	. .	. .	. .	. .	. .	. .	27 36.62	37.94	0.99	I.	6	38.51	16 22.06	89.89	6.47	26 57.69	20 48.42
29	7.8	. .	. .	. .	43.7	. .	. .	. .	. .	. .	27 43.67	37.94	1.00	IV.	5	41.99	23 5.36	89.90	7.24	27 4.73	27 32.50
30	8.9	. .	. .	. .	. .	. .	. .	23.5	. .	. .	27 46.32	37.94	1.00	VII.	4	42.31	28 40.15	89.90	7.86	27 7.38	33 7.91
31	7	. .	. .	. .	. .	. .	. .	. .	. .	8.9	11 28 0.68	−37.93	−1.00	IX.	4	39.24	30 25.13	−89.93	− 8.04	11 27 21.75	27 34 53.10

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847. h.	s.	s.	s.	s.	s.	° ′ ″	r.

REMARKS.

(84) 225. Double; brightest observed.
(84) 229. Hor. thread assumed as 5 instead of 6.
(84) 230. Micrometer reading assumed as 38r.09 instead of 38r.9.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1847 h. m.	° ′ ″				″	″	in.	°	°
Zone 85	Feb. 5, 11 45	. .	. .	. .	. .	. .	. .	29.884	31.8	25.
		293 35 28.3	33.6	36.1	32.9	32.59	32.72			
	12 00	. .	. .	. .	. .	. .	. .	29.884	29.7	25.9

Zone 85. February 5. M. $D_{\circ} = -27° 2' 50''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.				′ ″	″	″	h. m. s.	° ′ ″
32	7	28.4	..	..	..	..	..	..	..	..	11 31 5.54	−37.90	−0.99	I.	5	45.23	21 13.47	−90.26	− 7.01	11 30 26.65	27 25 40.74
33	7	..	..	10.7	23.	..	..	..	..	..	31 23.04	37.89	1.00	IV.	5	41.98	23 5.70	90.29	7.24	30 44.15	27 33.23
34	6.7	48.7	1.1	13.5	25.8	38.	..	..	..	..	33 25.82	37.87	1.00	IV.	3	40.75	35 29.60	90.48	8.61	32 46.95	39 58.69
35	8	55.3	7.7	20.	32.3	..	..	..	..	..	38 32.37	37.81	1.00	IV.	4	43.63	27 55.01	90.97	7.77	37 53.56	32 23.75
36	9	..	..	..	..	50.	2.5	..	..	..	39 37.61	37.80	1.01	VI,	1	37.80	51 45.87	91.07	10.45	38 58.80	56 17.39
37	7	..	..	46.	58.5	11.?	..	..	..	..	40 58.53	37.78	1.00	IV.	5	38.77	24 56.23	91.20	7.43	40 19.75	29 24.86
38	8.9	39.4	51.8	..	..	..	..	..	..	..	46 16.52	37.71	1.00	III,	4	40.96	29 26.91	91.61	7.95	45 37.81	33 56.47
39	8.9	..	..	..	39.5	51.7	4.3	..	..	..	46 39.45	37.71	1.00	V.	5	43.52	22 12.63	91.63	7.13	46 0.74	26 41.39
40	9	..	59.	..	..	..	..	..	..	..	48 23.48	37.69	0.99	II.	6	42.61	14 1.05	91.77	6.23	47 44.80	18 29.05
41	6	..	..	..	..	53.8	6.1	18.1	..	..	48 41.19	37.69	1.00	VII.	3	43.35	33 59.76	91.80	8.45	48 2.50	38 30.01
42	7	23.	35.5	47.7	0.	12.5	..	..	..	..	56 0.10	37.59	0.99	IV.	5	45.82	20 53.47	92.28	6.98	55 21.52	25 22.73
43	8	..	25.5	..	..	..	..	..	..	..	57 50.28	37.58	1.01	II.	2	39.36	45 0.44	92.39	9.69	57 11.69	49 32.52
44	7	..	..	..	8.	20.5	32.7	..	..	..	11 58 7.97	−37.57	−1.01	VI.	2	35.24	47 22.30	−92.41	− 9.95	11 57 29.39	27 51 54.66

Zone 86. February 11. M. $D_{\circ} = -27° 42' 0''$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	8	..	12.5	..	..	..	..	..	..	..	8 6 37.49	−41.62	−1.03	II.	1	38.85	51 9.72	− 6.73	−10.44	8 5 54.84	28 33 26.89
2	9	..	..	..	..	..	..	21.5	..	..	6 44.13	41.62	0.99	VII.	5	37.64	25 34.82	6.76	7.49	6 1.52	7 49.07
3	9	..	..	..	..	..	..	..	2.9	..	7 7.04	41.62	1.03	VIII.	1	37.93	51 40.81	6.87	10.50	6 24.39	33 58.18
4	9	..	..	..	..	..	53.7	..	..	..	8 28.65	41.62	1.02	VI.	2	39.86	44 43.22	7.28	9.69	7 46.01	27 0.19
5	8.9	..	..	..	..	..	..	..	40.8	..	8 44.94	41.62	1.03	VIII.	1	35.64	52 59.67	7.35	10.65	8 2.29	28 35 17.67
6	8.9	..	..	..	..	..	..	..	30.	..	9 34.09	41.61	1.00	VIII.	5	36.28	17 38.45	7.60	6.59	8 51.48	27 59 52.64
7	9	..	..	..	..	..	..	14.	..	..	10 36.62	41.61	1.00	VII.	5	36.1	26 27.84	7.88	7.59	9 54.01	28 8 43.31
8	9	..	..	..	..	6.	..	..	..	..	12 53.55	41.61	1.03	V.	1	40.36	50 17.82	8.53	10.33	12 10.91	32 36.68
9	9	..	..	..	..	..	..	57.	..	..	13 19.52	41.61	1.02	VII.	2	36.59	46 35.64	8.65	9.91	12 36.89	28 54.20
10	9	..	..	..	..	..	48.7	..	..	..	14 23.80	41.61	0.98	VI.	7	32.39	14 2.87	8.95	6.20	13 41.21	28 56 18.02
11	9.10	..	..	..	..	..	..	..	58.5	..	15 2.74	41.61	0.98	VIII.	7	34.69	12 43.10	9.13	6.05	14 20.15	27 54 58.28
12	8	..	..	..	37.	49.8	..	..	..	..	16 37.20	41.61	1.00	IV.	5	35.91	26 34.71	9.57	7.60	15 54.59	28 8 51.88
13	8	..	..	..	..	..	30.5	..	..	..	17 5.45	41.60	1.02	VI.	2	35.25	47 21.95	9.71	9.99	16 22.83	29 41.65
14	7.8	..	..	..	21.	33.3	..	..	..	..	18 20.92	41.60	1.02	IV.	2	35.74	47 5.22	10.06	9.96	17 38.30	29 25.24
15	9.10	..	..	..	..	..	..	20.	..	..	18 42.50	41.60	1.03	VII.	1	37.63	51 51.54	10.16	10.55	17 59.87	34 12.25
16	8	..	..	..	..	0.5	12.8	..	..	..	19 35.39	41.60	1.02	VII.	2	37.63	45 59.83	10.47	9.85	18 52.77	28 28 20.15
17	9	..	..	..	..	43.3	..	..	..	..	21 30.99	41.60	0.97	V.	7	45.89	6 18.12	10.95	5.31	20 48.42	27 48 34.38
18	8	..	..	..	..	..	..	33.7	..	..	21 56.54	41.60	0.97	VII.	7	47.63	5 17.93	11.07	5.20	21 13.97	27 47 34.20
19	8	9.1	21.5	..	..	..	..	..	..	..	23 46.40	41.59	1.00	II.	4	41.33	29 14.07	11.57	7.92	23 3.81	28 11 33.56
20	8	..	..	..	..	..	4.7	..	..	..	23 39.69	41.59	1.00	VI.	4	43.83	27 47.98	11.55	7.75	22 57.10	10 7.28
21	9	..	..	..	..	..	55.7	..	..	..	24 30.70	41.59	1.00	VI.	4	44.74	27 16.65	11.78	7.69	23 48.11	9 36.12
22	9	..	..	..	..	..	..	44.8	..	..	25 7.47	41.59	0.99	VII.	5	44.65	21 33.44	11.95	7.03	24 24.89	3 52.42
23	9	..	..	..	..	..	..	..	..	26.8	25 18.35	41.59	0.99	IX.	5	44.18	21 48.87	12.00	7.06	24 35.77	4 7.93
24	8	..	..	..	16.	..	41.	..	..	..	27 15.96	41.58	1.01	V.	3	35.36	38 35.15	12.54	8.99	26 33.37	20 56.68
25	9	..	..	..	..	..	..	..	..	43.6	26 35.10	41.58	0.99	IX.	5	39.36	24 34.84	12.63	7.38	26 52.53	6 54.85
26	8	..	..	..	..	..	..	..	52.6	..	27 56.78	41.58	1.03	VIII.	1	37.12	52 8.70	12.73	10.57	27 14.17	34 32.00
27	8.9	..	..	..	..	..	..	..	29.7	..	29 33.78	41.58	1.01	VIII.	3	31.	41	13.	9.	28 51.19	28 23
28	7	..	..	..	..	..	..	..	..	20.9	30 12.59	41.58	0.98	IX.	7	31.6	14 29.14	13.37	6.24	29 30.03	27 56 47.75
29	8	..	..	..	..	..	..	..	..	1.5	30 52.84	41.58	1.01	IX.	4	32.30	34 24.06	13.56	8.50	30 10.25	28 16 46.12
30	8	..	..	..	..	0.7	..	..	..	..	33 48.39	41.57	0.98	IV.	7	41.56	8 47.26	14.36	5.60	33 5.84	27 51 7.22
31	7	..	..	..	..	..	..	45.3	..	..	34 7.80	41.57	1.02	VII,	1	39.36	50 51.97	14.45	10.42	33 25.21	28 33 16.84
32	8	..	..	..	..	..	32.4	..	..	..	35 7.53	−41.56	−0.98	VII.	7	37.99	10 49.87	−14.72	− 5.82	8 34 24.99	27 53 10.41

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847. h.	s.	s.	s.	s.	s.	° ′ ″	r.
Feb. 11, 6	− 48.20	g 0.016	. .	− 0.212	− 0.290	0 0 18.21	40.193

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1847 h. m.	° ′ ″				″	″	in.	°	°
Zone 86	Feb. 11, 8 5	292 57 2.4	8.	11.3	7.	7.20	7.18			
		. .	. .	. .	. .	. .	. .	30.076	34.	28.
		2.1	3.7	11.0	6.7	5.90	5.88	. .	. .	. .
	9 30	. .	. .	. .	. .	. .	. .	30.05	33.2	24.9
	9 52	. .	. .	. .	. .	. .	. .	.042	32.	25.
	10 10	. .	. .	. .	. .	. .	. .	.040	31.9	24.8

REMARKS.

(86) 6. Hor. thread assumed as 6 instead of 5.
(86) 16. Transits over T.'s VI and VII assumed as recorded over T.'s V and VI.

ZONE 86. FEBRUARY 11. M. $D_0 = -27° 42' 0''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
33	8									17.	8 35 8.30	−41.56	−1.01	IX.	3	35.75	38 20.69	−14.72	− 8.95	8 34 25.73	28 20 44.36
34	8									50.	35 41.28	41.56	1.01	IX.	3	31.73	40 39.12	14.89	9.23	34 58.71	23 3.24
35	8.9				3.9						37 3.87	41.56	1.00	IV.	5	36.45	26 16.11	15.25	7.58	36 21.31	8 38.94
36	8.9				21.7						38 21.67	41.56	1.02	IV.	2	36.46	46 40.43	15.60	9.93	37 39.09	29 5.96
37	8					18.2					39 5.74	41.55	1.03	V.	1	36.83	52 19.36	15.82	10.59	38 23.16	34 45.77
38	9		30.1								40 54.82	41.55	0.99	II.	5	38.53	25 4.35	16.30	7.44	40 12.28	7 28.09
39	9				1.4						41 1.37	41.55	0.99	IV.	5	41.81	23 11.55	16.33	7.23	40 18.83	28 5 35.11
40	9			48.							42 0.46	41.55	0.97	III.	7	44.74	6 57.72	16.60	5.39	41 17.94	27 49 19.71
41	7				37.7						42 37.67	41.55	0.99	IV.	5	42.36	22 52.61	16.76	7.18	41 55.13	28 5 16.55
42	7.8	5.5									44 42.96	41.54	1.01	IV.	3	40.22	35 47.85	17.33	8.66	44 0.41	18 13.84
43	7			31.5							44 43.97	41.54	0.99	IV.	5	45.25	21 13.09	17.33	6.99	44 1.44	3 37.41
44	9.10									52.5	44 43.88	41.54	1.00	IX.	4	41.00	29 24.50	17.33	7.93	44 1.34	11 49.76
45	9					45.7					46 33.24	41.53	1.03	V.	1	35.6	53 1.72	17.82	10.67	45 50.68	35 30.21
46	9							32.9			46 55.44	41.53	1.02	VII.	2	42.39	43 15.93	17.93	9.52	46 12.89	28 25 43.38
47	9				37.5						48 37.47	41.52	0.98	IV.	6	39.58	15 45.52	18.40	6.39	47 54.97	27 58 10.31
48	9.10			57.6							51 10.13	41.51	1.02	III.	2	34.25	47 56.49	19.08	10.07	50 27.60	28 30 25.64
49	8.9			6.7	19.1						52 19.14	41.51	1.01	IV.	3	41.34	35 9.29	19.37	8.59	51 36.62	17 37.25
50	6				36.2						53 36.17	41.50	1.00	IV.	4	38.00	31 8.87	19.72	8.13	52 53.67	13 36.72
51	9				25.						54 24.97	41.50	1.01	IV.	3	33.36	39 44.06	19.72	9.12	53 42.46	22 13.10
52	9							7.7			54 30.21	41.50	1.02	VII.	2	33.90	48 8.26	19.95	10.09	53 47.69	30 38.30
53	8							12.			55 34.58	41.50	1.00	IV.	4	35.70	32 28.06	20.23	8.28	54 52.08	14 56.57
54	6	48.5	0.7	13.	25.7						59 25.71	41.49	1.02	IV.	2	43.18	42 49.04	20.98	9.47	57 43.20	25 19.49
55	9								24.		8 59 28.08	41.49	1.00	VIII.	4	42.69	28 26.66	20.99	7.82	8 57 45.59	10 55.47
56	9.10					1.8					9 0 49.40	41.48	1.01	V.	3	42.26	34 37.56	21.61	8.53	9 0 6.91	28 17 7.70
57	7		40.2								2 4.86	41.47	0.98	II.	6	37.38	17 1.14	21.93	6.53	1 22.41	27 59 29.60
58	7.8					42.2					2 29.98	41.47	0.98	V.	7	38.54	10 31.21	22.05	5.79	1 47.43	27 52 59.05
59	7					32.2					3 19.80	41.47	1.01	V.	3	35.8	38 20.00	22.26	8.95	2 37.32	28 20 51.21
60	9.10								25.5		3 29.56	41.46	1.00	VIII.	4	39.45	30 18.22	22.31	8.03	2 47.10	12 48.56
61	9.10									21.8	4 13.24	41.46	1.00	IX.	5	36.54	26 11.94	22.49	7.56	3 30.78	8 41.99
62	6	0.8	13.			50.5					6 38.08	41.45	1.01	II.	3	37.11	37 34.79	23.12	8.87	5 55.62	20 6.78
63	9.10					2.7					9 2.67	41.44	1.03	V.	1	37.66	51 50.79	23.68	10.53	8 17.20	34 25.00
64	7		57.2	9.5							10 21.98	41.43	1.00	IV.	4	34.23	33 18.68	24.12	8.38	9 39.55	28 15 51.18
65	8					15.					11 2.69	41.43	0.98	V.	7	45.72	6 23.97	24.23	5.31	10 20.28	27 48 53.51
66	9.10						25.1				11 0.05	41.43	1.02	VI.	1	44.36	47 59.99	24.22	10.09	10 17.60	28 30 34.30
67	9.10						23.5				12 58.54	41.42	0.99	VI.	5	44.91	21 24.67	24.72	7.02	12 16.13	3 56.41
68	6		14.4								14 39.35	41.41	1.02	II.	1	46.13	46 59.04	25.14	9.98	13 56.92	29 34.16
69	8				0.5						15 0.47	41.41	1.00	IV.	4	44.16	27 36.76	25.22	7.73	14 18.06	10 9.71
70	7							33.			15 55.49	41.40	1.02	VII.	1	36.27	52 38.37	23.19	10.64	14 13.07	35 14.20
71	8						26.1				16 1.13	41.40	0.99	VI.	5	42.1	23 1.42	25.47	7.20	15 18.74	5 34.09
72	5.6			12.8							17 25.28	41.40	1.00	IV.	4	41.43	29 10.77	25.82	7.91	16 42.88	11 44.50
73	8.9						57.				17 31.95	41.40	1.01	VI.	2	38.33	45 25.91	25.85	9.81	16 49.54	28 11.57
74	8				34.8						18 34.77	41.39	1.02	IV.	1	41.44	49 40.67	26.12	10.29	17 52.36	32 17.08
75	8.9								40.7		18 44.80	41.39	1.01	VIII.	2	43.3	42 44.19	26.16	9.47	18 2.40	25 19.82
76	7									38.7	19 30.02	41.39	1.01	IX.	3	37.19	37 31.11	26.35	8.86	18 47.62	20 6.32
77	5						20.1	32.5			20 55.12	41.38	1.00	VII.	5	37.23	25 48.93	26.69	7.52	20 12.74	8 23.14
78	9								49.8		21 53.86	41.37	1.00	VIII.	4	35.5	32 34.22	26.93	8.29	21 11.49	28 15 9.44
79	7		49.								22 13.63	41.37	0.98	II.	6	43.13	13 43.14	27.51	6.15	23 31.28	27 56 16.80
80	9		23.5								24 48.13	41.36	0.98	II.	6	42.22	14 14.48	27.63	6.21	24 5.79	27 56 48.32
81	5.6						14.1				9 24 49.12	−41.36	−0.99	V.	5	40.47	23 57.65	−27.63	− 7.31	9 24 6.77	28 6 32.59

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847. h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
	A.	B.	C.	D.	Corr'd Mean.	Mean			
1847. h. m.	° ′ ″				″	″	in.	°	°

REMARKS.

(86) 40. Double star.
(86) 45. Declination about 1° different from Arg. Z. 352, 149.
(86) 54. Minutes assumed as 58 instead of 59.
(86) 55. Minutes assumed as 58 instead of 59.
(86) 63. Transit over T. IV assumed as recorded over T. V.
(86) 64. Transit over T. II assumed as recorded over T. I.
(86) 70. Minutes assumed as 14 instead of 15.
(86) 79. Minutes assumed as 24 instead of 23.
(86) 81. Star apparently double.

ZONE 86. FEBRUARY 11. M. $D_0 = -27° 42' 0''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	c_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
82	6	. .	. .	14.5	. .	. .	. .	. .	. .	. .	9 26 26.96	−41.35	−0.99	IV.	6	39.92	15 33.81	−27.98	− 6.36	9 25 44.62	27 58 8.19
83	9	. .	. .	. .	. .	. .	. .	. .	10.5	. .	26 14.58	41.35	1.01	VIII.	2	47.3	40 26.46	27.95	9.20	25 32.22	28 23 3.61
84	9.10	. .	. .	. .	48.9	. .	. .	. .	. .	. .	27 48.87	41.34	1.02	IV.	1	40.16	50 24.74	28.35	10.38	27 6.51	33 3.47
85	9.10	. .	. .	. .	. .	16.6	. .	. .	. .	. .	29 4.22	41.33	1.00	IV.	4	39.74	30 8.95	28.66	8.01	28 21.89	28 12 45.62
86	8	44.5	. .	. .	. .	. .	. .	. .	. .	. .	31 21.79	41.32	0.98	I.	7	42.73	8 6.65	29.18	5.52	30 39.49	27 50 41.35
87	9	. .	. .	22.7	. .	. .	. .	. .	. .	. .	31 35.16	41.32	0.98	III.	6	41.65	14 34.21	29.25	6.24	30 52.86	57 9.70
88	9	11.	23.5	. .	48.3	. .	. .	. .	. .	. .	55 48.24	41.16	0.98	IV.	6	41.31	14 45.96	34.58	6.26	55 6.10	27 57 26.80
89	9.10	. .	. .	. .	50.5	. .	. .	. .	. .	. .	56 50.47	41.15	1.02	IV.	1	36.33	52 36.62	34.79	10.64	56 8.30	28 35 22.05
90	8.9	. .	. .	. .	. .	48.8	. .	. .	. .	. .	9 57 36.40	41.15	1.01	V.	3	38.91	36 32.92	34.96	8.76	56 54.24	19 16.64
91	6	23.6	. .	. .	. .	. .	. .	. .	. .	. .	10 0 1.10	41.13	1.01	I.	2	46.66	40 48.90	35.48	9.24	59 18.96	28 23 33.62
92	8	. .	. .	8.	. .	. .	. .	. .	. .	. .	0 20.46	41.13	0.98	III.	6	45.24	12 30.60	35.55	6.01	59 38.35	27 55 12.16
93	8	. .	. .	. .	. .	47.	. .	. .	. .	. .	0 34.59	41.13	1.01	V.	2	45.24	41 38.08	35.60	9.34	59 52.45	28 24 23.02
94	8	. .	. .	. .	. .	. .	25.8	. .	. .	. .	0 0.81	41.13	1.00	VI.	4	47.80	25 31.29	35.48	7.49	9 59 18.68	8 14.26
95	8.9	. .	. .	. .	. .	3.2	. .	. .	. .	. .	3 50.75	41.10	1.02	V.	1	40.40	50 16.44	36.28	10.36	10 3 8.63	28 33 3.08
96	7	17.5	30.1	42.4	54.8	. .	19.5	31.9	. .	. .	10 5 54.74	−41.08	−0.98	IV.	7	40.69	9 17.22	−36.68	− 5.64	10 5 12.68	27 51 59.54

ZONE 87. MARCH 5. MAJ. $D_0 = -30° 11' 30''$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	c_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	6	. .	. .	24.5	37.6	49.5	. .	. .	. .	. .	8 10 37.23	−44.13	−0.98	IV.	6	38.605	16 19.10	− 6.47	− 8.10	8 9 52.12	30 28 3.67
2	.	. .	. .	. .	. .	. .	. .	50.	. .	. .	11 11.66	44.13	1.00	V.	4	38.860	30 39.22	6.64	10.09	10 26.53	42 25.95
3	6	10.	23.2	35.9	48.	. .	. .	. .	. .	. .	14 48.38	44.13	0.99	.	5	37.31	25 46.50	7.60	9.41	14 3.26	37 33.51
4	6	. .	. .	6.6	. .	. .	. .	. .	. .	. .	16 18.85	44.13	1.02	V.	2	42.88	42 59.33	8.01	11.83	15 33.70	54 49.17
5	8	. .	. .	. .	. .	. .	10.	23.	. .	. .	17 44.45	44.13	1.02	IV.	1	48.325	45 43.60	8.43	12.22	16 59.30	57 34.25
6	9	. .	. .	. .	. .	. .	22.	. .	. .	. .	19 56.33	44.13	1.01	IV.	2	50.28	38 44.57	9.01	11.23	19 11.19	30 50 34.81
7	.8	. .	. .	. .	. .	. .	. .	15.	. .	. .	21 36.54	44.13	1.03	IV.	1	35.893	52 51.68	9.45	13.27	20 51.38	31 4 44.40
8	8	. .	. .	16.8	29.5	41.5	. .	. .	. .	. .	25 29.29	44.13	0.99	IV.	5	36.68	26 8.19	10.47	9.45	24 44.17	30 37 58.11
9	5	7.	20.	32.4	44.	. .	11.5	. .	. .	. .	27 45.55	44.13	1.03	IV.	1	41.885	49 25.35	11.07	12.76	27 0.39	31 1 19.18
10	7	. .	29.5	41.2	55.	7.9	. .	. .	. .	. .	29 55.03	44.13	1.01	IV.	3	42.675	34 23.31	11.64	10.62	29 9.89	30 46 15.57
11	8	. .	. .	. .	56.	9.	21.8	. .	. .	. .	30 56.13	44.13	1.01	V.	3	37.695	37 14.76	11.90	11.02	30 10.99	49 7.68
12	10	. .	. .	. .	. .	. .	26.5	. .	. .	. .	36 0.83	44.12	1.01	VII.	3	33.40	39 42.33	13.17	11.37	35 15.70	51 36.87
13	10	. .	. .	. .	. .	. .	20.2	. .	. .	. .	37 54.52	44.12	1.02	VII.	2	35.65	47 7.97	13.67	12.43	37 9.38	59 4.07
14	8	. .	. .	. .	. .	. .	. .	31.	. .	. .	?40 52.60	44.12	1.02	VII.	2	42.205	43 22.26	14.41	11.90	40 7.46	55 18.57
15	8	23.	. .	49.	61.8	. .	. .	. .	. .	. .	44 1.58	44.11	0.98	III.	7	38.28	10 40.16	15.18	7.30	43 16.49	22 32.64
16	8	. .	. .	. .	17.8	. .	43.8	. .	. .	. .	46 17.98	44.11	0.99	.	5	42.11	23 1.21	15.73	9.03	45 32.88	34 55.97
17	8	. .	. .	. .	. .	. .	. .	31.	. .	. .	46 52.71	44.11	0.99	.	5	40.97	23 40.48	15.87	9.13	46 7.61	35 35.48
18	8	. .	. .	. .	. .	51.2	. .	17.	. .	. .	48 38.59	44.11	1.00	.	4	42.51	28 33.57	16.29	9.79	47 53.48	40 29.65
19	.	. .	. .	. .	. .	56.	. .	. .	. .	. .	50 43.36	44.10	0.98	.	6	40.91	14 59.69	16.80	7.91	49 58.28	26 54.40
20	7.8	. .	. .	. .	. .	. .	. .	. .	. .	. .	51	. .	. .	.	4	38.53	30 50.62	16.65	10.12	. . .	42 47.39
21	7.8	. .	. .	. .	. .	. .	. .	. .	. .	. .	. . .	. .	. .	.	5	38.53	25 4.49	16.65	9.31	. . .	37 0.45
22	8	. .	51.	63.5	16.	29.	42.	. .	. .	. .	53 16.26	44.10	1.00	.	4	43.665	27 53.81	17.41	9.70	52 31.16	39 50.92
23	8	. .	. .	. .	. .	. .	. .	. .	. .	. .	54	. .	. .	.	3	41.60	35 0.33	17.58	10.70	. . .	46 58.61
24	8	. .	. .	. .	4.	16.	. .	42.	. .	. .	8 57 3.72	44.09	0.98	.	6	43.135	13 43.11	18.30	7.73	8 56 18.65	25 39.14
25	10	. .	. .	. .	25.	. .	48.5	. .	. .	. .	9 12 24.90	44.05	1.01	IV.	3	42.812	34 18.59	21.81	10.60	9 11 39.84	46 21.00
26	9	. .	55.	7.4	20.2	. .	45.4	. .	. .	. .	20 20.13	44.02	1.00	IV.	4	37.99	31 9.22	23.58	10.16	19 35.11	43 12.96
27	8	. .	. .	29.5	42.	55.	. .	20.	. .	. .	24 42.05	44.01	1.02	IV.	2	45.778	41 19.60	24.53	11.60	23 57.02	53 25.73
28	8	. .	. .	15.1	. .	40.8	. .	. .	. .	. .	29 28.00	43.99	1.00	.	3	44.824	33 9.32	25.55	10.44	28 43.01	45 15.31
29	.	. .	. .	. .	. .	. .	. .	. .	. .	. .	30	. .	. .	.	5	44.356	21 43.89	25.66	8.84	29	33 48.39
30	8	. .	. .	. .	32.4	46.	. .	10.	. .	. .	9 37 32.44	−43.95	−1.01	V.	2	46.252	41 3.22	−27.22	−11.57	9 36 47.48	30 53 12.01

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847.	h.	s.	s.	s.	s.	s.	° ′ ″	r.
Mar. 5,	5	− 50.77	g 0.004	. .	− 0.212	+ 0.294	0 0 0.96	40.169

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1847. h. m.	° ′ ″				″	″	in.	°	°
Zone 87	Mar. 5,	290 27 28.50	32.2	33.4	35.3	32.52	32.48			
	7 32	. .	. .	. .	. .	. .	. .	30.390	41.	34.5
	7 48	. .	. .	. .	. .	. .	. .	.390	40.5	34.0
	8 7	. .	. .	. .	. .	. .	. .	.396	39.5	33.8
	9 6	. .	. .	. .	. .	. .	. .	.400	39.5	30.8
	10 15	. .	. .	. .	. .	. .	. .	.402	38.5	30.9
	10 57	. .	. .	. .	. .	. .	. .	30.42	38.	30.

REMARKS.

(86) 88. Double star.
(87) 13. Doubtful.
(87) 19. } The observations of right ascension
(87) 20. } in the original record are unintelli-
(87) 21. } gible for these three stars.
(87) 25. Transit over T. VI assumed as at $50^s.5$ instead of $48^s.5$.

Zone 87. March 5. Maj. $D_0 = -30° 11' 30''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
31	8	. .	. .	. .	. .	. .	. .	17.6	. .	. .	9 38 39.26	−43.95	−1.00	.	3	49.652	30 23.07	−27.47	−10.06	9 37 54.31	30 42 30.60
32	8	. .	. .	30.	43.4	56.	. .	. .	. .	. .	40 43.16	43.94	0.99	IV.	5	42.156	22 59.64	27.88	9.02	39 58.23	35 6.54
33	7	. .	. .	. .	. .	. .	41.	. .	. .	. .	41 15.42	43.94	0.99	.	5	43.285	22 20.76	27.99	8.93	40 30.49	34 27.68
34	.	. .	10.5	. .	. .	. .	49.?	. .	. .	. .	44 35.88	43.92	1.00	IV.	4	43.200	28 9.81	28.67	9.74	43 50.96	40 18.22
35	8	. .	. .	. .	. .	. .	. .	52.	. .	. .	45 13.64	43.92	1.01	VII.	3	39.22	36 21.93	28.79	10.89	44 28.71	48 31.61
36	8	. .	. .	17.8	30.	42.7	. .	. .	. .	. .	48 30.19	43.90	1.00	IV.	4	40.662	29 37.21	29.45	9.95	47 45.29	41 46.61
37	8	. .	57.2	10.	23.	35.	47.4	. .	. .	. .	50 22.49	43.89	0.98	.	7	38.305	10 39.34	29.81	7.29	49 37.62	22 46.44
38	7	. .	37.8	50.	3.5	15.6	28.2	. .	. .	. .	54 2.99	43.87	1.00	V.	4	47.162	25 53.35	30.54	9.43	53 18.12	38 3.32
39	9	. .	. .	. .	20.	32.8	. .	. .	. .	. .	9 56 20.04	43.86	0.99	VII.	5	41.962	23 5.97	30.78	9.03	9 54 35.19	35 15.78
40	8	. .	. .	. .	38.7	. .	64.0	. .	. .	. .	10 2 38.61	43.83	0.98	V.	7	39.462	9 59.45	32.20	7.20	10 1 53.80	30 22 8.85
41	.	. .	13.	24.8	. .	. .	. .	. .	. .	. .	5 38.14	43.81	1.02	V.	1	39.15	50 59.48	32.75	13.03	4 53.31	31 3 15.26
42	8.9	. .	. .	. .	. .	. .	. .	9.6	. .	. .	8 31.24?	43.79	1.01	IV.	3	40.931	35 23.37	33.09	10.76	6 46.44	30 47 37.22
43	8	. .	16.	29.	41.8	54.?	66.?	. .	. .	. .	9 41.33	43.78	1.00	IV.	4	36.776	31 51.02	33.50	10.26	8 56.55	44 4.78
44	8	. .	. .	50.6	64.0	75.0	. .	. .	. .	. .	15 3.23	43.75	1.01	.	3	33.681	39 33.01	34.47	11.35	14 18.47	51 48.83
45	.	. .	. .	. .	. .	22.	34.?	48.	. .	. .	15 9.06	43.75	1.02	.	2	37.421	46 7.35	34.49	12.30	14 24.29	58 24.14
46	8	. .	. .	. .	21.	. .	47.	. .	. .	. .	16 21.15	43.74	1.00	.	3	44.725	33 12.73	34.71	10.45	15 36.41	45 27.89
47	.	. .	. .	. .	. .	. .	. .	24.	. .	. .	17 45.64	43.73	1.01	.	3	40.756	35 29.05	34.95	10.77	17 0.90	47 44.77
48	.	. .	. .	. .	. .	. .	. .	35.	. .	. .	56.64	43.72	1.00	.	3	43.470	33 55.59	35.	10.55	(17) 11.92	30 46 11.
49	3	. .	. .	. .	. .	. .	14.	. .	. .	. .	20 1.31	43.71	0.98	.	.	. .	. . .	. .	. .	20 16.62	
50	8	. .	. .	. .	. .	13.	. .	. .	. .	. .	26 0.23	43.67	1.02	.	1	37.165	52 7.87	36.39	13.19	25 15.54	31 4 27.45
51	8	. .	. .	. .	. .	50.5	. .	15.8	. .	. .	28 37.69	43.65	0.99	.	5	44.32	21 45.12	36.83	8.84	27 53.05	30 34 0.79
52	9	. .	. .	. .	. .	17.	. .	. .	. .	. .	30 4.32	43.64	1.00	.	4	44.32	27 31.25	37.07	9.65	29 19.68	39 47.97
53	8	. .	. .	. .	. .	. .	. .	53.	. .	. .	30 14.64	43.64	1.00	V.	3	43.20	34 5.19	37.10	10.57	29 30.00	46 22.86
54	7.8	. .	. .	. .	. .	. .	. .	40.	. .	. .	31 1.58	43.64	1.02	VII.	1	46.65	46 40.93	37.23	12.37	30 16.92	30 59 0.53
55	9	. .	. .	54.2	. .	20.1	. .	. .	. .	. .	35 7.20	43.61	1.02	IV.	1	39.52	50 46.78	37.90	12.97	34 22.57	31 3 7.65
56	6	. .	. .	. .	4.	. .	29.	42.	. .	. .	37 3.62	43.59	1.02	I.	2	38.915	45 15.56	38.22	12.18	36 19.01	30 57 35.96
57	7	. .	. .	39.	52.	. .	20.?	. .	. .	. .	38 51.87	43.58	0.99	II.	6	31.10	20 37.37	38.51	8.68	38 7.30	32 54.56
58	7	39.	52.	4.5	16.8	30.	. .	. .	. .	. .	41 17.25	43.56	1.01	IV.	3	39.50	36 28.13	38.91	10.90	40 32.68	48 47.94
59	5	. .	. .	. .	. .	. .	24.	36.	. .	. .	41 57.97	43.55	1.01	VI.	2	45.96	41 20.07	38.99	11.59	41 13.41	53 40.65
60	7	. .	. .	. .	. .	. .	. .	39.	. .	. .	43 0.66	43.54	1.00	VII.	3	49.695	30 21.25	39.18	10.05	42 16.12	42 40.48
61	8	. .	. .	. .	. .	. .	55.	. .	. .	. .	43 29.39	43.54	1.00	VII.	4	48.68	25 0.79	39.26	9.30	42 44.85	37 19.35
62	8	. .	. .	. .	. .	. .	. .	. .	. .	. .	47	. .	. .	.	7	41.98	8 32.80	39.	6.98	. . .	20 49.
63	8	. .	. .	. .	. .	43.4	56.	68.	. .	. .	50 30.38	43.48	0.99	V.	7	36.33	11 47.30	40.32	7.42	49 45.91	24 5.04
64	8	. .	. .	. .	52.	6.	29.?	31.	. .	. .	51 52.64	43.47	1.00	IV.	4	34.215	33 19.20	40.55	10.46	51 8.17	30 45 40.21
65	6	40.	53.	5.	. .	32.	44.	. .	. .	. .	10 54 18.51	−43.46	−1.01	.	1	41.5	49 54.10	−40.89	−12.85	10 53 34.04	31 2 17.84

Zone 88. March 14. Maj. $D_0 = -29° 34' 30''$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	9	. .	. .	. .	. .	58.	. .	. .	. .	. .	9 46 45.41	+12.70	+1.00	.	4	49.10	24 46.66	− 2.29	− 5.30	9 46 59.11	29 29 24.25
2	8	. .	59.	. .	12.	27.	37.	. .	. .	. .	49 23.	12.71	0.98	.	1	43.25	48 38.35	2.72	8.50	. . .	30 23 19.57
3	8	45.	58.4	11.	23.	. .	. .	. .	. .	. .	52 23.32	12.72	1.01	.	5	40.98	23 40.13	3.42	5.15	52 37.05	29 58 18.70
4	8	. .	. .	. .	. .	. .	18.	30.6?	. .	. .	53 52.51	12.73	1.00	.	4	41.602	29 4.84	3.72	5.87	54 6.24	30 3 44.43
5	6.7	. .	. .	41.	53.8	6.2	19.	. .	. .	. .	55 53.69	12.74	1.01	.	6	37.76	16 48.20	4.11	4.26	56 7.44	29 51 26.57
6	9	. .	37.	. .	. .	. .	. .	. .	. .	. .	57 2.18	12.74	1.01	.	5	41.92	23 7.76	4.31	5.09	57 15.93	29 57 47.16
7	7	. .	. .	. .	. .	. .	13.2	26.4	. .	. .	9 58 47.99	12.75	0.99	V.	3	41.122	35 16.75	4.67	6.71	9 59 1.73	30 9 58.13
8	7.8	1.	14.	27.4	39.8	. .	. .	. .	. .	. .	10 1 39.66	12.76	0.98	.	1	45.35	47 26.04	5.23	8.36	10 1 53.40	22 9.63
9	8	. .	49.	1.2	14.	25.8	. .	. .	. .	. .	3 13.85	12.77	0.99	.	3	41.578	35 1.10	5.53	6.68	3 27.61	30 9 43.31
10	8	. .	. .	14.	27.	. .	. .	. .	. .	. .	10 6 26.82	+12.78	+1.02	.	7	45.165	6 43.12	− 6.12	− 2.91	10 6 40.62	29 41 22.15

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847. h.	s.	s.	s.	s.	s.	° ′ ″	r.
Mar. 14, 10	+ 7.72	g 0.018	. .	− 0.212	+ 0.294	0 0 7.12	40.142

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1847. h. m.	° ′ ″				″	″	in.	°	°
Zone 88	Mar. 14, 9 46	291 5 0.0	3.5	0.5	0.1	0.85	1.02			
	8 35	. .	. .	. .	. .	. .	. .	30.182	43.8	32.1
	9 45	. .	. .	. .	. .	. .	. .	.180	41.5	30.
	10 35	. .	. .	. .	. .	. .	. .	.180	40.	28.5
	10 44	. .	. .	. .	. .	. .	. .	.180	40.	28.5
	11 27	. .	. .	. .	. .	. .	. .	.166	39.	28.6
	12 4	. .	. .	. .	. .	. .	. .	.162	38.5	28.4
	12 51	. .	. .	. .	. .	. .	. .	.161	38.	28.5

REMARKS.

(87) 39. Minute of transit assumed as 55^s instead of 56^s.
(87) 42. Minute of transit assumed as 7^m instead of 8^m.
(87) 49. Transit over T. V assumed to have been recorded as over T. VI.
(87) 58. Micrometer reading assumed as $39^r.05$ instead of $39^r.50$.
(87) 59. Double; micrometer reading assumed as $45^r.76$ instead of $45^r.96$.
(87) 61. Minute of transit assumed as 43^m instead of 44^m.
(87) 65. Micrometer reading assumed as $41^r.05$ instead of $41^r.5$.
(88) 2. Transit observations incongruous.

ZONE 88. MARCH 14. MAJ. $D_0 = -26° 34' 30''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
11	8	. .	17.	30.	42.	. .	. .	. .	. .	. .	10 7 42.31	+12.79	+1.00	.	3	51.11	29 32.87	− 6.37	− 5.93	10 7 56.10	30 4 15.17
12	8	. .	. .	. .	. .	56.	. .	. .	. .	. .	8 43.34	12.79	0.98	.	1	46.39	46 50.24	6.57	8.28	8 57.11	21 35.09
13	8	. .	. .	. .	. .	. .	. .	36.	. .	. .	9 57.88	12.80	0.99	V.	3	40.36	35 42.99	6.80	6.77	10 11.67	10 26.56
14	7	. .	11.	23.	36.	48.	. .	. .	. .	. .	12 35.86	12.81	0.99	VI.	2	48.30	39 52.60	7.29	7.34	12 49.66	30 14 37.23
15	8	. .	27.	. .	53.	. .	. .	. .	. .	. .	14 52.56	12.82	1.01	IV.	5	45.505	21 4.31	7.72	4.82	15 6.39	29 55 46.85
16	7	. .	. .	. .	. .	. .	45.	57.6	. .	. .	15 19.60	12.83	1.01	.	5	48.63	19 16.72	7.78	4.58	15 33.44	29 53 59.08
17	8	. .	. .	. .	. .	. .	56.	10.	. .	. .	16 31.19	12.83	0.99	.	3	41.105	35 17.28	7.99	6.72	16 45.01	30 10 2.09
18	8	. .	. .	. .	15.	28.	40.	. .	. .	. .	19 15.03	12.85	1.01	.	6	36.61	17 27.79	8.47	4.34	19 28.89	29 52 10.60
19	3	. .	. .	. .	. .	. .	29.	41.8	. .	. .	20 3.54	12.85	0.99	.	2	41.815	43 36.05	8.63	7.86	20 17.38	30 18 22.54
20	8	. .	. .	59.	72.	. .	. .	. .	. .	. .	22 11.83	12.86	1.02	V.	6	46.69	11 40.67	9.01	3.59	22 25.71	29 46 23.27
21	5	. .	. .	. .	. .	. .	50.	63.	. .	. .	22 24.84	12.86	1.01	VII.	5	54.835	15 42.72	9.04	4.12	22 38.71	29 50 25.88
22	9	. .	. .	. .	. .	. .	37.	. .	. .	. .	29 11.54	12.90	1.00	VII.	5	34.16	27 34.65	10.20	5.68	29 25.44	30 2 20.53
23	9	34.	27.	. .	. .	. .	. .	. .	. .	. .	34 12.01	12.92	1.02	.	7	38.77	10 23.33	11 03	3.42	33 25.95	29 45 7.78
24	8	. .	. .	. .	. .	. .	. .	7.5	. .	. .	35 29.45	12.94	1.01	VII.	5	41.65	23 16.72	11.23	5.09	35 43.40	29 58 3.04
25	7	. .	. .	. .	. .	. .	38.	50.	. .	. .	36 ?24.35	12.94	0.99	.	2	42.3	43 28.64	11.38	7.81	36 38.28	30 18 17.83
26	8	. .	. .	. .	. .	53.	. .	78.	. .	. .	38 40.14	12.96	1.00	.	4	41.15	29 20.41	11.75	5.91	38 54.10	4 8.07
27	8	. .	. .	20.	34.	. .	. .	. .	. .	. .	40 33.38	12.97	0.98	.	1	40.?59	50 9.94	12.04	8.74	40 47.33	25 0.72
28	7	. .	16.	29.	41.8	. .	. .	. .	. .	. .	41 41.63	12.98	0.99	.	2	46.528	40 53.77	12.23	7.47	41 55.60	15 43.47
29	7	. .	. .	. .	. .	. .	. .	. .	. .	. .	42	. .	. .	VIII	3	52.76	28 35.29	12.	5.81	. . .	3 23.
30	8	. .	. .	. .	. .	. .	20.	. .	. .	. .	46 54.49	13.01	0.98	.	1	47.87	45 59.27	13.00	8.17	47 8.48	20 50.44
31	9	. .	. .	. .	. .	. .	58.	. .	. .	. .	49 32.54	13.03	1.00	VII.	4	45.51	26 49.94	13.41	5.58	49 46.57	1 38.93
32	.	. .	. .	. .	. .	. .	. .	. .	. .	. .	50 7.52	13.03	1.00	.	.	. .	. . .	. .	. .	50 21.55	
33	.	. .	. .	. .	. .	. .	. .	53.8	. .	. .	52 15.70	13.05	1.00	IX.	3	47.625	31 31.72	13.81	6.21	52 29.75	6 21.74
34	8	29.	. .	54.8	7.4	20.2	33.5	. .	. .	. .	57 7.52	13.08	1.00	IV.	5	34.882	27 10.10	14.50	5.62	57 21.60	2 0.22
35	8	. .	. .	. .	55.	7.8	20.	. .	. .	. .	10 58 54.87	13.09	0.99	.	2	43.651	42 32.83	14.76	7.69	10 59 8.95	30 17 25.28
36	8	. .	. .	. .	. .	. .	42.	55.	. .	. .	11 1 16.76	13.11	1.00	VII.	4	52.74	22 40.98	15.07	5.02	11 1 30.87	29 57 31.07
37	8	. .	36.5	48.2	11.8	. .	. .	. .	. .	. .	5 1.54	13.14	0.99	IV.	2	40.77	44 12.03	15.56	7.94	5 15.67	30 19 5.53
38	8	. .	33.	. .	. .	9.5	. .	. .	. .	. .	7 57.50	13.16	1.01	.	6	46.22	11 56.89	15.95	3.60	8 11.67	29 46 46.44
39	8.9	. .	. .	. .	22.	35.0	47.6	. .	. .	. .	8 22.17	13.16	1.00	.	4	45.29	26 57.86	16.00	5.59	8 36.33	30 1 49.45
40	8	. .	8.	19.8	33.	45.1	. .	. .	. .	. .	11 32.82	13.18	1.00	.	3	40.05	36 28.13	16.39	6.89	11 47.00	11 21.41
41	.	. .	. .	. .	. .	. .	. .	11.	. .	. .	14 32.90	13.21	1.00	.	4	40.275	29 50.20	16.76	5.98	14 47.11	4 42.94
42	8	. .	. .	. .	. .	. .	26.	. .	. .	. .	25.97	13.21	1.00	.	4	40.95	29 27.29	16.82	5.93	15 40.18	4 20.04
43	8	. .	. .	. .	33.	. .	. .	. .	. .	. .	20 32.97	13.25	0.99	V.	1	41.56	49 36.50	17.48	8.68	20 47.21	24 32.66
44	.	. .	. .	. .	1.	. .	. .	69.	. .	. .	22 ?0.93	13.27	1.00	.	2	58.05	34 17.03	17.65	6.58	22 15.20	9 11.26
45	6	. .	. .	. .	15.	. .	40.7	53.8	. .	. .	25 15.28	13.29	0.99	.	2	52.10	37 41.90	18.01	7.04	25 29.56	30 12 36.95
46	7	. .	. .	11.	23.2	36.	. .	. .	. .	. .	27 23.43	13.31	1.01	.	5	49.41	18 49.85	18.22	4.50	27 37.75	29 53 42.57
47	7	. .	41.	53.	. .	. .	. .	. .	. .	. .	30 6.10	13.33	0.99	.	1	44.10	48 9.08	18.54	8.46	30 20.42	30 23 6.08
48	7	. .	. .	. .	. .	35.	. .	. .	. .	. .	11 31 22.32	13.34	0.99	.	1	43.61	48 25.96	18.67	8.52	11 31 36.65	23 23.15
49	8	. .	. .	45.	56.	69.	. .	. .	. .	. .	12 7 56.69	13.68	0.99	.	2	45.54	41 27.79	21.83	7.56	12 8 11.36	16 27.18
50	8	. .	. .	45.	56.	69.	. .	. .	. .	. .	56.69	13.68	1.00	.	3	41.29	35 11.01	21.83	6.70	8 11.37	10 9.54
51	8	. .	. .	. .	. .	. .	9.	22.	. .	. .	9 43.66	13.69	0.99	VI.	1	46.057	47 1.55	21.94	8.33	9 58.34	22 1.82
52	9	. .	. .	. .	. .	. .	. .	59.8	. .	. .	11 21.70	13.71	1.00	.	.	. .	. . .	. .	. .	11 36.41	
53	.	. .	. .	. .	. .	69.	81.	. .	. .	. .	12 55.95	13.73	1.00	.	1	. .	. . .	. .	. .	13 10.68	
54	8.9	. .	42.	55.	. .	. .	. .	. .	. .	. .	13 7.59	13.74	0.99	IV.	1	48.542	45 36.13	22.21	8.13	(14) 22.32	20 36.47
55	9	. .	. .	. .	. .	42.	. .	7.	. .	. .	16 29.08	13.76	0.99	.	1	47.31	46 18.51	22.37	8.23	16 43.83	21 19.11
56	9	. .	. .	. .	. .	. .	. .	. .	. .	14.	17 16.49	13.77	0.99	.	2	42.982	42 54.71	22.37	7.75	16 31.25	17 54.83
57	8	. .	10.5	22.	35.2	48.	. .	. .	. .	. .	21 35.29	13.81	0.99	.	2	40.934	44 6.38	22.65	7.93	21 50.09	30 19 6.96
58	7	. .	33.	46.	58.	. .	. .	. .	. .	. .	22 45.70	13.83	1.01	.	6	39.442	15 50.27	22.72	4.11	23 0.54	29 50 47.10
59	6.7	. .	. .	. .	. .	. .	53.	6.	. .	. .	12 23 27.69	+13.83	+1.00	.	3	43.33	34 0.76	−22.74	− 6.54	12 23 42.52	30 9 0.04

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847. h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1847. h. m.	″ ′ ″				″	″	in.	°	°
Zone 88	Mar. 14, 12 53	. .	. .	. .	. .	. .	. .	30.160	38.	28.9
	13 57	. .	. .	. .	. .	. .	. .	.148	37.	28.8
	?14	. .	. .	. .	. .	. .	. .	30.140	37.	28.
	14 49	. .	. .	. .	. .	. .	. .	30.138	37.	28.
	15 12	. .	. .	. .	. .	. .	. .	.134	37.	27.2

REMARKS.

(88) 21. Apparently wrong by 3^s.

(88) 23. Time of transit over T. II assumed as 47^s instead of 27^s.

(88) 25. Three stars of nearly the same right ascension; transits over T.'s V and VI assumed to have been recorded as over T.'s VI and VII; micrometer reading assumed as $42^r.03$ instead of $42^r.3$.

(88) 32. A star of 6.7 magnitude in upper part of field.

(88) 37. Time of transit over T. IV assumed as $1^s.8$ instead of $11^s.8$.

(88) 40. Micrometer reading assumed as $39^r.05$ instead of $40^r.05$.

(88) 42. Minute of transit assumed as 15^m, and transit over T. IV assumed as recorded over T. VI.

(88) 45. Declination 3′ different from Oeltz, Arg. Z. 401, 53; micrometer reading perhaps $47^r.10$.

(88) 56. Transit assumed to have been observed over T. 11 instead of 12, as recorded.

(88) 58. Transits over T.'s III, IV, and V ass'd as recorded over T.'s II, III, and IV.

ZONE 88. MARCH 14. MAJ. $D_0 = -29° 34' 30''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
60	9	. .	. .	. .	65.	. .	. .	. .	. .	. .	12 24 4.97	+13.84	+1.00	.	5	46.978	20 13.61	−22.76	− 4.69	12 24 19.81	29 55 11.06
61	8	. .	6.8	19.	31.8	44.8	. .	. .	. .	. .	34 31.91	13.95	1.00	.	3	46.221	32 21.22	23.23	6.32	34 46.86	30 7 20.77
62	8.9	. .	. .	. .	. .	. .	62.	. .	. .	. .	40 36.49	14.01	0.99	.	2	34.403	47 51.27	23.46	8.44	40 51.49	30 22 53.17
63	8	. .	. .	. .	. .	. .	. .	52.	. .	. .	41 13.95	14.02	1.00	VII.	5	39.121	24 44.14	23.48	5.30	41 28.97	29 59 42.92
64	8	. .	5.	18.	. .	30.	50.	. .	. .	. .	43 30.39	14.04	0.99	.	1	44.37	47 59.78	23.55	8.47	43 45.42	30 23 1.80
65	7	. .	. .	. .	. .	. .	. .	. .	. .	. .	. . .	. .	. .	.	2	46.575	40 52.15	23.55	7.48	(44)	15 53.18
66	9	. .	. .	. .	25.2	. .	50.	. .	. .	. .	48 24.82	14.09	1.00	VII.	2	46.30	41 10.57	23.69	7.53	48 39.91	16 11.79
67	8.9	. .	. .	. .	. .	. .	25.8	. .	. .	. .	49 0.31	14.10	1.00	.	3	46.59?	32 8.51	23.70	6.30	49 15.41	30 7 8.51
68	8	. .	. .	. .	46.	58.	. .	. .	. .	. .	51 45.71	14.13	1.00	.	6	45.39	12 25.48	23.76	3.66	52 0.84	29 47 22.90
69	8	. .	. .	. .	. .	35.6	48.	60.4	. .	. .	53 22.62	14.15	1.00	V.	4	46.52	26 15.46	23.79	5.50	53 37.77	30 1 14.75
70	8	. .	16.?	. .	43?.2	. .	. .	. .	. .	. .	12 55 17.76	14.17	1.00	.	5	47.255	11 21.10	23.82	3.51	12 55 32.93	29 46 18.43
71	9	. .	26.	. .	. .	. .	. .	. .	. .	. .	13 2 51.03	14.25	1.00	.	7	40.515	9 23.24	23.92	3.26	13 3 6.28	29 44 20.42
72	.	. .	. .	. .	. .	. .	. .	25.	. .	. .	2 46.83	14.25	1.00	.	2	40.816	44 10.11	23.92	7.94	3 2.08	30 19 11.97
73	9	. .	. .	. .	. .	. .	21.	33.	. .	. .	3 55.17	14.27	1.00	.	2	46.575	40 52.00	23.93	7.48	4 10.44	30 15 53.41
74	9	. .	. .	. .	. .	. .	. .	. .	. .	. .	(5)	. .	. .	.	5	47.16	20 7.33	23.93	4.67	. . .	29 55 5.93
75	9	. .	. .	. .	. .	. .	. .	31.	. .	. .	6 53.10	14.30	1.00	.	6	48.521	10 37.33	23.94	3.41	7 8.40	45 34.68
76	.	. .	. .	. .	. .	. .	45.	59.	. .	. .	8 20.38	14.31	1.00	VII.	6?	44.698	12 49.16	23.95	3.69	8 35.69	47 46.80
77	8	. .	. .	. .	. .	. .	. .	10.5	. .	. .	9 32.48	14.33	1.00	.	5	44.92	21 24.46	23.95	4.84	9 47.81	29 56 23.25
78	9	. .	. .	. .	. .	. .	. .	20.2	. .	. .	10 42.10	14.34	1.00	.	4	38.492	30 51.59	23.95	6.12	10 57.44	30 5 51.66
79	8	. .	. .	. .	51.6	4.	17.	. .	. .	. .	13 51.51	14.38	1.00	.	4	46.738	26 8.00	23.95	5.48	14 6.89	1 7.43
80	8	. .	. .	. .	. .	54.	6.8	. .	. .	. .	30 41.35	14.57	1.00	VI.	3	46.475	32 12.32	23.73	6.30	30 56.92	30 7 12.35
81	8	. .	. .	23.4	36.4	49.	. .	. .	. .	. .	39 36.29	14.67	1.00	VII.	5	38.886	24 51.90	23.48	5.31	39 51.96	29 59 50.69
82	8	. .	. .	. .	. .	. .	. .	50.	. .	. .	40 11.96	14.68	1.00	VII.	5	42.714	22 40.08	23.46	5.02	40 27.64	29 57 38.56
83	8	. .	. .	. .	. .	. .	. .	10.	. .	. .	41 31.83	14.70	1.01	.	2	41.070	44 1.70	23.43	7.93	41 47.54	30 19 3.06
84	.	. .	. .	. .	. .	41.	54.	5.6	. .	. .	43 28.15	14.72	1.00	V.	5	34.445	27 25.11	23.37	5.64	43 43.87	30 2 24.12
85	7	25.	38.	49.8	3.2	. .	. .	. .	. .	. .	46 2.94	14.75	0.99	.	6	40.25	15 22.45	23.26	4.01	47 18.68	29 50 19.72
86	8	. .	. .	. .	49.8	2.	. .	. .	. .	. .	49 49.55	14.79	1.01	.	2	39.45	44 57.48	23.10	8.08	50 5.35	30 19 58.66
87	8	. .	. .	. .	. .	16.	. .	41.	. .	. .	3.12	14.87	1.00	.	3	35.09	38 44.48	23.	7.19	(49) 18.99	30 13 45.
88	9	. .	. .	50.2	3.0	16.	. .	. .	. .	. .	56 3.10	14.87	0.99	VII.	6	36.945	17 22.80	22.79	4.29	56 18.96	29 52 19.88
89	9	. .	. .	. .	. .	. .	. .	14.	. .	. .	13 56 35.82	14.87	1.01	.	2	34.45	47 49.31	22.76	8.47	13 56 51.70	30 22 50.54
90	.	. .	. .	. .	. .	. .	. .	. .	. .	30.	14 0 20.08	14.92	1.00	.	3	42.89	34 14.76	22.58	6.58	14 0 36.00	9 13.92
91	8	3.8	17.2	29.	42.7	55.	. .	. .	. .	. .	5 42.28	14.98	1.01	.	2	38.21	45 40.18	22.25	8.17	5 58.27	20 40.60
92	9	. .	12.	24.6	38.	51.2	. .	. .	. .	. .	7 37.81	15.00	1.01	.	2	47.205	40 30.45	22.12	7.45	7 53.82	15 30.02
93	9	. .	. .	. .	. .	. .	. .	26.	. .	. .	8 47.82	15.02	1.01	VII.	1	49.51	45 2.46	22.08	8.08	9 3.85	20 2.62
94	.	. .	. .	. .	45.	. .	. .	. .	. .	. .	12 44.97	15.07	1.00	.	.	. .	. . .	. .	. .	13 1.04	
95	8	. .	31.	44.5	57.8	11.	. .	. .	. .	. .	15 57.41	15.11	1.00	III.	4	36.625	31 56.17	21.58	6.26	16 13.52	6 54.01
96	8	. .	. .	. .	. .	. .	. .	8.	. .	. .	16 29.88	15.12	1.00	VII.	3	40.889	35 58.90	21.54	6.80	16 46.00	30 10 57.24
97	8	. .	. .	. .	. .	30.6	42.	. .	. .	. .	19 17.34	15.15	0.99	.	6	42.105	14 18.58	21.36	3.87	19 33.48	29 49 13.81
98	7	23.	36.	49.	61.	. .	. .	. .	. .	. .	24 1.24	15.21	1.00	.	4	43.625	27 55.18	20.97	5.72	24 17.45	30 2 51.87
99	9	. .	. .	. .	. .	. .	. .	35.	. .	. .	23 56.82	15.21	1.01	.	2	34.19	47 58.26	20.98	8.50	24 13.04	22 57.74
100	9	. .	. .	. .	. .	. .	. .	36.	. .	. .	23 57.84	15.21	1.01	.	2	42.06	43 27.27	20.98	7.86	24 14.06	18 26.11
101	9	. .	3.	15.	29.	. .	. .	. .	. .	. .	27 28.39	15.25	1.01	.	2	34.71	47 40.70	20.71	8.44	27 44.65	22 39.85
102	8	. .	. .	. .	14.	27.	. .	51.	. .	. .	31 14.18	15.29	1.00	.	5	35.252	26 57.36	20.39	5.59	31 30.47	1 53.34
103	7	. .	. .	. .	. .	51.	5.0	17.	. .	. .	32 38.90	15.31	1.01	.	2	44.48	42 4.29	20.27	7.68	32 55.22	17 2.24
104	9	. .	. .	. .	. .	5.	17.6	. .	. .	. .	34 52.24	15.34	1.00	.	3	42.34	34 34.81	20.05	6.63	35 8.58	9 31.49
105	8	. .	31.	43.4	57.	. .	. .	. .	. .	. .	36 56.51	15.36	1.00	.	2	39.325	45 1.78	19.87	8.08	37 12.87	30 19 59.73
106	7	. .	. .	. .	. .	. .	38.	. .	. .	. .	38 12.71	15.38	0.99	.	7	42.92	8 0.42	19.76	3.03	38 29.08	29 42 53.21
107	7	. .	. .	. .	. .	. .	. .	35.	. .	. .	38 57.08	15.38	0.99	.	6	45.97	12 5.51	−19.69	− 3.59	39 13.45	29 46 58.79
108	.	. .	. .	. .	. .	. .	. .	56.	. .	. .	14 39 17.90	+15.39	+1.00	.	.	. .	. . .	. .	. .	14 39 34.29	

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847. h.	s.	s.	s.	s.	s.	° ′ ″	s.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1847. h. m.	° ′ ″				″	″	in.	°	°

REMARKS.

(88) 60. Minute of transit assumed as 25^m instead of 24^m.

(88) 64. The time, 30^s, assumed for transit over T. IV instead of T. V supposed to be 5^s in advance of the last star, as indicated by the rejected observation of T. VI; micrometer reading assumed as $46^r.03$ instead of $46^r.30$.

(88) 70. Transit over T. VI assumed as recorded over T. IV; hor. thread assumed as 6 instead of 5.

(88) 85. Minutes assumed as 47 instead of 46.

(88) 90. Right ascension differs $12^s.9$ from Arg. Z. 404, 67; transit over T. 11 probably recorded over T. 12.

(88) 96. Micrometer reading assumed as $39^r.889$ instead of $40^r.889$.

(88) 98. Transit over T. IV assumed as $1^s.0$ instead of $6^s.1$.

ZONE 88. MARCH 14. MAJ. $D_{\circ}=-29^{\circ}\,34'\,30''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	IV.	VII.	11.	12.											
											h. m. s.	s.	s.				′ ″	″	″	h. m. s.	° ′ ″
109	8	47.	. .	72.	. .	. .	. .	. .	. .	. .	14 42 24.98	+15.43	+1.01	.	2	47.86	40 7.90	−19.36	− 7.40	14 42 41.42	30 15 4.66
110	7	. .	. .	. .	21.5	34.	45.2	. .	. .	. .	43 20.89	15.44	1.00	.	5	43.39	22 17.15	19.26	4.94	43 37.33	29 57 11.35
111	8	. .	. .	. .	. .	27.	. .	52.	. .	. .	45 14.13	15.46	1.00	.	3	34.502	33 20.40	19.07	6.46	45 30.59	30 8 15.93
112	7	. .	. .	50.2	63.	76.	. .	. .	. .	. .	47 3.09	15.48	1.01	.	2	46.125	41 7.64	18.87	7.53	47 19.58	16 4.04
113	8	33.	45.2	58.	11.2	22.9	. .	. .	. .	. .	50 10.75	15.52	1.00	.	4	37.502	31 26.01	18.57	6.19	50 27.27	30 6 20.77
114	8	. .	. .	15.5	28.7	40.7	. .	. .	. .	. .	55 28.33	15.58	0.99	.	6	35.695	17 59.30	17.98	4.37	55 44.90	29 52 51.65
115	7	. .	. .	. .	60.	12.5	25.8	. .	. .	. .	56 12.79	15.59	1.00	.	5	41.92	23 7.76	17.93	5.06	56 29.48	29 58 0.75
116	6	. .	. .	. .	11.2	24.	36.8	50.	. .	. .	57 11.41	15.60	1.01	VII.	2	39.44	44 57.48	17.78	8.08	14 57 28.02	30 19 53.34
117	.	. .	18.5	31.6	43.8	56.	. .	. .	. .	. .	14 59 43.81	15.64	1.00	VIII.	4	37.956	31 9.62	17.52	6.16	15 0 0.45	6 3.30
118	7	6.4	20.	31.9	45.	. .	. .	. .	. .	. .	15 2 44.91	15.67	1.01	.	2	41.59	43 43.80	17.18	7.93	3 1.59	18 38.91
119	7	. .	. .	. .	. .	. .	. .	44.	. .	. .	3 5.85	15.68	1.01	.	2	47.41	40 23.39	17.14	7.44	3 22.54	15 17.97
120	7	. .	. .	. .	. .	. .	. .	44.	. .	. .	4 5.86	15.69	1.01	.	2	51.73	37 54.65	17.02	7.10	4 22.56	12 48.77
121	9	. .	48.	. .	14.	. .	. .	. .	. .	. .	6 13.64	15.71	1.00	.	3	44.51	33 18.07	16.78	6.45	6 30.35	8 11.30
122	8	. .	. .	. .	40.	. .	. .	. .	. .	. .	6 39.97	15.72	1.01	.	3	41.298	35 10.74	16.73	6.71	6 56.70	10 4.18
123	9	. .	. .	. .	. .	. .	. .	60.	. .	. .	9 21.85	15.75	1.01	.	2	45.305	41 35.54	16.38	7.61	9 38.61	16 29.53
124	.	. .	. .	. .	. .	59.	11.2	24.	. .	. .	10 45.96	15.77	1.01	.	2	43.79	42 28.00	16.21	7.72	11 2.74	30 17 21.93
125	8	. .	38.	51.	64.8	. .	. .	42.	. .	. .	15 13 3.78	+15.79	+0.99	.	6	40.27	15 21.77	−15.92	− 4.00	15 13 20.56	29 50 11.69

ZONE 89. MARCH 18. MAJ. $D_{\circ}=-28^{\circ}\,59'\,20''$.

1	7	. .	. .	45.	57.9	. .	. .	. .	. .	. .	7 33 57.79	+10.15	+0.97	.	1	41.176	49 49.77	− 6.00	− 8.43	7 34 8.91	29 49 24.20
2	.	. .	. .	7.	20.	32.	. .	. .	. .	. .	34 19.69	10.15	0.98	.	2	40.59	44 18.23	6.09	7.74	34 30.82	43 52.06
3	.	. .	. .	. .	. .	35.	. .	. .	. .	. .	22.47	10.15	1.00	.	.	. .	. . .	. .	. .	34 33.62	
4	7	. .	. .	. .	. .	. .	. .	37.9	. .	. .	35 59.95	10.14	0.97	VII.	1	40.042	50 28.47	6.51	6.51	36 11.06	50 3.49
5	8	. .	. .	23.	. .	. .	. .	. .	. .	. .	38 15.01	10.14	0.97	VI.	1	35.76	52 56.11	7.07	8.81	38 26.12	52 31.99
6	8	. .	. .	28.4	41.7	. .	6.	. .	. .	. .	40 41.13	10.13	0.99	VI.	3	41.251	35 12.20	7.68	6.62	40 52.25	34 46.50
7	7	. .	. .	. .	25.	. .	. .	. .	. .	. .	24.97	10.13	1.00	.	1	. .	. . .	. .	. .	(42) 36.10	
8	9	. .	7.2	19.	31.4	. .	. .	. .	. .	. .	45 31.72	10.11	1.02	.	6	36.82	17 20.56	8.88	4.49	45 42.85	16 53.93
9	8	39.2	51.	5.1	17.	. .	. .	. .	. .	. .	47 16.95	10.10	1.01	V.	5	36.122	26 27.36	9.31	5.58	47 28.06	26 2.25
10	6	. .	47.	0.4	13.	25.2	. .	. .	. .	. .	50 12.74	10.10	0.96	.	1	34.832	53 28.20	10.04	8.87	50 23.80	53 7.11
11	.	. .	1.	. .	20.	. .	. .	63.1	. .	. .	25.76	10.08	1.00	.	4	35.16	32 46.65	12.05	6.34	58 36.84	32 25.04
12	.	. .	. .	. .	. .	. .	. .	4.	. .	. .	7 26.14	10.08	1.00	.	.	. .	. . .	. .	. .	7 59 37.22	
13	8	. .	. .	39.8	52.1	5.	17.2	. .	. .	. .	8 2 52.21	10.07	1.01	.	5	36.419	26 17.17	13.16	5.56	8 3 3.29	25 55.89
14	8	. .	. .	. .	7.2	. .	. .	. .	. .	. .	4 7.17	10.07	0.99	.	3	40.70	36 5.75	13.45	6.73	4 18.23	35 45.93
15	7	. .	. .	. .	23.	. .	. .	. .	. .	. .	5 10.40	10.06	0.97	.	1	44.56	47 53.24	13.71	8.19	4 21.43	47 5.14
16	7	. .	. .	. .	42.3	. .	. .	. .	. .	. .	29.72	10.06	0.98	.	2	43.69	42 31.49	13.70	7.52	4 40.76	42 12.80
17	7	. .	. .	. .	. .	. .	55.	8.	. .	. .	6 29.92	10.06	1.00	.	4	43.55	27 57.76	14.03	5.76	6 40.98	27 37.55
18	7	. .	18.7	31.	43.2	56.2	. .	. .	. .	. .	9 43.60	10.06	0.98	.	2	41.74	43 38.63	14.83	7.65	9 54.64	43 21.11
19	6.7	3.4	16.	29.	41.	54.	6.	. .	. .	. .	11 41.19	10.05	1.00	.	3	46.00	32 28.82	15.33	6.30	11 52.24	32 10.45
20	8.9	. .	. .	. .	. .	. .	. .	22.	. .	. .	12 44.09	10.05	0.98	.	2	45.84	41 17.46	15.57	7.37	12 55.12	41 0.40
21	7	36.	48.7	1.9	13.8	26.	. .	. .	. .	. .	16 13.84	10.05	1.03	.	6	44.33	13 1.97	16.39	3.97	16 24.92	12 42.33
22	8	. .	. .	30.4	43.	56.2	8.1	. .	. .	. .	17 43.13	10.04	1.01	.	5	42.555	22 45.89	16.75	5.13	17 54.18	22 27.77
23	9	. .	. .	. .	51.	3.	15.2	. .	. .	. .	19 50.47	10.04	1.01	.	5	43.09	22 27.47	17.26	5.10	20 1.52	22 9.83
24	8	. .	. .	. .	. .	. .	. .	. .	. .	25.	19 38.53	10.04	1.01	.	4	47.03	25 56.81	17.26	5.52	19 39.58	25 39.59
25	8	. .	. .	19.4	32.8	44.9	. .	. .	. .	. .	22 32.39	10.04	1.00	IX.	4	44.672	27 18.00	17.90	5.68	22 43.43	27 1.58
26	.	. .	. .	. .	. .	. .	. .	37.	. .	. .	22 59.05	10.04	0.97	.	1	. .	. . .	. .	. .	23 10.06	
27	9.8	. .	. .	. .	. .	45.	59.2	11.2	. .	. .	8 23 33.17	+10.04	+0.97	.	1	41.52	49 37.88	− 18.15	− 8.41	8 23 44.18	29 49 24.44

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847. h. Mar. 18, 6	s. + 5.83	s. g 0.012	s. . .	s. − 0.238	s. − 0.341	° ′ ″ 0 0 4.73	r. 40.152

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1847. h. m.	° ′ ″				″	″	in.	°	°
Zone 89	Mar. 18 7 33	291 42 22.6	25.7	20.5	28.7	24.41	24.38	30.160	46.2	46.3
	8	. .	. .	. .	. .	. .	. .	.156	46.5	45.9
	8 22	. .	. .	. .	. .	. .	. .	.170	46.5	45.3
	9 10	12.2								
	9 23	10.4								
	9 45	. .	. .	. .	. .	. .	. .	30.186	46.5	45.5
	10	. .	. .	. .	. .	. .	. .	30.188	45.5	45.1

REMARKS.

(88) 109. Double. ?

(88) 115. Transits over T.'s III, IV, and V assumed as recorded over T.'s IV. V, and VI.

(89) 11. Transit over T. IV assumed as 26^{s} instead of 20^{s}.

(89) 14. Micrometer reading assumed as 39^{r}.70 stead of 40^{r}.70.

(89) 15. Transit over T. V assumed to have been recorded as over T. IV, and the minutes to be 4 instead of 5.

(89) 16. Transit over T. V assumed to have been recorded as over T. IV.

(89) 24. Transit over T. 11 assumed to have been recorded as over T. 12.

Zone 89. March 18. Maj. $D_{\circ}=-28^{\circ}\ 59'\ 20''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
28	9	. .	18.	. .	. .	. .	. .	. .	. .	. .	8 26 43.11	+10.03	+0.99	.	3	43.95	27 43.84	−18.89	− 5.72	8 26 54.13	29 27 28.45
29	8	. .	. .	29.	. .	54.2	. .	. .	. .	. .	26 41.65	10.03	0.99	.	3	45.295	32 53.11	18.89	6.35	26 52.67	32 38.35
30	7.8	25.6	38.2	50.8	. .	15.6	27.	. .	. .	. .	30 3.39	10.03	1.00	.	4	37.546	31 24.51	19.68	6.17	30 14.42	29 31 10.36
31	9	. .	. .	. .	35.	47.2	. .	. .	. .	. .	30 34.83	10.03	1.01	.	5	40.492	23 56.93	19.80	5.27	30 45.87	28 23 42.00
32	8	. .	. .	. .	. .	. .	24.	36.2	. .	. .	31 58.52	10.03	1.00	VI.	4	43.921	27 44.84	20.14	5.73	32 9.55	29 27 30.71
33	8	. .	. .	. .	39.	50.9	4.2	. .	. .	. .	37 38.71	10.03	0.97	.	2	34.532	42 2.49	21.46	7.33	37 49.71	41 51.2
34	8	. .	. .	. .	21.	33.2	46.	. .	. .	. .	40 20.84	10.02	1.02	.	6	44.662	12 50.54	22.04	3.96	40 19.35	12 36.5
35	8	. .	. .	. .	. .	51.	3.2	16.	. .	. .	42 38.13	10.02	0.99	VI.	2	48.35	39 50.88	22.61	7.19	42 49.14	39 40.6
36	7	. .	. .	. .	. .	. .	. .	28.	. .	. .	43 50.05	10.02	0.97	VII.	1	38.10	51 35.35	22.89	8.65	44 1.04	51 26.8
37	8	. .	41.8	54.	. .	. .	. .	. .	. .	. .	46 6.76	10.02	1.02	.	6	34.04	18 56.28	23.41	4.66	46 17.80	18 44.38
38	8	. .	. .	. .	. .	. .	. .	. .	. .	7.	46 10.53	10.02	1.01	.	5	37.472	25 40.92	23.61	5.48	46 21.56	25 30.01
39	8	. .	. .	1.3	13.4	26.	. .	. .	. .	. .	49 13.59	10.02	1.01	.	5	41.032	23 37.65	24.13	5.23	49 24.62	23 27.04
40	8	. .	. .	. .	46.	59.1	12.	. .	. .	. .	8 50 46.46	10.02	1.02	.	6	38.692	16 16.11	24.48	4.35	8 50 57.50	16 4.91
41	7	. .	31.2	44.	55.9	69.	. .	. .	. .	. .	9 0 56.32	10.03	1.00	.	4	41.97	28 52.18	26.76	5.87	9 1 7.35	28 44.85
42	8	. .	. .	. .	. .	55.	8.2	20.4	. .	. .	1 42.59	10.03	0.99	.	2	47.582	40 17.47	26.93	7.25	1 53.61	40 11.65
43	6	. .	. .	23.8	36.2	49.2	2.	. .	. .	. .	3 36.48	10.03	0.98	.	1	49.187	45 13.92	27.34	7.86	3 34.87	45 9.12
44	7.8	33.	45.2	58.	11.	. .	. .	. .	. .	. .	8 10.70	10.04	1.00	.	4	35.832	32 23.51	28.36	6.29	8 21.74	32 18.16
45	6.7	. .	. .	. .	. .	. .	. .	7.	. .	. .	8 29.08	10.04	0.98	.	2	40.86	44 43.36	28.44	7.79	8 40.10	44 39.59
46	8	. .	. .	. .	. .	. .	21.2	34.7	. .	. .	9 56.36	10.04	1.00	IV.	4	39.589	30 14.15	28.74	6.02	10 7.40	30 8.91
47	8	. .	31.	43.2	55.8	8.4	. .	. .	. .	. .	13 55.86	10.05	1.02	IV.	6	38.299	16 29.64	29.60	4.38	14 6.93	16 23.62
48	8	. .	. .	58.4	11.2	23.	. .	. .	. .	. .	16 10.89	10.05	0.97	VI.	1	35.65	52 59.89	30.08	8.83	16 21.91	52 58.80
49	9	. .	. .	. .	. .	. .	1.4	. .	. .	. .	15 36.04	10.05	0.97	VII.	1	39.524	50 46.31	30.17	8.56	16 47.06	50 45.04
50	8	. .	. .	18.6	30.9	44.	. .	. .	. .	. .	19 31.19	10.06	1.01	IV.	5	41.87	23 9.49	30.80	5.17	19 42.26	23 5.46
51	9	. .	. .	. .	. .	. .	8.4	. .	. .	. .	20 55.91	10.06	1.02	.	6	42.392	14 8.55	31.10	4.09	21 6.99	14 3.74
52	8	. .	6.	. .	29.2	41.2	54.	. .	. .	. .	23 29.40	10.06	1.00	.	4	41.425	29 10.94	31.64	5.89	23 40.46	29 8.47
53	7.8	. .	. .	18.2	30.	42.8	. .	. .	. .	. .	30 30.36	10.08	1.00	.	4	36.372	32 4.92	33.10	6.25	30 41.44	32 4.27
54	8	. .	26.2	39.	51.1	3.5	16.4	. .	. .	. .	32 51.21	10.08	1.02	VI.	7	36.570	11 38.93	33.59	3.80	33 2.31	11 36.32
55	7.8	. .	42.	54.2	7.5	20.	32.2	. .	. .	. .	35 7.16	10.09	0.99	IV.	3	37.94	37 6.36	34.05	6.85	35 18.24	37 7.26
56	8.9	. .	50.	2.4	15.6	28.	. .	. .	. .	. .	37 15.31	10.09	0.99	IV.	3	37.20	37 31.83	34.49	6.91	37 26.39	37 33.23
57	7	. .	. .	. .	34.8	47.2	0.2	. .	. .	. .	38 34.77	10.10	1.00	.	4	38.885	30 38.40	34.76	6.08	38 45.87	30 39.24
58	8	. .	11.	24.	35.7	. .	. .	. .	. .	. .	41 36.15	10.11	0.99	.	3	42.542	34 27.89	35.37	6.54	41 47.25	34 29.80
59	7	. .	. .	. .	. .	. .	10.2	22.7	. .	. .	41 44.84	10.11	0.99	.	3	37.452	37 23.16	35.40	6.90	41 55.94	37 25.46
60	8	. .	. .	. .	. .	. .	39.2	52.1	. .	. .	9 14.22	+10.11	+1.02	.	7	35.650	12 10.76	−35.70	− 3.85	9 43 25.35	29 12 10.31

Zone 90. March 24. Maj. $D_{\circ}=-30^{\circ}\ 48'\ 50''$.

1	6	31.4	. .	57.	10.	23.	. .	. .	. .	. .	7 38 10.02	+ 8.77	+1.00	IV.	3	49.58	30 25.55	− 2.68	− 6.06	7 38 19.79	31 19 24.29
2	6	. .	. .	. .	. .	. .	6.	18.5	. .	. .	42 40.08	8.76	1.01	V.	4	47.525	25 40.86	3.86	5.38	42 49.85	14 40.10
3	7	. .	. .	38.	51.4	. .	. .	. .	. .	. .	45 51.12	8.75	1.00	.	3	46.75	32 3.00	4.70	6.29	46 0.87	21 3.99
4	7	. .	. .	. .	. .	8.	. .	. .	. .	. .	45 55.23	8.75	1.00	.	3	46.75	32 3.00	4.71	6.29	46 4.98	21 4.00
5	7	. .	. .	. .	. .	. .	. .	58.	. .	. .	46 19.34	8.75	0.98	.	2	40.19	44 32.00	4.82	8.05	46 29.07	33 34.87
6	7	. .	. .	. .	5.	. .	. .	. .	. .	. .	48 4.90	8.74	1.00	VII.	2	59.66	33 21.23	5.28	6.48	48 14.70	22 22.99
7	7	. .	. .	. .	. .	. .	. .	27.	. .	. .	48 48.39	8.74	0.99	VI.	2	58.525	34 0.52	5.47	6.57	48 58.12	23 2.56
8	6	. .	. .	31.	43.8	56.5	. .	. .	. .	. .	51 43.79	8773	0.99	.	2	47.965	40 4.29	6.25	7.43	51 53.51	29 7.97
9	7	. .	. .	40.	. .	. .	. .	. .	. .	. .	58 52.93	8.73	0.98	.	1	48.645	45 32.59	6.29	8.19	52 2.64	34 37.07
10	7	. .	. .	51.	5.4	. .	. .	. .	. .	. .	4.62	8.73	1.00	.	3	44.965	33 4.47	6.34	6.45	52 14.35	22 7.26
11	.	. .	. .	. .	. .	. .	. .	. .	. .	. .	. . .	. .	. .	.	3	48.60	30 59.30	6.50	6.14	. . .	20 1.94
12	.	1.3	. .	. .	. .	. .	. .	. .	. .	. .	7 52 39.98	+ 8.73	+0.99	III.	2	47.742	40 11.92	− 6.51	− 7.47	7 52 49.70	31 29 15.90

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	*m*	*n*	*c*	Zenith Point.	Mic. Co.
1847.	h.	s.	s.	s.	s.	s.	° ′ ″	r.
Mar. 24,	6	+ 4.51	+ 0.018	. .	− 0.238	− 0.341	359 59 55.47	40.110

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	h. m.	° ′ ″				″	″	in.	°	°
Zone 90	Mar. 24, 7 37	289 49 64.2	64.0	47.8	66.5	60.53	60.62			
	7 35	. .	. .	. .	. .	. .	. .	29.992	53.5	48.5
	7 52	53.8								
	7 59	. .	. .	. .	. .	. .	. .	30.002	52.4	46.9
	8 27	47.0								
	8 30	. .	. .	. .	. .	. .	. .	29.998	51.5	44.9
	9 36	50.4	. .	. .	. .	. .	. .	30.008	49.9	42.2
	10 13	. .	. .	. .	. .	. .	. .	30.008	. .	41.2

REMARKS.

(89) 28. Hor. thread assumed as 4 instead of 3.

(89) 30. Transit over T. VI assumed as at 29^s instead of 27^s.

(89) 33. Micrometer reading assumed as $44^r.532$ instead of $34^r.532$.

(89) 34. Tr'ts over T.'s V–VII assumed to have been recorded as over T.'s IV–VII.

(89) 37. Transits discordant; first adopted as correct.

(89) 38. Transits over T. 11 assumed to have been recorded as over T. 12.

(89) 43. Tr'ts over T.'s IV–VII assumed to have been recorded as over T.'s III–VI.

(89) 45. Micrometer reading assumed as $39^r.86$ instead of $40^r.86$.

(89) 49. Minutes of transit assumed as 16 instead of 15.

(89) 51. Transits over T. V assumed to have been recorded as over T. VI.

(89) 54. Touched telescope by accident; circle changed reading; mic. A 10″.4.

(90) 9. Minutes assumed as 51 instead of 58.

(90) 10. Minutes assumed as 52.

(90) 12. Circle moved; microscope A 53″.8 instead of 64″.2.

Zone 90. March 24. Maj. $D_0 = -30° 48' 50$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
13	7	. .	. .	. .	. .	. .	51.3	. .	. .	. .	7 53 25.50	+ 8.72	+1.00	.	4	45.186	27 1.44	— 6.69	— 5.58	7 53 35.22	31 16 3.71
14	.	. .	. .	. .	. .	. .	. .	41.5	. .	. .	8 3 2.92	8.70	1.00	VII.	3	51.515	29 18.57	9.23	5.90	8 3 12.62	18 23.70
15	8	. .	. .	48.5	51.	14.	. .	. .	. .	. .	4 51.19	8.69	0.98	IV.	1	46.928	46 31.71	9.71	8.34	5 0.86	35 39.76
16	6	. .	5.4	18.2	31.0	44.1	56.9	. .	. .	. .	7 31.08	8.69	1.00	.	4	43.004	28 16.56	10.40	5.76	7 40.77	17 22.72
17	7.8	. .	. .	. .	24.	36.8	. .	. .	. .	. .	9 23.98	8.68	0.99	.	2	44.485	42 4.12	10.89	7.71	10 33.65	31 12.72
18	8.9	. .	52.	. .	17.4	. .	. .	. .	. .	. .	11 17.54	8.68	0.98	IV.	2	40.558	44 19.33	11.39	8.03	11 27.20	33 28.75
19	9	. .	. .	. .	. .	. .	. .	7.6	. .	. .	13 29.00	8.67	1.00	.	3	46.74	32 3.34	11.96	6.29	13 38.67	21 11.59
20	.	. .	. .	. .	. .	. .	38.	51.1	. .	. .	14 12.30	8.67	0.99	.	2	43.75	42 29.26	12.12	7.79	14 21.96	31 39.17
21	.	. .	. .	. .	. .	. .	9.	. .	. .	. .	15 43.15	8.67	0.98	.	2	39.525	44 54.74	12.51	8.13	15 52.80	34 5.38
22	.	. .	. .	. .	. .	. .	. .	45.6	. .	. .	7.91	8.67	1.00	.	.	. .	. .	. .	. .	(16) 16.68	
23	7.8	. .	35.	48.2	. .	14.1	. .	. .	. .	. .	19 1.02	8.66	0.99	.	2	51.74	37 54.30	13.35	7.13	19 10.67	27 4.78
24	7	. .	. .	26.8	39.9	. .	. .	. .	. .	. .	20 39.78	8.66	0.98	IV.	1	53.256	42 53.82	13.77	7.84	20 49.42	32 5.43
25	5	. .	. .	. .	. .	. .	31.	43.8	. .	. .	21 5.28	8.66	1.01	IV.	4	54.763	21 31.68	13.88	4.79	21 14.95	10 40.35
26	7	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	.	1	57.004	40 44.75	14.	7.53	. . .	29 56.
27	8	. .	. .	. .	. .	. .	3.	. .	. .	. .	24 27.23	8.66	1.01	.	3	58.81	25 7.74	14.72	5.31	24 36.90	14 17.77
28	7	. .	. .	. .	. .	3.	15.8	. .	. .	. .	25 50.10	8.65	1.00	.	4	41.205	29 18.51	15.06	5.90	25 59.75	18 29.47
29	5.6	. .	. .	. .	. .	. .	. .	28.7	. .	. .	26 50.29	8.65	1.03	VII.	6	45.860	12 8.93	15.31	3.51	26 59.97	1 17.75
30	6	. .	. .	. .	3.	. .	. .	50.	. .	. .	38	. .	. .	.	2	49.10	39 25.20	18.05	7.35	38	28 40.60
31	5	. .	. .	. .	. .	. .	66.	. .	. .	. .	38 40.15	8.64	0.97	.	1	45.875	47 7.97	18.23	8.44	38 49.76	36 24.64
32	9	. .	29.5	. .	55.	. .	. .	. .	. .	. .	46 55.03	8.64	0.99	.	3	42.33	34 35.19	20.21	6.66	47 4.66	23 52.06
33	7.8	. .	. .	. .	50.9	2.8	17.	. .	. .	. .	47 50.67	8.64	0.99	.	2	47.90	40 6.52	20.43	7.44	48 0.30	29 24.39
34	7	. .	. .	. .	. .	4.	. .	. .	. .	. .	48 51.17	8.64	0.98	.	1	45.89	47 7.45	20.67	8.44	49 0.79	36 26.56
35	8.9	. .	. .	. .	. .	. .	49.	. .	. .	. .	49 23.15	8.64	0.99	.	2	45.89	41 15.74	20.80	7.60	49 32.78	30 34.14
36	9	. .	. .	16.9	. .	43.2	. .	. .	. .	. .	51 30.11	8.64	1.02	.	5	53.952	16 13.46	21.30	4.08	51 39.77	5 28.84
37	6.7	. .	. .	. .	. .	. .	. .	. .	. .	23.	52 12.18	8.64	0.99	VII.	3	43.79	33 44.56	21.47	6.54	52 21.81	23 2.57
38	9	. .	4.	. .	29.4	42.6	. .	. .	. .	. .	56 29.58	8.64	1.00	.	4	41.55	29 6.63	22.46	5.87	56 39.22	18 24.96
39	9	. .	. .	. .	. .	. .	2.	. .	. .	. .	8 57 36.18	8.64	1.00	VII.	4	40.605	29 38.81	22.72	5.95	8 57 45.82	18 57.48
40	9	. .	. .	. .	. .	5.5	. .	. .	. .	. .	9 0 52.73	8.64	1.00	.	3	51.10	29 33.18	23.49	5.94	9 1 2.37	18 52.61
41	8.9	. .	. .	. .	. .	. .	. .	4.5	. .	. .	1 25.87	8.64	0.99	.	2	53.995	36 36.66	23.60	6.95	1 35.50	25 57.21
42	8.9	. .	. .	40.1	52.8	6.1	17.8	. .	. .	. .	5 52.76	8.65	1.00	.	4	42.876	28 20.98	24.62	5.76	6 2.41	17 41.36
43	.	. .	. .	. .	49.6	2.1	14.5	. .	. .	. .	7 49.17	8.65	0.99	.	2	44.898	41 49.90	25.05	7.70	7 58.81	31 12.65
44	7	. .	. .	. .	23.0	35.9	48.7	. .	. .	. .	9 22.96	8.65	0.98	.	1	46.090	47 0.56	25.42	8.44	9 32.59	36 24.42
45	7	. .	14.6	27.8	40.7	. .	. .	. .	. .	. .	12 40.58	8.65	0.98	.	1	47.812	46 1.26	26.15	8.29	12 50.21	35 25.70
46	8	. .	. .	. .	49.4	1.4	15.	27.4	. .	. .	13 48.98	8.65	0.99	V.	3	40.29	35 45.40	26.41	6.82	13 58 62	25 8.63
47	.	. .	. .	. .	. .	. .	23.4	. .	. .	. .	15 57.56	8.66	0.99	.	2	44.84	41 51.69	26.89	7.70	16 7.21	31 16.28
48	.	. .	. .	. .	61.	. .	. .	. .	. .	. .	18 0.96	8.66	0.98	.	1	45.69	47 14.34	27.34	8.48	18 10.60	36 40.16
49	.	. .	. .	. .	. .	. .	. .	58.5	. .	. .	19 19.83	8.66	0.98	.	1	45.69	47 13.98	27.64	8.48	19 29.47	36 40.10
50	9	. .	. .	. .	. .	. .	. .	58.5	. .	. .	19 19.85	8.66	0.98	.	2	42.215	43 21.91	27.64	7.92	19 29.49	32 47.47
51	.	. .	. .	42.	. .	67.6	. .	. .	. .	. .	23 54.86	8.67	0.99	.	2	51.605	37 58.95	28.65	7.15	24 4.52	27 24.75
52	6	. .	. .	. .	. .	. .	. .	. .	. .	8.	24 57.33	8.67	1.01	.	4	49.73	24 23.75	28.88	5.21	25 7.01	13 47.84
53	6	. .	. .	. .	. .	. .	23 8	. .	. .	. .	24 58.03	8.67	1.01	.	4	51.885	23 10.77	28.88	5.03	25 7.71	12 34.68
54	7	58.	10.2	23.	. .	. .	. .	. .	. .	. .	26 23.13	8.67	1.00	IV.	4	44.752	27 16.38	29.18	5.61	27 32.80	16 41.17
55	7	. .	. .	25.	. .	. .	. .	. .	. .	. .	26 24.96	8.67	1.00	VII.	3	46.080	32 25.71	20.18	6.34	27 34.63	21 51.23
56	4	. .	7.4	20.2	33.2	45.9	58.	. .	. .	. .	30 32.92	8.68	0.99	.	2	46.752	40 46.05	30.07	7.55	30 42.59	30 13.67
57	9	. .	. .	. .	. .	. .	7.	. .	. .	. .	30 41.16	8.68	0.99	.	2	46.752	40 45.89	30.11	7.55	30 50.83	30 13.55
58	9	. .	. .	. .	. .	. .	. .	51.4	. .	. .	32 12.71	8.68	0.98	.	1	41.650	49 33.08	30.43	8.82	32 22.37	39 2.33
59	8.9	. .	45.8	58.7	11.6	23.9	37.	. .	. .	. .	35 11.38	8.69	0.99	.	2	46.275	41 2.48	31.06	7.58	35 21.06	30 31.12
60	9	. .	. .	. .	40.	. .	5.6	. .	. .	. .	36 39.85	+ 8.69	+0.98	VII.	1	39.008	51 4.05	−31.36	— 9.04	9 36 49.52	31 40 34.45
61	.	. .	3.?	. .	. .	. .	. .	. .	. .	. .	9 28.56										

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847.	h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1847. h. m.	° ′ ″				″	″	in.	°	°
Zone 90	Mar. 24, 10 44	. .	. .	. .	. .	. .	. .	30.012	48.9	40.0
	11 10	. .	. .	. .	. .	. .	. .	.012	48.5	39.8
	11 30	. .	. .	. .	. .	. .	. .	.008	48.0	39.7
	12	. .	. .	. .	. .	. .	. .	.008	48.0	39.1
	12 15									
	12 52	48.0	. .	. .	. .	. .	. .	29.902	51.5	51.8

REMARKS.

(90) 15. Transit over T. V assumed as at 4^s instead of 14^s.
(90) 22. Micrometer-screw works badly.
(90) 28. Circle moved a little farther.
(90) 30. Transit observations incongruous.
(90) 52. Double.
(90) 54. Transits over T.'s II–IV assumed to have been recorded as over T.'s I–III; minutes assumed as 27 instead of 26.
(90) 55. Transit over T. IV assumed to have been recorded as over T. III; minutes assumed as 27 instead of 26.

ZONE 90. MARCH 24. MAJ. $D_0 = -30° 48' 50''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
62	8	. .	30.9	4.4	57.	10.2	. .	. .	. .	. .	9 47 57.04	+ 8.73	+0.99	IV.	3	43.237	34 3.96	−33.69	− 6.58	9 48 6.76	31 23 34.23
63	8	. .	. .	27.	39.8	52.9	. .	. .	. .	. .	49 39.93	8.73	0.99	.	2	44.10	42 17.37	34.03	7.77	49 49.65	31 49.17
64	8	. .	. .	. .	8.9	21.2	. .	47.6	. .	. .	52 8.82	8.74	1.02	.	5	55.745	15 11.73	34.53	3.91	52 18.58	04 40.17
65	8	. .	. .	. .	. .	. .	. .	. .	. .	32.	52 21.17	8.74	0.99	VII.	3	43.00	34 11.76	34.57	6.61	52 30.90	23 42.94
66	8	. .	. .	43.	55.8	. .	21.8	. .	. .	. .	55 55.88	8.75	1.01	.	4	48.454	25 8.91	35.26	5.31	56 5.64	14 39.48
67	7.8	. .	54.	7.4	20.8	. .	. .	. .	. .	. .	58 20.22	8.76	0.99	.	2	55.198	35 55.23	35.74	6.85	9 58 29.97	31 25 27.82
68	6.7	. .	. .	58.2	11.1	24.	37.1	. .	. .	. .	9 11.16	8.76	1.00	.	.	. .	. . .	. .	. .	(10) (1) 20.92	
69	8	. .	. .	. .	. .	. .	. .	23.	. .	. .	10 4 44.63	8.78	1.03	VII.	7	41.992	9 6.47	36.97	3.06	10 4 54.44	30 58 36.5
70	8	17.2	30.2	43.8	56.1	8.7	. .	. .	. .	. .	8 56.07	8.80	0.99	IV.	3	40.62	35 34.07	37.77	6.80	9 5.86	31 25 8.64
71	6	. .	. .	. .	. .	. .	. .	16.2	. .	. .	13 37.77	8.82	1.02	VII.	6	42.488	14 5.04	38.64	3.75	13 47.61	3 37.43
72	.	. .	. .	. .	20.8	. .	. .	. .	. .	. .	15 20.76	8.82	0.98	.	1	41.22	49 48.25	38.95	8.87	15 30.56	39 26.07
73	7.8	. .	. .	22.8	35.	49.2	. .	. .	. .	. .	19 35.69	8.84	0.99	.	2	48.20	39 56.19	39.73	7.43	19 45.52	29 33.35
74	9	. .	. .	. .	. .	5.9	25.9	39.4	. .	. .	21 0.41	8.85	0.99	VII.	2	45.206	41 38.93	39.98	7.67	21 10.25	31 16.58
75	8	. .	. .	. .	. .	. .	. .	43.	. .	. .	23 4.38	8.86	0.99	.	2	53.95	36 38.20	40.33	6.95	23 14.23	26 15.48
76	9	. .	. .	. .	. .	18.	30.9	43.2	. .	. .	25 5.09	8.87	1.01	.	5	57.07	14 26.06	40.69	3.80	25 14.97	31 4 0.55
77	9	. .	. .	. .	. .	. .	. .	11.6	. .	. .	25 33.01	8.87	1.02	.	.	. .	. . .	. .	. .	25 42.90	
78	6	. .	. .	. .	6.5	. .	. .	46.2	. .	. .	30 7.14	8.89	1.02	.	7	40.50	9 23.75	41.57	3.10	30 17.05	30 58 58.42
79	.	. .	. .	. .	. .	53.8	. .	. .	. .	. .	31 41.03	8.90	1.00	.	.	. .	. . .	. .	. .	31 50.93	
80	6	. .	. .	. .	. .	. .	. .	13.9	. .	. .	33 35.42	8.91	1.01	.	5	49.85	18 34.71	42.15	4.38	33 45.34	31 8 11.24
81	.	. .	. .	. .	. .	24.	. .	. .	. .	. .	11.23	8.92	1.00	.	.	. .	. . .	. .	. .	(34) 21.15	
82	6	. .	. .	. .	. .	21.2	. .	. .	. .	. .	36 8.50	8.92	1.02	.	7	41.80	8 39.00	42.56	3.00	36 18.44	30 58 14.56
83	6	. .	. .	. .	. .	. .	. .	. .	. .	12.	1.20	8.93	1.00	.	3	48.00	31 19.96	43.	6.19	(41) 11.13	31 20 59.
84	7	55.4	8.6	20.9	34.2	47.3	. .	. .	. .	. .	46 34.17	8.98	0.99	.	2	44.84	41 51.89	44.22	7.71	46 44.14	31 31 33.82
85	9	. .	. .	. .	. .	. .	21.2	33.6	. .	. .	47 55.40	8.98	1.02	.	6	49.4	10 7.23	44.44	3.18	48 5.40	30 59 44.85
86	6	. .	. .	. .	. .	. .	1.	14.8	. .	. .	48 35.90	8.99	1.02	VI.	6	50.70	9 22.47	44.54	3.07	48 45.91	30 59 0.08
87	6	. .	. .	. .	. .	. .	. .	. .	. .	52.4	49 54.63	9.00	1.00	VII.	4	50.372	24 2.50	44.70	5.15	50 4.63	31 13 42.35
88	7	59.8	13.	25.	38.7	. .	. .	. .	. .	. .	52 38.42	9.02	0.99	.	2	54.402	36 22.64	45.14	6.91	52 48.43	26 4.69
89	7	. .	. .	. .	. .	. .	. .	. .	. .	56.	52 45.03	9.02	0.99	VII.	1	55.42	41 38.94	45.16	7.68	52 55.04	31 21.78
90	4	. .	31.8	44.9	57.9	10.7	. .	. .	. .	. .	10 55 57.71	9.04	1.01	IV.	5	48.607	19 17.51	45.61	4.47	10 56 7.76	8 57.59
91	8	. .	. .	32.	44.	. .	. .	. .	. .	. .	11 1 44.44	9.07	0.99	.	2	46.545	40 53.18	46.43	7.58	11 1 54.50	30 37.19
92	5	. .	. .	. .	54.	. .	. .	. .	. .	. .	53.96	9.07	0.99	.	2	42.47	43 13.49	46.	7.90	(2) 4.02	32 57.
93	5	. .	. .	. .	51.2	. .	. .	. .	. .	. .	4 51.16	9.10	0.98	.	1	45.725	47 13.13	46.84	8.50	5 1.24	31 36 58.47
94	6	. .	. .	. .	. .	. .	8.	20.	. .	. .	10 42.04	9.13	1.02	VII.	7	46.195	6 7.30	47.62	2.61	10 52.19	30 55 47.53
95	6	. .	. .	50.2	3.4	16.6	29.2	41.9	. .	. .	13 3.39	9.15	1.00	.	4	45.28	26 58.20	47.93	5.57	13 13.54	31 16 41.70
96	7.8	. .	. .	19.8	32.7	45.	. .	. .	. .	. .	15 32.52	9.16	0.99	.	1	46.835	46 34.91	48.23	8.41	15 42.67	31 36 21.55
97	8	. .	. .	. .	. .	. .	. .	20.5	. .	. .	16 42.09	9.18	1.02	VII.	6	55.214	6 46.83	48.37	2.70	16 52.29	30 56 27.90
98	6.7	. .	. .	. .	. .	42.	54.6	7.7	. .	. .	17 29.06	9.18	1.00	VII.	3	56.354	20 34.72	48.48	4.65	17 39.24	31 10 17.85
99	7	. .	. .	56.	9.2	. .	34.4	48.	. .	. .	20 9.00	9.20	1.00	IV.?	3	51.162	29 31.08	48.80	5.93	20 19.20	19 15.81
100	7	. .	. .	. .	. .	. .	. .	. .	. .	55.	20 57.62	9.20	1.01	VII.	6	46.160	11 58.59	48.87	3.43	21 7.83	1 40.89
101	3.4	. .	. .	. .	27.8	39.6	53.	5.8	. .	. .	25 27.35	9.24	1.01	IV.	6	46.562	11 45.11	49.41	3.40	25 37.60	1 27.92
102	8	. .	. .	. .	. .	25.8	. .	51.3	. .	. .	27 12.80	9.25	0.99	.	1	46.152	46 58.43	49.61	8.46	27 23.04	36 46.50
103	7	. .	. .	7.6	20.	33.4	45.4	59.	. .	. .	29 20.19	9.27	0.98	.	1	42.62	49 0.04	49.85	8.80	29 30.44	38 48.69
104	5	. .	. .	51.	. .	17.4	31.	. .	. .	. .	34 4.55	9.30	0.98	.	1	40.97	49 56.86	50.35	8.94	34 14.83	31 39 46.15
105	9	. .	. .	. .	. .	. .	35.	. .	. .	. .	9.18	9.30	1.00	.	.	. .	. . .	. .	. .	(35) 19.48	
106	8	. .	. .	. .	. .	. .	48.	. .	. .	. .	37 22.41	9.33	1.02	.	7	45.49	6 31.93	50.70	2.67	37 32.76	30 56 15.30
107	10	. .	. .	. .	. .	. .	39.	. .	. .	. .	40 13.16	9.35	0.99	.	2	42.46	43 13.67	51.00	7.93	40 23.50	31 33 2.60
108	8	. .	. .	47.	0.0	12.3	. .	38.4	. .	. .	42 59.78	9.37	0.99	.	1	46.694	46 39.77	51.28	8.44	43 10.14	36 29.49
109	9	. .	26.4	39.	. .	64.5	. .	. .	. .	. .	46 51.84	9.41	1.00	.	4	44.32	27 31.25	51.65	5.65	47 2.25	17 18.55
110	8	. .	. .	. .	. .	31.	. .	58.	. .	. .	11 48 18.80	+ 9.42	+1.00	.	3	44.24	33 29.43	−51.79	− 6.51	11 48 29.22	31 23 17.73

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847. h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1847. h. m.	° ′ ″				″	″	in.	°	°

REMARKS.

(90) 69. Micrometer reading assumed as 40ʳ.992 instead of 41ʳ.992.

(90) 87. Transit over T. 11 assumed as recorded over T. 12.

(90) 98. Hor. thread assumed as 5 instead of 3; micrometer reading as 46ʳ.354 instead of 56ʳ.354.

(90) 100. Transit over T. 11 assumed as recorded over T. 12.

ZONE 90. MARCH 24. MAJ. $D_{\circ}=-30^{\circ}\,48'\,50''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
111	7.8	. .	. .	44.	. .	. .	. .	35.	. .	. .	11 56.64	+ 9.43	+0.99	VII.	3	40.11	35 51.27	−52.	− 6.84	11 (49) 7.06	31 25 40.
112	7	. .	. .	55.	7.9	. .	33.9	. .	. .	. .	53 7.96	9.46	1.01	.	5	45.22	21 14.13	52.23	4.74	53 18.43	11 1.10
113	8	. .	. .	. .	. .	. .	. .	33.2	. .	. .	53 54.60	9.47	1.00	.	3	46.56	32 9.18	52.30	6.29	54 5.07	21 57.77
114	8	. .	. .	. .	. .	. .	. .	35.1	. .	. .	56.49	9.47	1.00	.	3	44.97	33 4.30	52.	6.42	(54) 6.96	22 53.
115	8	. .	. .	. .	. .	. .	. .	21.2	. .	. .	55 42.51	9.48	0.99	.	1	41.142	49 50.93	52.45	8.93	55 52.98	39 42.31
116	8	. .	. .	. .	. .	. .	49.8	. .	. .	. .	11 24.01	9.49	1.00	.	4	46.57	26 13.78	52.	5.46	11 (56) 34.50	16 1.
117	7	. .	39.7	52.9	6.	18.9	. .	. .	. .	. .	12 6 5.83	9.57	0.99	.	1	42.682	48 57.91	53.31	8.80	12 6 16.39	38 50.62
118	7.8	. .	. .	. .	. .	9.7	. .	33.8	. .	. .	8 56.02	9.60	1.00	.	2	46.10	41 8.46	53.55	7.63	9 6.62	30 59.64
119	.	. .	. .	. .	. .	. .	. .	21.	. .	. .	10 42.49	9.61	1.00	.	5	45.10	21 18.26	53.68	4.74	10 53.10	11 6.68
120	8	. .	. .	50.7	3.2	16.	29.	41.2	. .	. .	15 3.18	9.65	1.00	.	5	43.176	22 24.52	54.00	4.90	15 13.83	12 13.42
121	8	. .	. .	. .	. .	. .	14.7	28.	. .	. .	12 51 49.20	+10.01	+1.00	.	4	50.55	23 56.73	−56.24	− 5.13	12 52 0.21	31 13 48.10

ZONE 91. APRIL 9. MAJ. $D_{\circ}$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	8	. .	63.	. .	88.2	. .	. .	. .	. .	. .	9 26 28.20	+ 0.42	+0.08	IV.	2	38.47	45 33.01	−11.21	− 5.75	9 26 28.70	29 4 29.97
2	9	. .	. .	. .	. .	. .	. .	. .	. .	. .	30	. .	. .	.	5	38.372	25 9.43	11.96	3.46	. . .	28 44 4.85
3	6	. .	. .	. .	. .	. .	20.	31.2	. .	. .	30 54.62	0.42	0.08	VII.	1	42.85	48 52.93	12.14	6.14	30 55.12	29 7 51.21
4	.	. .	. .	. .	. .	. .	22.8	. .	. .	. .	34 57.67	0.42	0.09	IX.	3	42.60	22 45.00	13.00	3.19	34 58.18	28 41 41.19
5	.	. .	. .	31.9	. .	57.2	. .	. .	. .	. .	36 44.52	0.42	0.08	VIII.	1	43.66	48 24.66	13.38	6.08	36 45.02	29 7 24.12
6	.	. .	. .	. .	. .	. .	22.	. .	. .	. .	37 56.81	0.42	0.09	.	2	47.14	40 34.57	13.63	5.20	37 57.32	28 59 33.40
7	.	. .	. .	. .	. .	13.	. .	39.	. .	. .	0.91	0.42	0.10	.	.	. .	. . .	. .	. .	(38) 1.43	
8	.	. .	. .	. .	. .	. .	. .	30.	. .	. .	38 52.35	0.42	0.09	VI.	2	46.27	41 4.50	13.82	5.26	38 52.86	29 0 3.58
9	7	. .	. .	. .	. .	. .	29.5	. .	. .	. .	40 4.40	0.42	0.10	.	4	42.95	28 18.50	14.05	3.80	40 4.92	28 47 16.35
10	7	. .	. .	. .	. .	9.	21.5	34.9	. .	. .	40 56.68	0.42	0.09	.	2	46.738	40 48.54	14.23	5.22	40 57.19	28 59 47.99
11	.	. .	. .	39.8	. .	65.4	. .	. .	. .	. .	46 52.58	0.43	0.09	.	2	43.132	42 52.61	15.43	5.45	46 53.10	29 1 53.49
12	7	. .	. .	. .	. .	. .	. .	. .	. .	. .	. . .	. .	. .	.	6	40.972	14 58.36	16.	2.33		
13	.	. .	. .	. .	. .	. .	29.	41.2	. .	. .	50 3.76	0.43	0.12	.	6	41.94	14 24.92	16.06	2.27	50 4.31	28 33 23.25
14	.	. .	. .	38.	49.8	. .	. .	. .	. .	. .	51 50.14	0.43	0.09	.	3	40.70	35 31.86	16.41	4.63	51 50.66	54 32.90
15	6	. .	. .	. .	. .	. .	. .	37.	. .	. .	51 59.32	0.43	0.11	VI.	6	38.358	16 28.17	16.43	2.50	51 59.86	28 35 27.10
16	9	. .	. .	. .	. .	. .	. .	24.	. .	. .	53 46.35	0.43	0.09	VII.	2	44.11	42 18.64	16.76	5.40	53 46.87	29 1 20.80
17	.	. .	. .	. .	. .	20.1	. .	. .	. .	. .	56 7.64	0.44	0.10	.	6	38.695	. . .	. .	. .	56 8.18	
18	.	. .	. .	. .	. .	. .	. .	49.	. .	. .	11.33	0.44	0.10	.	.	. .	. . .	. .	. .	(57) 11.87	
19	9	. .	. .	. .	. .	. .	. .	59.8	. .	. .	9 58 22.13	0.44	0.10	.	.	. .	. . .	. .	. .	9 58 22.67	
20	8	. .	. .	53.2	5.8	18.7	. .	. .	. .	. .	10 2 5.90	0.45	0.09	.	2	44.535	42 4.34	18.36	5.38	10 2 6.44	29 1 8.08
21	8	. .	. .	. .	7.	19.6	31.3	. .	. .	. .	3 6.84	0.45	0.11	.	6	42.705	13 58.74	18.54	2.22	3 7.40	28 32 59.50
22	6	20.5	33.4	46.2	58.2	69.8	. .	. .	. .	. .	5 58.17	0.45	0.10	.	4	45.945	26 35.46	19.08	3.62	5 58.72	45 38.16
23	7	. .	. .	. .	. .	22.	35.	46.8	. .	. .	10 9.49	0.46	0.09	.	3	39.288	36 20.46	19.84	4.72	10 10.04	55 25.02
24	6	. .	. .	. .	. .	. .	. .	32.7	. .	. .	10 55.00	0.46	0.12	.	7	39.05	10 14.04	19.98	1.81	10 55.58	29 15.83
25	8	. .	. .	. .	41.	53.8	. .	. .	. .	. .	12 41.16	0.46	0.11	.	5	44.96	21 22.77	20.31	3.03	12 41.73	40 26.11
26	6	. .	3.2	. .	23.5	. .	53.8	. .	. .	. .	15 28.47	0.47	0.10	.	4	41.462	29 9.69	20.80	3.90	15 29.04	48 14.39
27	9	. .	. .	. .	. .	. .	62.2	. .	. .	. .	16 37.15	0.47	0.11	.	5	42.62	22 43.14	21.00	3.19	16 37.73	28 41 47.33
28	6	. .	. .	. .	. .	. .	. .	39.	. .	. .	16 1.33	0.47	0.09	VI.	2	42.152	43 26.19	20.90	5.52	16 1.89	29 2 32.61
29	7	. .	. .	9.5	. .	34.5	. .	. .	. .	. .	19 21.98	0.48	0.08	.	1	46.972	46 31.43	21.48	5.88	19 22.5	29 5 38.79
30	.	. .	. .	. .	. .	. .	. .	17.	. .	. .	20 39.33	0.48	0.10	.	.	. .	. . .	. .	. .	20 39.91	
31	.	. .	. .	. .	. .	. .	32.	44.	. .	. .	22 6.62	0.48	0.10	.	.	. .	. . .	. .	. .	22 7.20	
32	.	. .	. .	. .	. .	. .	. .	3.	. .	. .	21 25.33	0.48	0.10	.	.	. .	. . .	. .	. .	21 25.91	
33	6	. .	. .	. .	. .	. .	58.	. .	. .	. .	22 32.83	0.48	0.09	.	2	52.14	37 42.68	22.02	4.89	23 33.40	28 56 49.59
34	.	. .	. .	. .	. .	. .	58.	70.	. .	. .	10 25 32.63	+ 0.49	+0.10	.	5	38.154	24 42.39	−22.51	− 3.40	10 25 33.22	28 43 48.30

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847.	h.	s.	s.	s.	s.	s.	° ′ ″	r.
Apr. 9,	6	− 5.05	g 0.024	. .	− 0.238	− 0.341	0 0 1.52	40.150

REMARKS.

(91) 1. Minutes assumed as 27 instead of 26.
(91) 3. T. VII assumed as 32ˢ.2 instead of 31ˢ.2.
(91) 4. Hor. thread assumed as 4 instead of 3; micrometer as 52ʳ.60 instead of 42ʳ.60.
(91) 17. Micrometer reading uncertain.
(91) 34. Micrometer reading assumed as 39ʳ.154 instead of 38ʳ.154.

INSTRUMENT READINGS.

	Date.			CIRCLE.						Barom.	Attached Thermom.	External Thermom.
				A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1847.	h.	m.	° ′ ″				″	″	in.	°	°
Zone 91	Apr. 9,	9	26	292 20 11.2	11.2	16.8	16.2	13.61	13.85	20.998	61.	54.
				. .	. .	. .	. .	. .	. .	30.	66.	52.4
		10	11	. .	. .	. .	. .	. .	. .	. .	. .	50.2
		10	8	. .	. .	. .	. .	. .	. .	29.994	57.8	50.
		10	57	. .	. .	. .	. .	. .	. .	29.984	55.8	48.0
		12	5	3.8	1.3	9.8	7.2	5.24	5.52	29.986	54.5	48.5
		12		. .	. .	. .	. .	. .	. .	29.980	53.0	45.5
		13		. .	. .	. .	. .	. .	. .	29.988	57.8	45.

ZONE 91. APRIL 9. MAJ. D_0=− ° ′ ″—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
35	.	. .	. .	. .	. .	. .	. .	. .	. .	58.2	10 26 49.19	+ 0.49	+0.10	.	.	. . .	. . .	. .	. .	10 26 49.78	
36	9	. .	. .	. .	36.	. .	60.5	. .	. .	. .	35 35.71	0.51	0.10	.	5	38.94	24 49.89	−24.16	− 3.42	35 36.32	28 43 57.47
37	8	. .	. .	. .	. .	. .	44.5	56.6	. .	. .	36 19.18	0.51	0.10	.	5	35.16	26 59.95	24.28	3.66	36 19.79	46 7.89
38	7	. .	. .	. .	1.	13.8	. .	39.5	. .	. .	38 1.37	0.52	0.10	.	4	31.82	34 41.43	24.55	4.53	38 1.99	28 53 50.51
39	6	. .	. .	. .	30.7	. .	. .	. .	. .	. .	42 30.75	0.54	0.08	.	1	35.93	52 51.35	25.24	6.63	42 31.37	29 12 3.22
40	8	. .	16.	28.2	40.4	53.	. .	. .	. .	. .	44 40.67	0.54	0.10	.	4	36.307	32 7.06	25.57	4.23	44 41.31	28 51 16.86
41	10	. .	. .	. .	. .	. .	. .	63.2	. .	. .	45 25.53	0.54	0.10	.	5	40.882	23 42.74	25.68	3.30	45 26.17	28 42 51.72
42	8	. .	. .	. .	. .	. .	. .	. .	. .	32.9	46 36.24	0.55	0.09	.	2	34.626	47 44.18	25.83	6.01	46 36.88	29 6 56.02
43	.	. .	. .	. .	. .	. .	. .	41.4	. .	. .	49 3.70	0.56	0.12	.	7	43.142	7 52.91	26.22	1.55	49 4.38	28 27 0.68
44	8	. .	. .	. .	. .	. .	38.8	. .	. .	. .	50 13.85	0.56	0.12	.	7	40.158	9 35.92	26.40	1.73	50 14.53	28 28 44.05
45	7	. .	. .	. .	. .	. .	25.1	37.6	. .	. .	50 0.02	0.56	0.10	.	7	4	. . .	. .	. .	50 0.68	
46	9	. .	. .	. .	. .	. .	. .	. .	. .	36.2	53 27.05	0.57	0.09	.	2	37.06	46 20.43	26.88	5.86	53 27.71	29 5 33.17
47	10	. .	. .	. .	. .	. .	. .	63.	. .	. .	55 25.32	0.58	0.11	VII.	6	30.26	21 6.59	27.15	3.00	55 28.01	28 40 16.74
48	9	. .	. .	. .	. .	. .	. .	. .	. .	42.3	56 45.88	0.58	0.09	.	3	29.96	41 40.29	27.30	5.33	56 46.55	29 0 52.92
49	.	. .	. .	. .	8.1	. .	. .	. .	. .	. .	59 8.18	0.59	0.08	.	1	30.254	50 15.69	27.68	6.32	10 59 8.85	29 9 29.69
50	9	. .	. .	. .	. .	. .	24.5	37.2	. .	. .	10 59 59.46	0.59	0.10	.	4	34.608	33 5.38	27.80	4.36	11 0 0.15	28 52 17.54
51	7	. .	. .	. .	. .	. .	48.	60.9	. .	. .	11 1 23.04	0.60	0.10	.	3	38.682	36 41.29	28.00	4.76	1 23.74	55 54.05
52	.	. .	. .	. .	. .	. .	56.	69.	. .	. .	2 31.08	0.60	0.09	.	3	33.74	39 31.19	28.15	5.08	2 31.77	58 44.42
53	.	. .	. .	. .	. .	. .	. .	21.	. .	. .	2 43.33	0.60	0.10	.	5	33.55	27 55.01	28.18	3.77	2 44.03	47 6.96
54	.	. .	. .	. .	. .	. .	. .	7.3	. .	. .	3 29.63	0.61	0.10	.	5	36.375	26 17.81	28.29	3.59	3 30.34	45 29.69
55	7	. .	. .	. .	. .	. .	. .	39.7	. .	. .	5 2.04	0.61	0.09	.	3	35.07	38 45.57	28.49	5.00	5 2.74	28 57 59.06
56	9	. .	. .	. .	. .	. .	31.	42.3	. .	. .	7 5.18	0.62	0.09	.	2	37.818	45 55.31	28.76	5.81	7 5.89	29 5 9.88
57	.	. .	. .	. .	. .	. .	. .	. .	. .	58.	7 48.95	0.62	0.10	.	3	42.789	34 18.89	28.86	4.49	7 49.67	28 53 32.24
58	.	. .	. .	. .	. .	. .	. .	. .	. .	37.2	8 28.29	0.63	0.10	.	4	48.641	25 1.60	28.95	3.44	8 29.02	44 13.99
59	9	. .	. .	. .	. .	. .	. .	67.	. .	. .	10 29.32	0.63	0.11	.	5	54.61	15 50.42	29.22	2.41	10 30.06	28 35 2.05
60	.	. .	. .	. .	51.	63.	. .	. .	. .	. .	13 50.77	0.65	0.08	.	1	34.58	53 37.80	29.64	6.71	13 51.50	29 12 54.15
61	8	. .	. .	. .	. .	69.	. .	. .	. .	. .	14 56.49	0.65	0.08	.	1	34.58	53 37.80	29.79	6.71	14 57.22	29 12 54.30
62	7	. .	. .	. .	. .	. .	. .	40.	. .	. .	15 2.33	0.65	0.10	.	5	35.19	26 58.91	29.80	3.66	15 3.08	28 46 12.37
63	.	. .	. .	. .	. .	20.5	34.	. .	. .	. .	16? 8.42	0.66	0.10	.	3	38.60	36 44.07	29.93	4.76	16 9.18	55 58.76
64	.	. .	. .	. .	. .	. .	. .	15.	. .	. .	18 37.32	0.66	0.11	.	5	45.529	21 2.86	30.26	3.00	18 38.09	28 40 16.12
65	10	. .	. .	. .	. .	. .	. .	15.8	. .	. .	19 38.10	0.67	0.09	.	1	45.814	47 10.95	30.39	5.96	19 38.86	29 6 27.30
66	7	. .	. .	. .	62.	74.5	86.8	. .	. .	. .	22 1.93	0.68	0.09	.	5	44.915	21 24.32	30.68	3.04	22 2.70	28 40 38.04
67	8	. .	. .	. .	. .	. .	. .	. .	. .	11.	11 25 2.12	0.70	0.10	.	5	42.31	22 52.84	31.05	3.21	11 25 2.92	42 7.10
68	9	. .	. .	. .	48.	59.7	12.3	. .	. .	. .	12 0 47.55	0.88	0.11	.	6	44.552	12 55.20	43.01	2.08	12 0 48.54	32 20.29
69	9	. .	. .	. .	43.8	. .	. .	21.2	. .	. .	2 43.64	0.90	0.10	.	4	43.975	27 43.23	43.15	3.75	2 44.64	47 10.13
70	9	. .	. .	. .	. .	. .	. .	38.8	. .	. .	3 1.12	0.90	0.11	.	6	42.02	14 21.98	43.17	2.25	3 2.13	33 47.40
71	9	. .	. .	. .	. .	37.	50.	62.2	. .	. .	5 24.66	0.91	0.10	.	5	38.08	25 19.44	43.34	3.47	5 25.67	44 46.25
72	8	. .	. .	3.2	. .	28.7	40.5	. .	. .	. .	8 15.77	0.93	0.10	.	4	43.52	27 58.89	43.55	3.77	8 16.80	47 26.21
73	8	29.	41.9	54.6	7.	19.8	31.3	44.	. .	. .	10 6.80	0.94	0.10	.	4	43.928	27 44.85	43.66	3.74	10 7.84	28 47 12.25
74	8	. .	. .	. .	. .	. .	. .	36.5	. .	. .	10 58.80	0.94	0.09	VII.	1	44.032	48 12.27	43.71	6.10	10 59.83	29 7 42.08
75	8	. .	. .	21.	33.4	46.4	. .	. .	. .	. .	13 33.60	0.96	0.10	.	3	43.356	34 0.49	43.88	4.46	13 34.66	28 53 28.83
76	9	. .	. .	32.8	45.9	58.9	. .	. .	. .	. .	17 45.86	0.98	0.10	.	3	37.715	37 14.57	44.12	4.83	17 46.94	56 43.52
77	.	. .	. .	. .	59.2	. .	. .	37.2	. .	. .	17 59.34	0.99	0.10	.	4	38.762	30 42.59	44.14	4.08	18 0.43	50 10.81
78	8	. .	. .	. .	. .	. .	59.7	72.4	. .	. .	19 34.64	1.00	0.10	.	3	36.882	37 43.22	44.23	4.89	19 35.74	57 12.34
79	.	. .	. .	. .	. .	. .	8.	. .	. .	. .	20 42.92	1.01	0.10	.	5	35.570	26 45.70	44.30	3.64	20 44.03	46 13.64
80	.	. .	. .	. .	. .	. .	. .	54.6	. .	. .	16.93	1.01	0.10	.	5	36.70	26 6.62	44.30	3.56	(21)18.04	28 45 34.48
81	.	. .	. .	. .	. .	. .	. .	67.	. .	. .	29.33	1.01	0.10	.	.	. . .	. . . .	. .	. .	(21)30.44	
82	7	. .	. .	. .	. .	. .	. .	. .	. .	50.	24 40.80	1.03	0.09	.	1	34.635	53 34.81	44.50	6.74	24 41.92	29 13 6.05
83	.	40.5	53.	5.6	17.2	42.	. .	. .	. .	. .	12 29 17.90	+ 1.06	+0.10	F. W.	4	40.150	29 54.84	−44.74	− 3.99	12 29 19.06	28 49 23.57

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847. h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1847. h. m.	° ′ ″				″	″	in.	°	°
Zone 91	Apr. 9, 13 45	. .	. .	. .	. .	. .	. .	29.982	. .	44.7
	13 51	. .	. .	. .	. .	. .	. .	29.982	52.	44.2

REMARKS.

(91) 42. Transit over T. 11 assumed as recorded over T. 12.
(91) 47. Transit over T. VII assumed as 65 instead of 63.
(91) 48. Transit over T. 11 assumed as recorded over T. 12.
(91) 49. Hor. thread assumed as 2 instead of 1.
(91) 53. Double.
(91) 67. Circle changed.

ZONE 91. APRIL 9. MAJ. $D_0 = -$ ° ′ ″—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
84	.	40.	53.	. .	. .	. .	. .	. .	. .	. .	12 17.88	+ 1.06	+0.10	.	5	36.382	26 17.75	−44.74	− 3.58	12 (28) 19.04	28 45 46.07
85	.	. .	. .	. .	25.2	. .	. .	. .	. .	. .	30 25.19	1.07	0.10	.	5	41.71	23 14.58	44.80	3.24	31 26.36	42 42.62
86	.	. .	. .	. .	. .	1.3	14.	. .	. .	. .	30 48.84	1.07	0.10	.	4	39.238	30 26.19	44.81	4.05	31 50.01	49 55.05
87	7	. .	. .	. .	. .	. .	45.	. .	. .	. .	32 19.91	1.08	0.10	.	4	43.568	27 57.24	44.88	3.78	32 21.09	47 25.90
88	6	. .	. .	. .	19.	31.	. .	56.8	. .	. .	34 18.86	1.09	0.10	VII.	3	47.43	31 39.98	44.98	4.18	34 20.05	51 9.14
89	8	. .	53.	5.2	18.	. .	. .	. .	. .	. .	36 17.92	1.10	0.10	IV.	5	45.10	21 17.95	45.05	3.02	36 19.12	40 46.02
90	8	. .	. .	5.	17.9	31.	43.8	56.	. .	. .	37 18.15	1.11	0.10	VII.	2	36.025	38 12.38	45.09	4.95	37 19.36	57 42.42
91	9	42.	55.2	67.2	. .	. .	. .	. .	. .	. .	39 19.89	1.13	0.10	.	5	35.57	26 45.84	45.18	3.64	39 21.12	46 14.66
92	7	. .	. .	. .	. .	. .	3.4	15.4	. .	. .	37.98	1.13	0.10	.	3	34.625	39 0.89	45.20	5.04	39 39.21	58 31.13
93	8	. .	. .	. .	. .	. .	56.	68.	. .	. .	44 30.62	1.16	0.10	.	6	31.12	20 37.33	45.35	2.94	44 31.88	40 5.62
94	7	. .	. .	. .	. .	. .	. .	24.8	. .	. .	45 47.10	1.18	0.10	.	7	39.165	10 10.09	45.39	1.77	45 48.38	29 37.25
95	8	. .	. .	. .	. .	. .	. .	43.	. .	. .	5.32	1.18	0.10	.	6	39.165	16 0.55	45.40	2.41	46 6.60	28 35 28.36
96	7	. .	. .	. .	. .	1.	13.	. .	. .	. .	50 48.12	1.21	0.10	.	1	37.84	51 45.64	45.54	6.52	50 49.43	29 11 17.70
97	.	. .	. .	. .	. .	. .	. .	. .	13.	. .	51 16.84	1.22	0.10	.	5	46.48	20 29.73	45.56	2.93	51 18.16	28 39 58.22
98	7	. .	. .	. .	. .	28.	40.8	53.	. .	. .	54 15.58	1.23	0.10	.	7	42.89	8 1.92	45.63	1.52	54 16.91	27 29.07
99	8	. .	. .	. .	. .	. .	38.7	50.	. .	. .	55 12.96	1.24	0.10	.	3	47.04	31 53.73	45.65	4.21	55 14.30	28 51 23.59
100	8	. .	. .	. .	. .	. .	. .	. .	. .	. .	56	. .	. .	.	2	41.61	43 44.97	45.65	5.59	(55)	29 3 16.21
101	8	. .	. .	. .	. .	. .	51.	63.2	. .	. .	58 25.75	1.26	0.10	.	5	48.92	19 6.51	45.73	2.78	58 27.11	28 38 35.02
102	8	. .	. .	. .	. .	. .	1.	13.	. .	. .	12 59 35.64	1.27	0.10	.	5	46.02	20 46.29	45.76	2.96	12 59 37.01	40 15.01
103	9	. .	. .	. .	49.7	14.5	. .	. .	. .	. .	13 5 49.51	1.32	0.10	.	2	49.30	39 20.40	45.88	5.09	13 5 50.93	58 51.37
104	8	. .	. .	. .	. .	44.	56.7	69.	. .	. .	7 31.49	1.33	0.10	VII.	4	52.23	22 58.89	45.90	3.21	7 32.92	42 28.00
105	8	. .	. .	. .	. .	. .	20.	31.4	. .	. .	11 54.35	1.37	0.10	.	5	48.092	19 35.00	45.95	2.82	12 55.82	39 3.77
106	6	. .	46.	57.8	. .	. .	. .	. .	. .	. .	24 10.69	1.46	0.10	III.	4	43.565	27 57.30	45.96	3.78	24 12.25	47 27.04
107	7	. .	. .	. .	. .	. .	. .	47.8	. .	. .	24 10.11	1.46	0.10	VII.	6	46.105	12 1.43	45.96	1.95	24 11.67	28 31 29.34
108	7	. .	. .	. .	. .	44.8	. .	. .	. .	. .	26 32.29	1.48	0.10	.	1	41.56	49 37.64	45.96	6.28	26 33.87	29 9 9.88
109	8	. .	. .	. .	. .	. .	40.4	52.8	. .	. .	27 15.25	1.49	0.10	VI.	6	37.272	17 5.53	45.96	2.51	27 16.84	28 36 34.00
110	7	18.	30.9	43.6	54.2	. .	. .	. .	. .	. .	29 55.96	1.51	0.10	.	2	39.575	44 55.00	45.95	5.74	29 57.57	29 4 26.69
111	6	. .	. .	. .	. .	28.1	41.	53.	. .	. .	30 15.62	1.51	0.10	VII.	4	43.382	28 3.20	45.95	3.78	30 17.23	28 47 32.93
112	6	. .	. .	30.	42.8	55.8	. .	. .	. .	. .	32 42.86	1.53	0.10	.	2	55.55	35 45.36	45.92	4.66	32 44.49	28 55 15.94
113	8	. .	. .	. .	. .	. .	4.	16.	. .	. .	33 38.58	1.54	0.10	.	2	46.24	41 5.67	45.91	5.27	33 40.22	29 0 36.85
114	8	. .	. .	. .	. .	. .	12.	17.	. .	. .	39.34	1.54	0.10	.	2	51.272	38 12.54	45.91	4.96	(35) 40.98	28 57 43.41
115	8	. .	. .	. .	26.	38.8	51.2	. .	. .	. .	38 26.12	1.58	0.10	.	4	35.152	35 38.83	45.84	4.63	38 27.80	55 9.30
116	8	. .	55.2	8.	20.8	31.4	. .	. .	. .	. .	40 20.53	1.59	0.10	.	4	31.11	35 5.87	45.81	4.59	40 22.22	28 54 36.27
117	7	. .	. .	13.4	26.	39.2	. .	. .	. .	. .	47 26.20	1.65	0.10	.	1	42.3	49 12.19	45.65	6.25	47 27.95	29 8 44.09
118	.	. .	. .	. .	35.8	. .	. .	. .	. .	. .	48 35.81	1.66	0.10	.	5	44.33	21 44.44	45.62	3.06	48 37.57	28 41 13.12
119	6	. .	. .	. .	. .	46.2	59.	11.4	. .	. .	49 33.75	1.67	0.10	.	2	46.42	40 59.48	45.59	5.27	49 35.52	29 0 30.34
120	.	. .	. .	58.4	70.	. .	. .	. .	. .	. .	13 52 10.44	+ 1.69	+0.10	.	2	54.65	36 16.32	−45.49	− 4.72	13 52 12.23	28 55 46.53

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847.	h. m.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.		CIRCLE.						Barom.	Attached Thermom.	External Thermom.
			A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1847.	h. m.	° ′ ″				″	″	in.	°	°

REMARKS.

(91) 85. Minutes assumed as 31 instead of 30.
(91) 86. Minutes assumed as 31 instead of 30.
(91) 90. Hor. thread assumed as 3 instead of 2.
(91) 95. Minutes assumed as 46.
(91) 103. Transit over T. VI assumed to have been recorded as over T. V.
(91) 105. Minutes assumed as 12 instead of 11.
(91) 115. Time of transit over T. VI assumed as $51^{\mathrm{s}}.2$ instead of $57.^{\mathrm{s}}2$; and micrometer as $30^{\mathrm{r}}.152$ instead of $35^{\mathrm{r}}.152$.

ZONE 92. APRIL 11. MAJ. $D_{\circ}=-$ ° ′ ″.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
1	8	35.8	48.	0.8	. .	25.8	. .	. .	. .	. .	9 33 13.22	– 0.44	–0.10	.	4	35.605	32 31.21	– 4.97	–10.27	9 33 12.68	28 14 16.45
2	.	. .	. .	. .	. .	. .	. .	54.6	. .	. .	34 17.15	0.44	0.10	VII.	4	42.95	28 18.18	5.18	9.81	34 16.61	10 3.17
3	8	. .	38.	. .	3.	. .	. .	. .	. .	. .	37 3.02	0.44	0.12	.	1	45.836	47 10.53	5.70	11.86	37 2.46	28 58.09
4	8	. .	. .	. .	. .	27.5	. .	53.	. .	. .	40 15.32	0.44	0.10	VI.	3	41.116	35 17.42	6.32	10.58	40 14.78	28 17 4.32
5	8	. .	. .	. .	35.2	. .	. .	. .	. .	. .	42 35.28	0.44	0.08	.	7	41.705	8 42.68	6.76	7.73	42 34.76	27 50 27.17
6	8	. .	. .	. .	. .	21.	32.8	. .	. .	. .	43 8.18	0.44	0.11	.	3	35.59	38 27.68	6.85	10.93	43 7.63	28 20 15.46
7.	7	. .	. .	. .	. .	. .	47.	. .	. .	. .	43 22.04	0.44	0.10	.	4	41.05	29 23.87	6.89	9.93	43 21.50	11 10.69
8	9	. .	. .	. .	26.	38.5	. .	. .	. .	. .	45 26.04	0.44	0.11	.	2	48.331	40 28.14	7.29	11.12	45 25.49	22 16.55
9	8	. .	17.8	29.9	43.	. .	. .	. .	. .	. .	47 42.68	0.44	0.10	.	5	37.815	25 28.60	7.72	9.52	47 42.14	7 15.84
10	8	. .	. .	52.	. .	. .	. .	. .	. .	. .	51 4.42	0.43	0.11	.	3	35.73	38 22.86	8.34	10.90	51 3.88	20 12.10
11	8	. .	. .	. .	37.6	50.	2.4	. .	. .	. .	51 37.52	0.43	0.10	.	4	38.275	30 59.35	8.45	10.11	51 36.99	28 12 47.91
12	8 & 10	. .	. .	53.8	6.4	18.5	. .	. .	. .	. .	50 6.29	0.43	0.09	.	6	39.65	15 43.85	8.17	8.50	50 5.77	27 57 30.52
13	8	17.	30.	41.8	54.9	. .	. .	. .	. .	. .	51 54.65	0.43	0.11	.	3	37.215	37 31.77	8.50	10.82	51 54.11	28 19 21.09
14	7	. .	. .	67.	80.	. .	. .	. .	. .	. .	59 19.71	0.43	0.11	.	2	45.068	41 46.01	9.86	11.28	59 19.17	23 37.15
15	8	. .	. .	. .	. .	. .	. .	31.6	. .	. .	9 59 54.16	0.43	0.11	.	2	43.67	42 34.10	9.96	11.36	9 59 53.62	24 25.42
16	7	. .	. .	. .	. .	. .	. .	57.6	. .	. .	10 0 20.14	0.43	0.10	.	4	46.19	26 27.02	10.04	9.62	10 0 19.61	8 16.68
17	6	. .	51.	4.	15.9	. .	. .	. .	. .	. .	11 16.08	0.41	0.10	.	3	45.445	32 48.61	11.95	10.31	11 15.57	14 40.87
18	8	. .	. .	. .	. .	27.	39.8	52.	. .	. .	12 14.65	0.41	0.10	VI.	4	38.804	30 41.00	12.12	10.07	12 14.14	12 33.19
19	8.9	. .	. .	. .	. .	. .	19.5	. .	. .	. .	12 54.53	0.41	0.10	VII.	4	38.57	30 48.88	12.23	10.09	12 54.02	12 41.20
20	8	3.5	16.2	28.3	41.	. .	. .	. .	. .	. .	16 40.98	0.40	0.11	.	2	46.382	41 0.78	12.87	11.20	16 40.47	22 54.85
21	6	. .	5.	17.2	29.8	42.4	54.5	. .	. .	. .	18 29.77	0.40	0.11	.	2	40.82	44 12.15	13.17	11.55	18 29.26	26 6.87
22	9	. .	. .	. .	. .	. .	47.	. .	. .	. .	22 22.06	0.39	0.10	.	5	35.105	27 1.70	13.80	9.68	22 21.57	8 55.18
23	10	. .	. .	. .	11.5	. .	. .	. .	. .	. .	25 11.52	0.39	0.12	.	2	33.122	48 37.01	14.27	12.02	25 11.01	30 33.30
24	9	. .	. .	. .	. .	. .	59.2	71.3	. .	. .	25 34.03	0.39	0.10	V.	4	31.648	34 47.32	14.33	10.53	25 33.54	16 42.18
25	8	16.4	30.	42.	54.8	. .	. .	. .	. .	. .	28 54.53	0.38	0.11	.	3	33.881	39 26.48	14.86	11.02	28 54.04	28 21 22.36
26	6	. .	. .	. .	. .	47.8	0.2	12.1	. .	. .	29 35.12	0.38	0.09	.	6	35.80	17 56.31	14.98	8.71	29 34.65	27 59 50.00
27	8	. .	. .	. .	. .	. .	11.	22.8	. .	. .	30 45.68	0.38	0.11	.	3	37.150	37 34.01	15.15	10.83	30 45.19	28 19 29.99
28	8	. .	. .	. .	28.5	40.5	52.3	6.	. .	. .	36 28.10	0.36	0.10	.	3	42.002	34 47.07	16.05	10.53	36 27.64	16 43.65
29	8	. .	. .	. .	34.2	46.7	59.	. .	. .	. .	40 34.15	0.35	0.10	.	4	39.518	30 16.59	16.68	10.03	40 33.70	12 13.30
30	8	. .	. .	41.	53.6	. .	. .	. .	. .	. .	41 53.50	0.35	0.10	.	3	38.60	36 44.11	16.88	10.74	41 53.05	18 41.73
31	9	. .	. .	. .	. .	. .	35.	47.9	. .	. .	42 10.22	0.35	0.11	.	3	35.25	38 39.24	16.92	10.94	42 9.76	20 37.10
32	10	. .	. .	51.4	. .	. .	. .	. .	. .	. .	49 3.80	0.33	0.11	.	2	39.18	45 8.55	17.92	11.64	49 3.36	27 8.11
33	8	. .	. .	. .	15.3	27.4	. .	. .	. .	. .	50 15.14	0.32	0.11	.	2	36.5	46 40.79	18.11	11.81	50 14.71	28 40.71
34	7	. .	37.	49.4	1.2	. .	. .	. .	. .	. .	1.64	0.32	0.10	.	.	. .	. . .	. .	. .	51 1.22	
35	9	. .	. .	. .	. .	. .	. .	9.5	. .	. .	51 32.06	0.32	0.11	.	3	36.18	38 7.06	18.28	10.88	51 31.63	28 20 6.22
36	6	48.5	1.3	12.9	25.5	37.8	. .	. .	. .	. .	10 59 25.66	0.29	0.08	.	7	44.39	13 0.77	19.39	8.18	10 59 25.29	27 54 58.34
37	6	. .	19.5	31.8	44.2	56.3	9.	. .	. .	. .	11 15 44.16	0.24	0.09	.	5	43.142	22 25.31	21.48	9.19	11 15 43.83	28 4 25.98
38	7	. .	53.	4.5	17.8	30.	. .	. .	. .	. .	17 17.57	0.23	0.11	.	3	33.752	39 30.91	21.66	11.05	17 17.23	21 33.62
39	8	. .	. .	55.2	. .	. .	. .	. .	. .	. .	20 7.67	0.22	0.10	.	5	36.242	26 22.71	22.00	9.61	20 7.35	8 24.32
40.	8	. .	34.	46.7	59.	. .	. .	. .	. .	. .	21 59.03	0.21	0.11	.	3	37.215	37 31.77	22.22	10.83	21 58.71	28 19 34.82
41	8	. .	13.8	26.2	38.9	. .	. .	. .	. .	. .	23 38.75	0.21	0.09	.	6	38.815	16 12.58	22.41	8.52	23 38.45	27 58 13.51
42	6	. .	. .	39.5	50.9	3.	. .	. .	. .	. .	24 50.96	0.20	0.11	.	2	40.380	44 27.29	22.54	11.59	24 50.65	28 26 31.42
43	7	. .	. .	. .	. .	. .	31.2	. .	. .	. .	25 6.18	0.20	0.10	.	3	38.442	36 49.55	22.57	10.75	25 5.88	18 52.87
44	10	. .	. .	. .	. .	. .	35.	. .	. .	. .	29 10.04	0.18	0.10	.	4	38.99	30 34.61	23.02	30.06	29 9.76	12 57.69
45	8	. .	15.4	. .	40.5	. .	. .	. .	. .	. .	32 40.48	0.17	0.11	.	1	43.69	48 24.36	23.40	12.02	32 40.20	30 29.78
46	6	. .	. .	. .	43.5	55.	. .	15.	. .	. .	33 42.87	0.16	0.11	.	2	47.564	40 20.12	23.50	11.14	33 42.60	22 24.76
47	9	. .	. .	5.	17.6	. .	. .	. .	. .	. .	39 17.50	0.14	0.11	.	1	42.30	49 12.19	24.08	12.11	39 17.25	31 18.38
48	9	. .	. .	. .	. .	6.7	. .	. .	. .	. .	51 54.27	0.08	0.10	.	3	32.082	40 28.34	25.27	11.15	51 54.09	22 34.76
49	9	. .	5.8	18.	31.	. .	. .	. .	. .	. .	11 55 30.74	– 0.06	–0.10	.	2	42.019	43 30.91	–25.57	–11.49	11 55 30.58	28 25 37.97

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847. h.	s.	s.	s.	s.	s.	° ′ ″	r.
Apr. 11, 15	– 6.40	*g* 0.025	. .	– 0.238	– 0.341	0 0 3.26	40.160

INSTRUMENT READINGS.

	Date.	CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1847. h. m.	° ′ ″				″	″	in.	°	°
Zone 92	Apr. 11, 9 32	292 57 23.5	20.9	25.4	28.5	24.61	24.58	30.058	57.	48.8
	10 36	. .	. .	. .	. .	. .	. .	.058	. .	46.5
	11 5	. .	. .	. .	. .	. .	. .	.060	55.5	45.8
	11 35	. .	. .	. .	. .	. .	. .	.054	55.	44.5
	12 35	. .	. .	. .	. .	. .	. .	.056	53.5	43.2
		. .	. .	. .	. .	. .	. .	.056	53.	
	13 4	. .	. .	. .	. .	. .	. .	.042	52.	42.8
	14 7	. .	. .	. .	. .	. .	. .	30.032	51.	40.9

REMARKS.

(92) 8. Micrometer reading assumed as $47^r.331$ instead of $48^r.331$.
(92) 12. Double.
(92) 36. Hor. thread assumed as 6 instead of 7.
(92) 42. Double; observed first.
(92) 46. Time of transit over T. VII assumed 20^s instead of 15^s.

ZONE 92. APRIL 11. M. $D_0 = -$ ° ′ ″—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
50	7	. .	. .	. .	. .	37.2	. .	. .	. .	. .	11 57 12.41	− 0.04	−0.09	.	7	43.90	7 27.16	−25.73	− 7.57	11 57 12.28	27 49 30.46
51	7	. .	. .	. .	. .	55.4	. .	. .	. .	. .	30.61	0.04	0.09	.	7	40.615	9 54.62	25.74	7.83	57 30.48	27 51 58.19
52	8	. .	. .	. .	. .	24.	36.8	. .	. .	. .	59 11.68	0.03	0.10	.	3	40.95	35 23.26	25.89	10.59	59 11.55	28 17 29.74
53	8	. .	. .	. .	. .	7.2	19.8	32.	. .	. .	11 59 54.72	0.03	0.10	.	4	37.162	31 37.65	25.94	10.18	11 59 54.59	13 43.77
54	8	. .	. .	. .	. .	. .	. .	26.	. .	. .	12 0 48.49	0.03	0.11	.	1	40.50	50 14.12	26.01	12.23	12 0 48.35	32 22.36
55	8	. .	. .	. .	3.	. .	. .	. .	. .	. .	4 3.04	0.01	−0.11	.	1	38.005	51 39.96	26.26	12.38	4 2.92	33 48.60
56	7	. .	. .	. .	. .	33.4	45.	58.	. .	. .	7 20.50	0.19	+0.10	.	2	44.652	42 0.31	26.51	11.32	7 20.41	24 8.14
57	8	. .	. .	37.	. .	. .	. .	. .	. .	. .	16 49.47	0.14	0.10	.	5	39.26	24 38.88	27.15	9.42	16 49.43	28 6 45.45
58	6	. .	. .	. .	. .	. .	. .	12.5	. .	. .	19 35.02	0.12	0.11	.	7	37.63	11 2.89	27.32	7.95	19 35.01	27 53 8.16
59	7	. .	. .	. .	. .	32.	44.5	. .	. .	. .	21 19.49	0.11	0.09	.	2	34.695	47 42.90	27.42	11.95	21 19.47	28 29 52.27
60	7	. .	. .	. .	56.	68.	. .	. .	. .	. .	21 55.80	0.11	0.09	.	2	36.265	46 48.87	27.46	11.85	21 55.78	28 58.18
61	8	. .	48.5	60.2	12.7	25.8	. .	. .	. .	. .	25 13.07	0.09	0.10	.	4	41.918	28 54.01	27.62	9.88	25 13.08	11 1.51
62	8	. .	. .	. .	. .	. .	16.7	. .	. .	. .	25 51.67	0.08	0.10	.	2	47.648	40 17.24	27.67	11.13	25 51.69	28 22 26.04
63	9	. .	. .	. .	. .	. .	. .	46.5	. .	. .	27 9.02	0.08	0.10	VII.	6	41.005	14 56.91	27.73	8.37	27 9.04	27 57 3.01
64	.	. .	. .	. .	. .	. .	. .	9.	. .	. .	30 31.55	− 0.06	0.10	.	.	. .	. . .	. .	. .	30 31.59	
65	8	. .	. .	45.	. .	. .	. .	33.5	. .	. .	37 56.76	0.00	0.10	.	6	41.790	14 30.22	28.23	8.32	37 56.86	27 56 36.77
66	8	. .	. .	. .	50.	63.	16.7	29.	. .	. .	38 50.96	0.00	0.10	.	4	43.945	27 44.27	28.27	9.75	38 51.06	28 9 52.29
67	8	. .	. .	. .	. .	33.5	. .	. .	. .	. .	40 21.13	+ 0.01	0.10	.	6	43.138	13 43.85	28.32	8.23	40 21.24	27 55 50.40
68	8	. .	. .	. .	. .	. .	33.	45.4	. .	. .	41 8.03	0.01	0.10	.	5	47.348	20 0.61	28.36	8.92	41 8.14	28 2 7.89
69	8	. .	38.	. .	3.5	. .	. .	. .	. .	. .	43 3.23	0.02	0.10	.	2	49.115	39 26.77	28.43	11.04	43 3.35	21 36.24
70	8	. .	. .	. .	17.4	. .	. .	. .	. .	. .	17.37	0.02	0.10	VII.	4	43.902	27 45.42	28.44	9.75	43 17.49	28 9 53.61
71	8	. .	. .	. .	. .	. .	. .	. .	. .	56.	43 0.76	0.03	0.10	.	6	44.020	12 38.00	28.45	8.13	44 0.89	27 54 44.59
72	.	. .	. .	. .	. .	49.	. .	. .	. .	. .	36.57	0.03	0.10	.	.	. .	. . .	. .	. .	44 36.70	
73	7	. .	. .	. .	. .	. .	. .	26.	. .	. .	44 48.52	0.04	0.10	.	1	45.172	47 33.37	28.47	11.94	45 48.66	28 29 43.83
74	9	. .	. .	. .	. .	. .	35.	. .	. .	. .	47 9.92	0.05	0.10	.	1	45.362	47 26.69	28.56	11.93	47 10.07	29 37.18
75	7	37.	50.	2.6	14.9	27.5	. .	. .	. .	. .	49 14.87	0.06	0.10	.	5	45.109	21 17.64	28.63	9.05	49 15.03	3 25.32
76	11	. .	. .	. .	. .	. .	. .	12.5	. .	. .	49 35.04	0.07	0.10	.	5	39.30	24 37.19	28.64	9.42	49 35.21	6 45.25
77	7	52.	5.	17.8	28.1	41.	. .	. .	. .	. .	55 29.28	0.10	0.10	.	2	39.055	45 12.89	28.79	11.67	55 29.48	27 23.35
78	9	. .	. .	. .	. .	44.3	56.2	. .	. .	. .	12 55 31.52	0.10	0.10	.	3	32.765	40 4.84	28.79	11.11	12 55 31.72	22 14.74
79	8	. .	. .	. .	58.	. .	23.4	35.2	. .	. .	13 0 58.06	0.14	0.10	.	4	46.010	26 33.22	28.91	9.62	13 0 58.30	8 41.75
80	8	. .	. .	. .	63.	76.	. .	. .	. .	. .	3 3.32	0.16	0.10	.	6	32.38	19 53.98	28.95	8.90	3 3.58	2 1.83
81	8	. .	. .	. .	. .	22.	. .	45.9	. .	. .	4 9.01	0.17	0.10	.	4	39.81	30 6.54	28.96	10.01	4 9.28	12 15.51
82	7	. .	. .	. .	. .	55.	. .	. .	. .	. .	42.57	0.17	0.10	.	3	40.08	35 53.20	28.97	10.65	(4) 42.84	18 2.82
83	9	. .	. .	. .	. .	21.5	. .	. .	. .	. .	6 9.07	0.18	0.10	.	2	38.112	45 45.29	28.99	11.74	6 9.35	27 56.02
84	9	. .	. .	16.	28.1	41.	. .	. .	. .	. .	7 28.36	0.19	0.10	.	2	45.944	41 15.86	29.00	11.25	7 28.65	23 26.11
85	10	. .	. .	. .	15.7	. .	. .	. .	. .	. .	9 15.66	0.20	0.10	.	4	38.009	31 8.50	29.03	10.12	9 15.96	28 13 17.65
86	9	. .	. .	. .	. .	41.	. .	. .	. .	. .	10 28.65	0.21	0.10	.	7	38.009	10 49.81	29.04	7.91	10 28.96	27 52 56.76
87	7.8	. .	. .	. .	. .	. .	. .	20.	. .	. .	10 42.53	0.21	0.10	.	6	36.628	17 27.83	29.05	8.64	10 42.84	27 59 35.52
88	9.10	. .	. .	. .	. .	43.	56.	. .	. .	. .	13 30.81	0.23	0.10	.	4	44.518	27 24.52	29.08	9.72	13 31.14	28 9 33.32
89	9	. .	. .	36.	47.6	59.5	. .	. .	. .	. .	16 47.78	0.25	0.10	.	7	40.451	9 25.84	29.10	7.75	16 48.13	27 51 32.69
90	8	12.8	. .	37.	50.	1.8	. .	. .	. .	. .	18 49.78	0.27	0.10	.	3	42.026	34 46.25	29.11	10.53	18 50.15	28 16 55.89
91	10	. .	. .	. .	71.	. .	. .	. .	. .	. .	21 10.98	0.29	0.10	.	3	38.178	36 58.64	29.10	10.77	21 11.37	19 8.51
92	8	. .	. .	. .	. .	. .	. .	9.	. .	. .	21 31.55	0.29	0.10	.	4	43.775	27 50.11	29.10	9.76	21 31.94	9 58.97
93	8	. .	. .	. .	. .	. .	. .	. .	. .	. .	. . .	. .	. .	.	2	43.874	42 27.07	29.10	11.38	. . .	28 24 37.55
94	7	. .	. .	2.8	14.7	. .	. .	. .	. .	. .	24 15.04	0.31	0.10	.	6	44.538	12 55.68	29.10	8.15	24 15.45	27 55 2.93
95	8	. .	. .	. .	. .	. .	. .	28.8	. .	. .	24 51.35	0.32	0.10	.	4	40.555	29 47.79	29.10	9.97	24 51.77	28 11 56.86
96	8	29.5	40.2	54.5	6.5	. .	. .	. .	. .	. .	27 6.40	0.34	0.10	.	2	46.308	41 3.34	29.09	11.21	27 6.84	23 13.64
97	9	. .	. .	. .	. .	34.6	47.	. .	. .	. .	27 22.08	0.34	0.10	.	2	50.765	38 29.95	29.09	10.95	27 22.52	28 20 39.99
98	7	. .	. .	. .	. .	. .	.	. .	. .	47.	13 28 38.75	+ 0.35	+0.10	.	6	43.752	13 22.71	−29.09	− 8.19	13 28 39.20	27 55 29.99

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847.	h.	s.	s.	s.	s.	s.	° ′ ″	s.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1847. h. m.	° ′ ″				″	″	in.	°	°

REMARKS.

(92) 50. Transit over T. VI assumed as recorded over T. V.

(92) 51. Transit over T. VI assumed as recorded over T. V, and micrometer reading assumed as 39ʳ.615 instead of 40ʳ.615.

(92) 71. Micrometer reading assumed as 45ʳ.020 instead of 44ʳ.020, to agree with Arg. Z. 292, 86; and transit over T. 11 assumed as recorded over T. 12.

(92) 73. Minutes assumed as 45 instead of 44.

Zone 92. April 11. Maj. D_0=− ° ′ ″—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
99	8	. .	. .	. .	. .	. .	. .	53.	. .	. .	13 32 15.55	+ 0.38	+0.10	.	4	37.695	31 19.31	−29.07	−10.15	13 32 16.03	28 13 28.53
100	8	. .	. .	. .	. .	. .	55.	68.	. .	. .	34 30.30	0.40	0.10	.	4	41.016	29 25.05	29.03	9.94	34 30.80	11 34.02
101	8	. .	. .	. .	24.	38.2	. .	. .	. .	. .	36 24.86	0.41	0.10	.	4	43.182	28 10.52	29.01	9.80	36 25.37	10 19.33
102	9	. .	. .	. .	. .	. .	. .	28.	. .	. .	36 50.56	0.41	0.10	.	3	42.246	33 29.55	29.01	10.39	36 51.07	15 38.95
103	10	. .	. .	. .	. .	. .	. .	49.5	. .	. .	39 12.05	0.43	0.10	.	4	38.347	30 56.55	28.97	10.10	39 12.58	28 13 5.62
104	9	. .	55.	. .	. .	. .	. .	. .	. .	. .	41 19.77	0.45	0.10	.	7	37.112	11 20.58	28.95	7.95	41 20.32	27 53 27.48
105	6	. .	. .	. .	. .	49.6	2.5	14.5	. .	. .	41 37.24	0.45	0.10	VII.	3	37.005	37 38.68	28.94	10.84	41 37.79	28 19 48.46
106	8	. .	. .	. .	. .	. .	. .	35.9	. .	. .	44 58.46	0.47	0.10	.	4	32.91	34 3.94	28.86	10.44	44 59.03	16 13.24
107	8	. .	. .	. .	. .	. .	. .	. .	. .	41.	45 32.63	0.48	0.10	.	5	50.60	18 8.71	28.85	8.71	45 33.21	0 16.27
108	8	. .	. .	. .	. .	31.	. .	. .	. .	. .	18.57	0.49	0.10	.	4	41.25	29 16.99	28.83	9.92	46 19.16	28 11 25.74
109	6	. .	. .	32.5	45.	57.8	9.1	. .	. .	. .	48 44.95	0.50	0.10	.	7	36.028	11 58.01	28.78	8.04	48 45.55	27 54 4.83
110	8	. .	. .	. .	. .	. .	. .	. .	. .	12.	49 16.02	0.50	0.10	.	3	37.238	37 30.99	28.77	10.83	49 16.62	28 19 40.59
111	9	. .	55.4	. .	20.4	32.5	. .	. .	. .	. .	52 20.28	0.53	0.10	.	3	32.535	40 12.79	28.69	11.13	52 20.91	22 22.61
112	8	. .	. .	. .	. .	3.	15.5	27.6	. .	. .	55 50.37	0.56	0.10	.	2	35.81	47 4.53	28.58	11.90	55 51.03	29 15.01
113	9	. .	. .	. .	. .	. .	. .	52.	. .	. .	14.56	0.57	0.10	.	2	43.955	42 23.97	28.50	11.37	(56) 15.23	24 33.84
114	9	. .	. .	. .	. .	. .	. .	59.5	. .	. .	58 22.02	0.58	0.10	.	1	47.718	46 5.46	28.50	11.79	58 22.70	28 15.75
115	8	. .	. .	. .	. .	. .	. .	43.	. .	. .	13 59 5.56	0.59	0.10	.	3	38.92	36 33.10	28.47	10.73	13 59 6.25	18 42.30
116	9	. .	. .	. .	. .	. .	. .	27.	. .	. .	14 1 49.55	0.61	0.10	.	2	42.61	43 10.25	28.38	11.47	14 1 50.26	25 20.10
117	.	. .	. .	. .	. .	. .	. .	42.	. .	. .	3 4.55	0.62	0.10								
118	.	. .	. .	. .	. .	. .	. .	34.5	. .	. .	2 57.04	0.62	0.10	.	5	42.21	22 57.06	28.33	9.24	3 57.76	5 4.63
119	.	. .	. .	. .	. .	. .	49.	. .	. .	. .	24.04	0.63	0.10	.	4	41.82	28 57.23	28.30	9.89	2 24.77	11 5.42
120	9	. .	25.8	. .	. .	2.4	. .	. .	. .	. .	5 50.42	0.64	0.11	.	1	40.695	50 7.41	28.20	12.24	51.17	28 32 17.85
121	8	. .	. .	. .	. .	16.	. .	. .	. .	. .	14 7 3.65	+ 0.65	+0.09	.	7	41.828	8 38.45	−28.14	− 7.66	14 5 4.39	27 50 44.25

Zone 93. April 13. Maj. D_0=− ° ′ ″.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	7	. .	. .	. .	. .	. .	. .	54.	. .	. .	9 46 16.94	− 1.43	−0.98	VII.	7	36.872	11 28.66	− 3.59	− 2.52	9 46 14.53	26 37 54.77
2	.	. .	. .	. .	. .	. .	. .	59.5	. .	. .	47 23.41	1.43	1.02	.	1	39.082	51 2.61	3.76	6.86	47 19.96	17 33.23
3	9	. .	. .	. .	10.5	. .	. .	. .	. .	. .	49 10.45	1.43	1.00	.	4	43.875	27 46.67	4.07	3.70	49 8.02	54 14.44
4	7	. .	. .	. .	. .	21.5	34.	. .	. .	. .	50 9.33	1.43	0.99	.	5	48.422	19 23.65	4.22	3.58	50 6.91	45 1.45
5	9	. .	. .	. .	. .	. .	. .	30.	. .	. .	50 52.94	1.43	0.98	VII.	6	46.190	11 58.53	4.34	2.58	50 50.53	38 25.45
6	9	. .	. .	. .	. .	46.5	. .	10.2	. .	. .	56 33.70	1.43	0.98	V.	6	45.968	12 6.45	5.24	2.59	56 31.29	26 38 34.28
7	10	. .	. .	. .	. .	49.	. .	. .	. .	. .	9 58 36.71	1.42	1.00	.	.	. . .	. . . .	. .	. .	9 58 34.29	
8	8	. .	. .	18.	30.3	42.	. .	. .	. .	. .	10 2 30.09	1.42	1.01	.	2	42.20	43 24.68	6.17	5.82	10 2 27.66	27 9 56.67
9	8	. .	. .	39.6	52.	4.5	. .	. .	. .	. .	6 52.02	1.42	1.02	.	1	46.563	46 45.51	6.86	6.27	6 49.58	27 13 18.64
10	9	. .	. .	. .	61.	. .	24.5	. .	. .	. .	8 0.54	1.42	0.97	.	7	43.992	7 24.00	7.03	1.97	7 58.15	26 33 53.00
11	8	. .	. .	. .	. .	6.9	19.5	. .	. .	. .	8 54.79	1.42	0.99	.	6	39.882	15 35.87	7.17	3.07	8 52.38	42 6.11
12	8	. .	. .	. .	. .	. .	. .	60.	. .	. .	9 22.98	1.42	1.00	.	4	37.892	31 12.53	7.24	4.16	9 20.56	57 43.93
13	8	. .	. .	48.	59.8	12.5	. .	. .	. .	. .	10 0.13	1.42	0.99	.	5	44.302	21 45.41	7.34	3.89	10 57.72	48 16.64
14	8	36.	48.5	60.5	11.5	21.5	. .	. .	. .	. .	13 11.93	1.41	0.99	.	5	45.100	21 17.95	7.83	3.82	13 9.53	26 47 49.60
15	8	. .	. .	45.	58.	10.3	. .	. .	. .	. .	15 57.76	1.41	1.02	.	1	42.70	48 58.42	8.26	6.58	15 55.33	27 15 33.26
16	8	. .	. .	5.	18.	. .	. .	. .	. .	. .	17 17.70	1.41	0.98	.	6	43.30	13 38.27	8.47	2.81	17 15.31	26 40 9.55
17	8	. .	. .	. .	4.	15.9	28.	41.	. .	. .	18 0.74	1.41	1.00	.	5	38.31	25 11.56	8.57	4.36	18 1.33	51 44.49
18	8	. .	. .	28.5	40.6	53.	. .	. .	. .	. .	21 40.77	1.40	0.98	.	7	41.265	8 57.82	9.12	2.18	21 38.39	35 29.12
19	8	. .	. .	63.	15.4	28.2	40.5	. .	. .	. .	23 15.65	1.40	0.99	.	5	44.732	21 30.61	9.35	3.86	23 13.26	48 3.82
20	9	. .	. .	. .	. .	47.	58.7	. .	. .	. .	24 21.98	1.40	1.00	.	4	46.185	26 27.17	9.55	4.52	24 19.58	26 53 1.24
21	9	. .	. .	. .	. .	. .	73.	. .	. .	. .	59 48.23	1.32	1.01	.	2	41.035	44 4.63	14.22	5.94	59 45.90	27 10 44.79
22	8	. .	. .	. .	51.	. .	. .	. .	. .	. .	10 50.97	− 1.32	−1.00	.	3	43.028	28 15.82	−14.22	− 3.77	10 (59) 48.65	26 54 53.81

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847. h. Apr. 13, 6	s. − 8.17	s. *g* 0.026	s. . .	s. − 0.238	s. − 0.341	° ′ ″ 0 0 0.56	r. 40.175

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1847 h. m.	° ′ ″				″	″	in.	°	°
Zone 93	Apr. 13, 9 46	294 12 29.7	29.0	32.4	35.2	31.81	31.58			
	10 20	. .	. .	. .	. .	. .	. .	30.142	54.5	50.
	?	. .	. .	. .	. .	. .	. .	.148	54.5	52.8
	11 ?	33.5	35.5	36.2	37.2	35.86	35.60	30.154	53.5	49.8

REMARKS.

(92) 102. Micrometer reading assumed as 44r.246 instead of 42r.246.
(92) 110. Transit over T. 11 assumed as recorded over T. 12.
(92) 120. Double.
(93) 13. Minutes of transit assumed as 11 instead of 10.
(93) 20. Transits over T.'s VI and VII assumed as recorded over T.'s V and VI.

ZONE 93. APRIL 13. MAJ. $D_0=-$ ° ′ ″—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
23	6	. .	. .	18.5	30.6	43.2	. .	. .	. .	. .	11 1 30.76	− 1.32	−1.01	.	1	41.890	49 26.29	−14.42	− 6.67	11 1 28.43	27 16 7.38
24	8	. .	. .	. .	37.	49.	1.7	. .	. .	. .	2 36.92	1.32	1.00	.	5	36.93	25 59.04	14.55	4.46	2 34.60	26 52 38.05
25	7	. .	. .	. .	. .	. .	. .	29.5	. .	. .	11 2 52.46	− 1.32	−0.99	.	6	37.109	16 36.85	−14.58	− 3.20	11 2 50.15	26 43 14.63
ZONE 94. APRIL 15. MAJ. $D_0=-$ ° ′ ″.																					
1	8	. .	. .	. .	27.5	39.8	. .	. .	. .	. .	15 18 27.40	− 1.51	−0.09	.	2	47.020	40 38.84	−33.26	−10.21	15 18 25.80	29 0 2.31
2	8	. .	. .	. .	. .	46.8	59.7	12.6	. .	. .	19 34.57	1.50	0.09	.	2	42.53	43 13.32	33.14	10.53	19 32.98	2 36.99
3	8	. .	. .	. .	. .	53.	. .	18.	. .	. .	21 40.40	1.48	0.09	.	2	40.30	44 30.05	32.92	10.69	21 38.83	3 53.66
4	8	. .	. .	. .	. .	. .	. .	30.	. .	. .	22 52.26	1.47	0.09	.	1	41.798	49 29.46	32.78	11.31	22 50.70	29 8 53.55
5	8	. .	58.	. .	23.4	. .	. .	. .	. .	. .	32 23.20	1.39	0.10	.	4	41.058	29 23.60	31.60	8.83	32 21.71	28 48 44.03
6	8	. .	63.	. .	28.	40.	. .	. .	. .	. .	27.84	1.39	0.10	.	5	42.91	22 33.30	31.60	8.00	32 26.35	41 52.90
7	10	. .	. .	. .	. .	. .	. .	59.9	. .	. .	34 22.24	1.37	0.10	.	3	40.92	35 23.96	31.35	9.57	34 20.77	54 44.88
8	10	. .	. .	. .	. .	52.	. .	. .	. .	. .	36 39.50	1.36	0.10	.	5	38.31	25 11.52	31.07	8.31	36 38.04	44 30.90
9	10	. .	. .	. .	. .	. .	13.	. .	. .	. .	47.93	1.36	0.10	.	5	41.715	23 14.27	31.00	8.08	46.47	42 33.35
10	3.4	61.	. .	27.	38.7	50.	. .	. .	. .	. .	47 38.60	1.26	0.10	.	5	35.165	26 59.78	29.59	8.53	47 37.24	46 17.90
11	9	. .	. .	33.8	46.	. .	. .	. .	. .	. .	52 46.22	1.22	0.11	.	7	32.100	14 13.16	28.87	6.97	52 44.89	33 29.00
12	6	. .	. .	. .	23.8	. .	. .	. .	. .	. .	53 23.79	1.22	0.11	.	5	41.32	23 28.00	28.78	8.11	53 22.46	42 44.89
13	7	. .	. .	. .	. .	27.6	41.	53.	. .	. .	55 15.49	1.20	0.12	.	7	36.694	11 35.09	28.51	6.66	55 14.17	28 30 50.26
14	9	40.9	53.7	. .	19.4	. .	. .	. .	. .	. .	58 18.98	1.18	0.09	.	2	40.31	44 29.70	28.06	10.70	58 17.71	29 3 48.46
15	8	. .	. .	. .	. .	25.8	38.	51.	. .	. .	59 13.24	1.17	0.12	.	7	41.17	14 45.42	27.93	7.04	59 11.95	28 34 0.39
16	8	. .	. .	. .	. .	. .	. .	. .	. .	52.	15 59 42.92	1.16	0.10	.	3	41.96	34 47.41	27.85	9.49	15 59 41.66	54 4.75
17	8	. .	. .	. .	. .	. .	30.	42.7	. .	. .	16 1 4.94	1.15	0.10	.	3	43.272	33 28.94	27.65	9.32	16 1 3.69	28 52 45.91
18	5.6	. .	. .	. .	. .	57.	9.7	20.0	. .	. .	44.50	1.15	0.09	.	2	45.275	41 38.88	27.57	10.34	1 43.26	29 0 56.79
19	8	. .	. .	. .	. .	33.5	45.	. .	. .	. .	4 20.48	1.13	0.11	.	5	45.928	20 49.46	27.14	7.78	4 19.24	28 40 4.38
20	8.9	. .	. .	17.	. .	42.	. .	. .	. .	. .	6 29.55	1.11	0.11	.	5	49.73	18 38.65	26.83	7.52	6 28.33	28 37 53.00
21	7	. .	. .	0.4	12.5	25.	. .	. .	. .	. .	11 12.62	1.07	0.08	.	2	31.35	49 37.98	26.10	11.34	11 11.47	29 8 55.42
22	8	39.2	52.	4.8	17.	29.3	. .	. .	. .	. .	16 17.04	1.03	0.09	.	2	41.575	43 46.18	25.29	10.61	16 15.92	3 2.08
23	9	. .	. .	. .	. .	. .	. .	9.4	. .	. .	16 56.89	1.03	0.08	.	1	44.56	47 54.10	25.25	11.13	17 55.78	7 10.48
24	8	. .	. .	. .	. .	74.	. .	. .	. .	. .	1.49	1.01	0.09	.	2	44.635	42 0.90	25.02	10.38	18 0.39	29 1 16.30
25	8	. .	. .	56.	. .	. .	. .	. .	. .	. .	8.50	1.01	0.09	.	2	52.622	37 26.10	25.01	9.82	18 7.40	28 56 40.93
26	7	. .	. .	. .	. .	30.8	. .	. .	. .	. .	21 18.29	0.99	0.08	.	1	41.358	49 44.60	24.49	11.35	21 17.22	29 9 0.44
27	9	. .	. .	49.7	3.	15.	. .	. .	. .	. .	23 2.57	0.97	0.11	.	5	40.93	23 41.42	24.22	8.13	23 1.49	28 42 53.77
28	10	. .	. .	. .	. .	. .	. .	28.	. .	. .	24 50.34	0.96	0.09	.	3	37.82	37 10.62	23.90	9.78	24 49.29	56 24.30
29	9	. .	. .	. .	55.	7.4	. .	. .	. .	. .	26 54.92	0.94	0.10	.	4	37.095	31 39.95	23.56	9.10	26 53.88	50 52.61
30	10	. .	. .	. .	. .	. .	8.5	. .	. .	. .	28 43.48	0.93	0.11	.	6	38.95	16 42.22	23.27	7.28	29 42.44	35 52.77
31	9	. .	. .	. .	. .	. .	13.	25.2	. .	. .	30 47.75	0.91	0.11	.	6	34.817	18 30.00	22.92	7.50	30 46.73	37 40.42
32	8	. .	. .	. .	. .	54.7	8.	19.6	. .	. .	32 42.34	0.89	0.10	.	4	39.10	30 30.97	22.59	8.96	32 41.35	28 49 42.52
33	10	. .	. .	. .	. .	. .	. .	13.	. .	. .	33 35.26	0.89	0.08	.	1	40.070	50 28.58	22.44	11.45	33 34.29	29 9 42.47
34	10	. .	. .	. .	. .	. .	. .	19.	. .	. .	34 41.35	0.88	0.09	.	2	45.630	41 26.33	22.26	10.31	34 40.38	29 0 38.90
35	8	. .	. .	. .	. .	. .	30.	. .	. .	. .	36 4.89	0.87	0.10	.	4	41.856	28 56.14	22.02	8.77	36 3.92	28 48 6.93
36	9	. .	. .	. .	. .	. .	. .	45.	. .	. .	7.26	0.87	0.08	.	1	40.57	50 11.38	22.00	11.42	(36) 6.31	29 9 24.80
37	8	. .	. .	. .	. .	43.8	56.4	9.	. .	. .	38 31.33	0.85	0.11	.	5	43.991	21 56.11	21.60	7.91	38 30.37	28 41 5.62
38	8	. .	. .	. .	. .	. .	. .	60.	. .	. .	39 22.34	0.84	0.10	.	3	43.13	34 8.26	21.45	9.42	39 21.40	53 19.13
39	8	. .	. .	. .	. .	. .	16.	. .	. .	. .	39 50.87	0.84	0.10	.	3	46.942	31 57.10	21.37	9.14	39 49.93	51 7.61
40	8	. .	. .	. .	44.	. .	10.	. .	. .	. .	41 44.44	0.82	0.10	.	4	46.060	26 31.50	21.04	8.47	41 43.52	28 45 41.01
41	9	. .	53.	66.	. .	. .	. .	. .	. .	. .	44 18.32	0.80	0.08	.	1	44.55	47 54.74	20.59	11.15	44 17.44	29 7 6.48
42	9	. .	. .	. .	. .	54.8	. .	. .	. .	. .	16 44 42.29	− 0.80	−0.08	.	1	42.90	48 51.50	−20.51	−11.26	16 44 41.41	29 8 3.27

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847.	h.	s.	s.	s.	s.	s.	° ′ ″	r.
Apr. 15,	20	− 9.45	g 0.028	. .	− 0.238	− 0.341	0 0 2.59	40.166

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean			
	1847. h. m.	° ′ ″				″	″	in.	°	°
Zone 94	Apr. 15, 15 18	292 20 6.5	6.4	14.0	13.6	10.08	10.12			
	15 45	. .	. .	. .	. .	. .	. .	30.066	50.8	34.5
	16 15	. .	. .	. .	. .	. .	. .	.066	50.	34.6
	16 51	. .	. .	. .	. .	. .	. .	.06	49.	34.8
	17 38	. .	. .	. .	. .	. .	. .	.062	48.8	34.5
	17 50	. .	. .	. .	. .	. .	. .	.064	48.5	34.
	18 15	. .	. .	. .	. .	. .	. .	30.080	48.	34.

REMARKS.

(93) 25. Micrometer reading assumed as 38^r.109 instead of 37^r.109.

(94) 7. Right ascension differs 1^m from Arg. Z. 384, 63.

(94) 15. Micrometer reading assumed as 31^r.17 instead of 41^r.17.

(94) 17. Micrometer reading assumed as 44^r.272 instead of 43^r.272.

(94) 23. Minutes assumed as 17 instead of 16, and transit over T. V assumed as recorded over T. VII.

(94) 30. Minutes assumed as 29 instead of 28, and micrometer reading as 37^r.95 instead of 38^r.95.

ZONE 94. APRIL 15. M. D_0=— ° ′ ″—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
43	.	. .	. .	. .	. .	48.	. .	. .	. .	. .	16 45 35.49	− 0.79	−0.08	.	2	40.82	44 12.11	−20.36	−10.67	16 45 34.62	29 3 23.14
44	.	. .	. .	. .	. .	. .	30.	43.	. .	. .	46 5.11	0.79	0.08	.	.	. .	. . .	. .	. .	46 4.24	
45	9	. .	. .	. .	. .	25.	. .	. .	. .	. .	51 12.49	0.75	0.09	.	2	43.775	42 30.45	19.37	10.46	51 11.65	29 1 40.28
46	8	51.4	5.	17.3	. .	. .	. .	. .	. .	. .	56 29.62	0.71	0.11	.	5	46.472	20 30.74	18.41	7.73	56 28.80	28 39 36.88
47	8	. .	. .	. .	. .	. .	. .	13.5	. .	. .	56 35.79	0.71	0.08	.	1	46.82	46 36.66	18.39	10.96	56 35.00	29 5 46.01
48	8	. .	. .	. .	. .	. .	26.	40.	. .	. .	57 1.65	0.70	0.11	.	6	37.12	17 10.90	18.32	7.32	57 0.84	28 36 16.54
49	10	. .	. .	. .	. .	. .	. .	36.	. .	. .	16 52 58.32	0.69	0.11	.	5	42.325	22 53.10	17.96	8.03	16 58 57.52	28 41 59.09
50	10	. .	. .	. .	. .	. .	. .	54.	. .	. .	17 0 16.35	0.68	0.09	.	2	44.23	42 14.51	17.73	10.41	17 0 15.58	29 1 22.65
51	9	. .	. .	. .	. .	. .	. .	54.	. .	. .	5 16.32	0.64	0.10	.	4	47.71	25 34.40	16.82	8.36	5 15.58	28 44 39.58
52	9	36.	49.	1.5	12.4	. .	. .	. .	. .	. .	8 13.50	0.62	0.10	.	4	45.50	26 50.77	16.26	8.51	8 12.78	45 55.54
53	9	. .	. .	. .	. .	. .	. .	23.	. .	. .	8 45.34	0.62	0.09	.	3	38.938	36 42.16	16.17	9.72	8 44.63	28 55 48.05
54	8	. .	. .	. .	. .	59.	. .	. .	. .	. .	11 59.02	0.59	0.08	.	1	36.448	53 7.97	15.61	11.79	10 58.35	29 12 15.37
55	9	. .	. .	. .	. .	. .	16.	. .	. .	. .	11 3.49	0.59	0.08	.	2	34.365	48 28.54	15.60	11.21	11 2.82	29 7 35.35
56	9	18.	29.8	42.7	55.	. .	. .	. .	. .	. .	14 55.15	0.57	0.12	.	7	37.17	11 18.72	15.04	6.61	14 54.46	28 30 20.37
57	8	. .	. .	. .	37.5	50.	3.	. .	. .	. .	15 37.62	0.57	0.10	.	4	43.11	28 13.00	14.89	8.68	15 36.95	47 16.57
58	8	10.	. .	35.	47.8	60.	12.	. .	. .	. .	17 47.51	0.55	0.12	.	6	49.26	18 54.78	14.49	7.55	17 46.84	37 56.82
59	9	. .	. .	. .	. .	10.	. .	35.	. .	. .	18 47.42	0.54	0.09	.	3	39.96	35 57.33	14.30	9.64	18 46.79	55 1.27
60	10.11	. .	. .	. .	25.	. .	. .	. .	. .	. .	21 24.98	0.52	0.09	.	3	39.25	36 21.76	13.79	9.68	21 24.37	28 55 25.23
61	9	. .	. .	. .	33.	45.	58.2	. .	. .	. .	23 32.83	0.51	0.09	.	3	30.448	41 23.22	13.39	10.32	23 32.23	29 0 26.93
62	9	. .	. .	. .	. .	. .	. .	60.	. .	. .	24 22.29	0.50	0.08	.	2	34.73	47 41.36	13.23	11.11	24 21.71	29 6 45.70
63	9	. .	43.	54.7	8.	20.	. .	. .	. .	. .	27 7.70	0.48	0.10	.	4	32.11	34 31.47	12.70	9.47	27 7.12	28 53 33.64
64	9	. .	. .	. .	. .	39.7	. .	. .	. .	. .	28 27.26	0.47	0.12	.	7	32.81	13 48.69	12.44	6.91	28 26.67	32 48.04
65	7.8	. .	28.2	. .	53.	5.	17.7	31.2	. .	. .	30 52.97	0.45	0.10	.	4	38.256	31 0.01	11.98	9.02	30 52.42	28 50 1.01
66	9	. .	. .	. .	. .	. .	. .	65.	. .	. .	32 27.35	0.44	0.09	.	2	45.475	41 31.67	11.66	10.33	32 26.82	29 0 33.66
67	9	. .	. .	. .	. .	. .	. .	67.	. .	. .	36 29.35	0.41	0.09	.	2	44.984	41 48.56	10.87	10.36	36 28.85	29 0 49.79
68	9	. .	. .	29.6	42.	54.	. .	. .	. .	. .	38 41.87	0.40	0.11	.	5	41.87	23 9.07	10.44	8.04	38 41.36	28 42 7.55
69	9	. .	. .	. .	. .	. .	. .	55.4	. .	. .	44 17.72	0.36	0.11	.	5	47.442	19 57.04	9.33	7.66	44 17.25	28 38 54.03
70	10	. .	. .	. .	. .	. .	29.5	. .	. .	. .	47 4.31	0.34	0.09	.	2	44.22	42 15.04	8.76	10.43	47 3.88	29 1 14.23
71	9	. .	. .	. .	. .	43.	55.4	. .	. .	. .	48 30.34	0.33	0.08	.	2	41.19	43 59.38	8.48	10.66	48 29.93	29 2 58.52
72	6	. .	. .	. .	. .	. .	33.8	46.	. .	. .	49 8.52	0.32	0.10	.	5	38.265	25 13.11	8.34	8.31	49 8.10	28 44 9.76
73	8	. .	47.	60.	12.2	. .	. .	. .	. .	. .	51 12.24	0.31	0.11	.	5	42.352	22 52.50	7.94	8.04	51 11.82	41 48.48
74	8	. .	. .	. .	. .	. .	. .	37.	. .	. .	51 59.33	0.31	0.10	.	4	44.21	27 35.15	7.78	8.61	51 58.92	46 31.54
75	9	. .	. .	. .	. .	29.	41.	53.2	. .	. .	54 15.99	0.29	0.11	.	5	38.81	24 54.32	7.31	8.27	54 15.59	43 49.90
76	9	. .	. .	. .	46.	58.3	. .	. .	. .	. .	55 45.91	0.29	0.11	.	5	43.582	22 10.17	7.01	7.92	55 45.51	28 41 5.10
77	8	. .	. .	. .	. .	. .	. .	25.	. .	. .	55 47.29	0.29	0.08	.	2	36.834	46 29.29	7.00	10.97	55 46.92	29 5 27.26
78	8	. .	. .	. .	. .	. .	. .	54.	. .	. .	57 16.32	0.27	0.09	.	2	41.65	43 43.59	6.70	10.62	57 15.96	2 40.91
79	8	. .	. .	. .	. .	. .	. .	61.	. .	. .	57 23.30	0.27	0.08	.	2	37.61	46 2.60	6.68	10.91	57 22.95	29 5 0.19
80	.	. .	. .	. .	16.	28.9	41.	. .	. .	. .	17 59 16.09	0.26	0.10	.	4	44.69	27 18.64	6.29	8.57	17 59 15.73	28 46 13.50
81	9	. .	. .	. .	. .	15.	. .	40.	. .	. .	18 0 2.4	0.25	0.10	.	3	44.695	33 14.38	6.13	9.32	18 0 2.07	52 9.83
82	7	48.5	2.5	14.	. .	. .	. .	. .	. .	. .	2 26.78	0.24	0.09	.	3	38.595	36 44.29	5.65	9.73	2 26.45	28 55 39.67
83	8	. .	. .	. .	. .	. .	10.	21.8	. .	. .	2 44.46	0.24	0.09	.	2	41.99	43 31.90	5.59	10.60	2 44.13	29 2 28.09
84	9	. .	. .	. .	. .	28.	. .	. .	. .	. .	4 15.49	0.22	0.10	.	4	35.249	32 43.46	5.25	9.24	4 15.17	28 51 37.95
85	9	. .	. .	. .	. .	. .	. .	40.	. .	. .	5 2.34	0.22	0.10	.	4	34.766	33 34.16	5.09	9.34	5 2.02	52 28.59
86	8	. .	. .	. .	. .	61.2	14.	26.5	. .	. .	6 48.78	0.21	0.09	.	2	43.768	39 31.94	4.73	10.08	6 48.48	58 26.75
87	6.7	. .	. .	. .	. .	. .	19.	31.2	. .	. .	7 53.70	0.20	0.11	.	5	42.22	22 57.04	4.50	8.04	7 53.39	28 41 49.58
88	8	. .	. .	39.	52.	5.4	. .	. .	. .	. .	9 52.13	0.19	0.08	.	2	40.62	44 19.04	4.09	10.71	9 51.86	29 3 13.84
89	8	. .	. .	. .	. .	66.	. .	31.	. .	. .	10 53.38	0.18	0.08	.	1	43.356	48 35.86	3.87	11.25	10 53.12	29 7 30.98
90	7	. .	. .	. .	30.9	42.9	56.	. .	. .	. .	12 30.82	0.17	0.12	.	7	38.082	10 47.34	3.54	6.53	12 30.53	28 29 37.41
91	8	. .	. .	. .	. .	. .	. .	23.	. .	. .	13 45.30	0.16	0.12	.	7	39.795	9 48.41	3.28	6.41	13 45.02	28 28 38.10
92	8	. .	. .	. .	. .	. .	. .	. .	. .	36.	18 14 26.80	− 0.16	−0.07	.	1	39.552	50 46.74	− 3.13	−11.52	18 14 26.57	29 9 41.39

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847. h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1847 h. m.	° ′ ″				″	″	in.	°	°

REMARKS.

(94) 54. Minutes assumed as 10 instead of 11, and micrometer reading as $35^r.448$ instead of $36^r.448$; transit over T. IV as recorded over T. V.

(94) 58. Micrometer reading assumed as $33^r.365$ instead of $34^r.365$; transit over T. V assumed as recorded over T. VI.

(94) 58. Hor. thread assumed as 5 instead of 6.

(94) 69. One only of a large cluster.

(94) 78. Right ascension differs 1′ from Arg. Z. 221, 64.

(94) 85. Micrometer reading assumed as $33^r.766$ instead of $34^r.766$.

(94) 86. Hor. thread assumed as 3 instead of 2, and micrometer reading assumed as $33^r.768$ instead of $43^r.768$.

ZONE 95. APRIL 18. MAJ. $D_0 = -29° 0' 20''$.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
1	8	. .	. .	. .	. .	. .	17.5	30.	. .	. .	9 51 52.17	− 4.48	−1.00	VII.	4	40.504	29 42.33	− 7.78	− 7.13	9 51 46.69	29 30 17.24
2	8	. .	. .	. .	. .	30.	42.	. .	. .	. .	53 17.06	4.48	1.00	V.	4	35.85	32 22.74	8.05	7.47	53 11.58	32 58.26
3	8	. .	. .	. .	. .	. .	48.	61.	. .	. .	54 22.97	4.48	0.99	VII.	6	40.9	15 0.51	8.25	5.32	54 17.50	15 34.08
4	8	. .	. .	. .	. .	41.	. .	. .	. .	. .	54 28.44	4.48	0.99	VII.	5	43.78	22 3.03	8.27	6.19	54 22.97	22 37.49
5	7	. .	. .	. .	. .	. .	38.	. .	. .	. .	56 12.60	4.48	1.02	V.	1	39.307	50 55.13	8.59	9.79	56 7.10	51 33.51
6	8	. .	. .	. .	. .	. .	. .	. .	. .	21.	56 11.53	4.48	1.00	VII.	4	36.86	31 47.70	8.59	7.39	56 6.05	32 23.68
7	8	. .	. .	. .	. .	. .	. .	29.8	. .	. .	56 51.90	4.48	1.00	VII.	4	38.09	31 5.48	8.71	7.30	56 46.42	31 41.49
8	8	. .	. .	. .	. .	42.	. .	6.8	. .	. .	58 29.76	4.47	1.00	VII.	4	39.34	30 22.38	9.02	7.22	58 24.29	30 58.62
9	8	. .	. .	. .	. .	. .	13.	26.	. .	. .	9 59 47.95	4.47	0.99	V.	5	42.11	23 0.79	9.26	6.30	9 59 42.49	23 36.35
10	8	. .	. .	. .	69.	. .	33.5	. .	. .	. .	10 1 8.60	4.47	1.00	IV.	4	39.768	30 7.99	9.50	7.18	10 1 3.13	30 44.67
11	8	. .	20.5	33.2	46.	59.	. .	. .	. .	. .	13 46.00	4.46	1.01	.	2	39.507	44 57.34	11.79	9.05	13 40.53	45 38.18
12	9	. .	. .	. .	. .	58.6	. .	. .	. .	. .	14 46.03	4.45	0.99	.	4	41.506	23 21.57	11.96	6.34	14 40.59	23 59.87
13	7	. .	1.	13.7	26.	38.5	. .	. .	. .	. .	16 26.10	4.45	1.00	VII.	5	41.000	23 38.68	12.25	6.38	16 20.65	24 17.31
14	8	. .	. .	. .	. .	15.	27.5	40.	. .	. .	17 2.24	4.45	1.00	VII.	4	38.134	29 55.06	12.35	7.16	16 56.79	30 34.57
15	8	. .	. .	. .	. .	. .	. .	45.7	. .	. .	18 7.78	4.45	0.98	VII.	7	37.838	10 55.41	12.53	4.82	18 2.35	11 32.76
16	8	. .	. .	. .	. .	37.	. .	. .	. .	. .	19 24.48	4.45	0.99	.	6	45.33	21 10.03	12.77	6.08	19 19.04	21 48.88
17	8	. .	. .	. .	. .	49.	. .	. .	. .	. .	36.47	4.45	0.99	.	6	41.99	14 23.34	12.80	5.25	19 31.03	15 1.39
18	8	. .	. .	. .	1.2	. .	. .	. .	. .	. .	20 1.24	4.45	0.99	.	5	50.80	18 1.83	12.87	5.69	19 55.80	18 40.39
19	8	. .	. .	. .	. .	. .	. .	. .	. .	40.	22 30.41	4.44	1.01	.	2	37.88	45 53.31	13.29	9.16	22 24.96	46 35.76
20	9	. .	. .	. .	. .	. .	. .	46.	. .	. .	25 8.09	4.44	1.01	.	2	38.956	45 15.96	13.73	9.09	25 2.64	45 58.78
21	9	. .	. .	. .	. .	. .	. .	51.	. .	. .	25 13.05	4.44	1.01	.	2	32.535	48 56.88	13.75	9.55	25 7.60	49 40.18
22	8	. .	. .	. .	. .	. .	. .	. .	. .	49.8	26 40.28	4.44	1.01	.	3	36.07	38 11.16	13.99	8.19	26 34.83	38 53.34
23	8	. .	. .	. .	18.5	. .	. .	. .	. .	. .	18.47	4.43	1.00	.	4	34.52	33 8.55	14.	7.57	(28) 13.04	33 50.1
24	9	. .	. .	3.	14.9	3.	14.	. .	. .	. .	30 49.50	4.42	1.00	.	2	36.975	46 24.44	14.52	9.23	29 44.08	47 8.19
25	8	. .	. .	. .	31.	43.	56.8	. .	. .	. .	34 30.95	4.42	1.01	.	2	40.476	44 24.00	15.26	8.98	34 25.52	45 8.24
26	8	. .	. .	. .	. .	. .	. .	57.5	. .	. .	45 29.60	4.40	0.99	.	5	42.05	22 28.48	16.94	6.22	45 24.21	23 11.64
27	8	. .	. .	. .	. .	. .	. .	. .	. .	52.	45 42.53	4.39	1.00	.	4	36.032	32 16.52	16.97	7.45	45 37.14	33 0.94
28	10	. .	. .	. .	. .	. .	. .	8.	. .	. .	47 30.12	4.39	1.01	.	3	32.884	40 0.45	17.24	8.43	47 24.72	40 46.12
29	8	. .	. .	. .	49.7	. .	. .	. .	. .	. .	47 49.66	4.39	1.00	.	4	37.23	31 35.31	17.29	7.36	47 44.27	32 19.96
30	8	. .	. .	23.5	36.	49.	. .	. .	. .	. .	50 36.17	4.38	1.00	.	5	35.492	26 48.52	17.70	6.78	50 30.79	27 33.00
31	8	. .	. .	. .	10.	. .	. .	. .	. .	. .	52 10.10	4.38	0.98	.	7	43.965	7 24.93	17.93	4.38	52 4.74	8 7.24
32	8	. .	37.2	49.8	2.	15.	. .	. .	. .	. .	56 2.31	4.37	0.99	.	5	44.18	21 49.61	18.46	6.16	55 56.95	22 34.23
33	8	. .	. .	. .	. .	42.	54.	. .	. .	. .	56 29.09	4.37	1.00	.	4	45.505	26 50.60	18.53	6.78	56 23.72	27 35.91
34	7.8	. .	. .	. .	6.	18.7	32.	45.	. .	. .	58 6.47	4.36	1.00	.	3	38.338	36 53.13	18.73	8.04	58 1.11	37 39.90
35	8	. .	. .	. .	. .	. .	. .	51.	. .	. .	59 13.08	4.36	0.99	.	7	41.252	8 58.27	18.90	4.57	59 7.73	9 41.74
36	7	. .	. .	. .	. .	. .	. .	23.	. .	. .	10 59 45.09	4.36	1.01	.	2	41.175	43 59.94	18.97	8.93	10 59 39.72	44 47.84
37	7	. .	. .	. .	. .	4.5	. .	31.	. .	. .	11 0 52.52	4.35	0.99	.	5	45.97	21 48.01	19.12	6.16	11 0 47.18	21 33.29
38	8	. .	. .	. .	. .	. .	. .	44.5	. .	. .	1 6.59	4.35	0.99	.	5	50.41	18 15.25	19.15	5.71	1 1.25	19 0.11
39	9	. .	. .	. .	25.8	38.	51.	. .	. .	. .	3 25.63	4.34	1.01	.	3	36.915	37 42.09	19.44	8.14	3 20.28	38 29.67
40	10	. .	. .	. .	. .	19.	. .	44.8	. .	. .	6 6.64	4.34	1.01	.	2	37.12	46 19.42	19.80	9.23	6 1.29	47 8.45
41	9	. .	. .	. .	. .	29.	41.5	54.2	. .	. .	7 16.27	4.33	1.01	.	2	37.58	46 3.59	19.94	9.20	7 10.93	46 52.73
42	9	. .	. .	. .	. .	. .	. .	. .	. .	59.5	7 50.35	4.33	0.99	.	6	38.00	16 39.49	20.02	5.51	7 45.03	17 25.02
43	7	. .	. .	. .	. .	. .	. .	8.	. .	. .	12 30.10	4.32	1.00	VII.	4	41.03	29 24.23	20.60	7.10	12 24.78	30 11.93
44	7	. .	. .	. .	. .	. .	. .	20.5	. .	. .	12 42.61	4.31	1.00	VII.	3	38.142	36 59.54	20.62	8.05	12 37.30	37 48.21
45	9	46.	58.	70.5	. .	. .	. .	. .	. .	. .	16 23.43	4.30	1.01	III.	3	34.085	39 19.43	21.06	8.35	16 18.12	40 8.84
46	10	. .	. .	. .	. .	34.9	. .	59.8	. .	. .	17 22.12	4.30	1.00	VI.	5	41.725	23 13.91	21.18	6.32	17 16.82	24 1.41
47	9	. .	. .	. .	33.	45.	57.6	. .	. .	. .	20 32.56	4.29	1.01	.	3	33.675	39 33.57	21.55	8.38	20 27.26	40 23.50
48	8	35.	48.	. .	. .	. .	. .	. .	. .	. .	23 13.11	4.28	1.00	.	3	40.000	35 55.95	21.86	7.91	23 7.83	36 45.72
49	9	. .	. .	. .	34.	45.7	. .	. .	. .	. .	11 23 33.56	− 4.28	−1.01	.	2	47.06	40 37.47	−21.90	− 8.51	11 23 28.27	29 41 27.88

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847.	h.	s.	s.	s.	s.	s.	° ′ ″	r.
Apr. 18,	17	− 11.40	g 0.020	. .	− 0.238	− 0.341	359 59 59.19	40.173

INSTRUMENT READINGS.

	Date.	CIRCLE. A.	B.	C	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1847. h. m.	° ′ ″				″	″	in.	°	°
Zone 95	Apr. 18, 9 52	291 42 32.4*	49.0	54.5	55.2	47.87	47.78	30.424	44.	36.2
	10 30	. .	. .	. .	. .	. .	. .	.434	43.2	34.0
	11 12	. .	. .	. .	. .	. .	. .	.440	42.5	32.8
	11 20	. .	. .	. .	. .	. .	. .	. .	. .	32.3
	11 50	. .	. .	. .	. .	. .	. .	.456	42.	32.2
	12 50	. .	. .	. .	. .	. .	. .	30.454	42.	29.

REMARKS.

(95) 14. Micrometer reading assumed as 40r.134 instead of 38r.134.

(95) 16. Micrometer thread assumed as 5 instead of 6.

(95) 20. "The reading of the circle I am afraid is in error two minutes."

(95) 24. Transits discordant; those over T.'s III and IV rejected, and minutes assumed as 29 instead of 30.

(95) 26. Time of transit over VII assumed as 7s.5 instead of 57s.5, and micrometer reading assumed as 43r.05 instead of 42r.05.

(95) 37. Right ascension differs 19s.15 from Arg. Z. 375, 32, and 401, 25; transit over T. VII probably 4s.5 instead of 44s.5.

*This circle-reading is evidently erroneous by 4′ and should be 291° 38′.

ZONE 95. APRIL 18. MAJ. $D_0 = -29^\circ\ 0'\ 20''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a^1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
50	9	. .	. .	. .	. .	. .	. .	. .	. .	39.	11 23 29.66	− 4.28	−1.00	.	4	47.84	25 29.13	−21.89	− 6.61	11 23 24.38	29 26 17.63
51	9	. .	. .	. .	. .	. .	. .	. .	. .	21.	24 11.43	4.27	1.01	.	2	42.40	43 16.67	21.96	8.84	24 6.15	44 7.47
52	9	. .	. .	. .	. .	. .	. .	. .	. .	6.	25 56.50	4.27	1.00	.	3	41.058	35 18.42	22.15	7.84	24 51.23	36 8.41
53	7	. .	. .	. .	. .	. .	. .	52.5	. .	. .	26 27.23	4.26	1.01	.	1	42.78	48 55.67	22.19	9.56	26 21.96	49 47.42
54	9	. .	. .	. .	. .	. .	. .	31.	. .	. .	26 53.12	4.26	1.01	.	2	46.80	40 46.07	22.26	8.53	26 47.85	41 36.86
55	7.8	. .	. .	. .	. .	. .	. .	. .	. .	49.5	27 40.46	4.26	0.99	.	6	47.045	11 29.42	22,34	4.87	27 35.21	12 16.63
56	8	. .	. .	39.8	53.	. .	. .	. .	. .	. .	31 52.68	4.24	1.00	.	4	39.96	30 1.38	22.80	7.17	31 47.44	30 51.35
57	9	. .	. .	. .	. .	. .	37.	49.	. .	. .	32 11.40	4.24	1.00	.	3	35.68	38 24.43	22.83	8.23	32 6.16	39 15.49
58	8	. .	. .	. .	. .	. .	2.	15.8	. .	. .	32 37.29	4.24	1.00	.	3	36.172	38 7.65	22.87	8.20	32 32.05	38 58.72
59	9	. .	. .	. .	. .	. .	. .	53.5	. .	. .	34 15.60	4.23	1.00	.	5	36.29	26 20.72	23.04	6.72	34 10.37	27 10.48
60	.	. .	. .	. .	. .	. .	56.	8.5	. .	. .	35 30.74	4.23	0.99	.	7	37.70	11 0.33	23.17	4.82	35 25.52	11 48.32
61	9	26.8	. .	52.	. .	. .	. .	. .	. .	. .	38 4.67	4.21	1.00	.	3	34.455	39 6.70	23.43	8.31	37 59.46	39 58.44
62	9	. .	9.	21.5	34.7	47.	. .	. .	. .	. .	39 34.36	4.21	1.00	.	3	34.115	39 18.44	23.59	8.34	39 29.15	40 10.37
63	7.8	. .	. .	. .	. .	. .	. .	28.8	. .	. .	39 50.90	4.21	1.00	.	5	37.242	25 48.31	23.61	6.65	39 45.69	26 38.57
64	8	. .	. .	. .	46.	59.	12.	. .	. .	. .	41 46.35	4.20	1.01	.	1	42.225	49 14.77	23.80	9.60	41 41.14	50 8.17
65	9.10	. .	. .	. .	. .	. .	12.	24.4	. .	. .	42 46.59	4.19	1.01	.	2	45.35	41 36.15	23.90	8.64	42 41.39	42 28.69
66	8	. .	. .	. .	. .	58.	. .	. .	. .	. .	46 35.50	4.17	0.99	.	7	42.832	8 3 91	24.29	4.46	46 30.34	8 52.66
67	7.8	. .	23.8	36.	49.	. .	. .	. .	. .	. .	51 48.86	4.15	0.99	.	6	44.000	12 39.78	24.75	5.02	51 43.72	13 29.55
68	9	. .	. .	. .	. .	. .	. .	49.5	. .	. .	52 11.59	4.15	1.01	.	2	39.312	45 3.71	24.79	9.07	52 6.43	45 57.57
69	8	. .	. .	. .	. .	. .	. .	. .	. .	47.	52 49.92	4.15	1.01	.	2	39.072	45 11.17	24.83	9.09	52 44.76	46 5.09
70	8	. .	. .	. .	. .	. .	. .	. .	. .	47.	52 50.46	4.15	1.00	.	4	41.262	29 15.44	24.83	7.07	52 45.31	30 7.34
71	8	. .	. .	. .	. .	. .	. .	. .	. .	47.6	54 38.00	4.14	1.01	.	2	38.560	45 28.78	25.01	9.13	54 32.85	46 22.92
72	9	. .	. .	. .	. .	. .	. .	0.0	. .	. .	56 22.07	4.13	1.01	.	2	36.67	46 34.61	25.16	9.27	56 16.93	47 29.04
73	9	. .	. .	. .	. .	11.	23.7	. .	. .	. .	57 58.54	4.12	0.99	.	7	39.42	10 1.27	25.30	4.69	57 53.43	10 51.26
74	9	. .	12.	24.2	36.3	. .	. .	. .	. .	. .	11 59 36.82	4.11	1.01	.	1	37.96	52 41.51	25.44	10.05	11 59 31.70	52 37.00
75	8	. .	. .	37.	49.8	. .	. .	. .	. .	. .	12 12 49.68	4.05	1.00	.	3	40.605	35 35.13	26.51	7.88	12 12 44.63	36 29.52
76	8	. .	. .	. .	. .	. .	29.5	. .	. .	. .	13 4.14	4.04	1.01	.	2	41.475	43 49.62	26.53	8.94	12 59.09	44 45.09
77	9	. .	. .	. .	. .	. .	. .	. .	41.8	. .	13 45.20	4.04	1.00	.	3	35.85	38 17.98	26.58	8.22	13 40.16	39 12.78
78	9.10	. .	. .	. .	. .	. .	. .	49.8	. .	. .	15 11.90	4.03	1.00	.	4	40.86	29 30.08	26.67	7.11	15 6.87	30 23.86
79	6	. .	. .	. .	. .	. .	. .	39.5	. .	. .	16 1.60	4.03	1.00	.	4	41.556	29 6.47	26.73	7.06	15 56.57	30 0.26
80	10	. .	. .	. .	. .	. .	. .	29.5	. .	. .	16 51.60	4.02	1.00	.	5	41.602	23 17.96	26.79	6.34	16 46.58	24 11.09
81	8	. .	. .	28.2	. .	53.5	. .	. .	. .	. .	19 40.91	4.01	1.00	.	6	41.01	14 22.65	26.99	5.23	19 35.90	15 14.87
82	8	37.	. .	62.	. .	. .	. .	. .	. .	. .	22 14.76	3.99	1.00	.	2	45.70	41 24.25	27.16	8.61	22 9.77	42 20.02
83	8	43.	. .	69.	. .	. .	. .	. .	. .	. .	22 21.26	3.99	1.00	.	2	43.75	42 31.34	27.17	8.76	22 16.27	43 27.27
84	6.7	. .	. .	. .	. .	. .	31.	44.5	. .	. .	23 6.06	3.99	1.01	.	1	40.84	50 2.42	27.22	9.71	23 1.06	50 59.35
85	7	. .	. .	47.	59.8	12.6	. .	. .	. .	. .	24 59.87	3.98	0.99	.	7	35.838	12 4.55	27.34	4.93	24 54.90	12 56.82
86	8	. .	. .	. .	36.2	. .	. .	. .	. .	. .	27 36.17	3.96	1.00	.	5	33.32	28 3.25	27.51	6.93	27 31.21	28 57.69
87	8	. .	. .	. .	. .	. .	. .	21.2	. .	. .	27 43.28	3.96	1.00	.	7	31.148	14 45.91	27.52	5.26	27 38.32	15 38.69
88	6	. .	. .	. .	. .	. .	. .	48.	. .	. .	30 10.11	3.95	1.00	.	4	31.64	34 47.63	27.67	7.77	31 5.16	35 43.07
89	8	. .	. .	. .	25.2	. .	50.2	63.	. .	. .	42 25.05	3.87	1.00	.	2	40.84	44 11.47	28.34	8.98	42 20.18	45 8.79
90	9	. .	. .	. .	. .	. .	22.5	. .	. .	. .	44 57.11	3.86	1.01	.	1	42.942	48 49.95	28.46	9.57	44 52.24	49 47.98
91	9	. .	. .	. .	. .	. .	41.5	54.	. .	. .	45 16.23	3.86	1.00	.	6	47.886	11 0.34	28.47	4.79	45 11.37	11 53.60
92	7	. .	. .	18.	30.	43.	. .	. .	. .	. .	48 30.39	3.83	1.00	.	6	42.036	14 21.77	28.63	5.21	47 25.56	15 15.61
93	8	. .	29.	41.8	. .	. .	. .	. .	. .	. .	50 54.25	3.82	1.00	.	7	38.96	10 17.13	28.73	4.70	50 49.43	11 10.56
94	8	. .	. .	. .	. .	. .	. .	42.8	. .	. .	52 4.86	3.81	1.00	.	2	36.61	46 37.00	28.78	9.30	52 0.05	47 35.08
95	8	. .	. .	29.5	41.4	. .	. .	. .	. .	. .	54 41.73	3.79	1.00	.	4	38.515	30 51.09	28.88	7.27	54 36.94	31 47.24
96	8	. .	. .	. .	. .	. .	. .	9.2	. .	. .	12 59 31.31	− 3.76	−1.00	.	3	38.298	36 54.51	−29.06	− 8.04	12 59 26.55	29 37 51.61

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847. h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
	A.	B.	C.	D.	Corr'd Mean.	Mean.			
1847. h. m.	° ′ ″				″	″	in.	°	°

REMARKS.

(95) 52. Minutes assumed as 24 instead of 25.
(95) 53. Transit over T. VI assumed as recorded over T. VII.
(95) 66. Transit over T. V assumed as 48^s instead of 58^s.
(95) 67. Micrometer reading assumed as 45^r.000 instead of 44^r.000.
(95) 69. Transit over T. 11 assumed as recorded over T. 12.
(95) 70. Transit over T. 11 assumed as recorded over T. 12.
(95) 81. Micrometer reading assumed as 42^r.01 instead of 41^r.01.
(95) 88. Minutes assumed as 31 instead of 30.
(95) 92. Minutes assumed as 47 instead of 48.

ZONE 96. APRIL 22. MAJ. $D_0 = -29° 35' 40''$.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
1	7	54.	6.5	19.5	31.3	44.6	57.2	. .	. .	. .	14 50 31.87	− 4.10	−1.00	.	4	36.475	32 1.28	−36.35	−10.26	14 50 26.77	30 6 27.89
2	9	. .	. .	. .	. .	. .	. .	30.5	. .	. .	15 8 52.36	3.95	1.00	VII.	6	30.425	21 0.91	35.97	8.87	15 8 47.41	29 55 25.75
3	8	. .	. .	. .	67.4	. .	31.9	. .	. .	. .	11 6.95	3.93	0.99	VI.	2	43.022	42 56.24	35.91	11.64	11 2.03	30 17 23.79
4	9	. .	. .	20.5	. .	. .	. .	. .	. .	. .	30 33.10	3.77	0.99	.	1	37.162	52 8.93	35.15	12.82	30 28.34	26 36.90
5	8	. .	. .	. .	. .	. .	. .	25.4	. .	. .	32 47.28	3.75	1.00	.	3	33.325	39 45.61	35.05	11.25	32 42.53	14 11.91
6	7	. .	. .	. .	. .	. .	39.7	. .	. .	. .	34 14.28	3.74	1.00	.	5	32.08	28 45.92	34.97	9.84	34 9.54	3 10.73
7	7	. .	. .	. .	. .	. .	. .	32.5	. .	. .	34 54.38	3.74	1.00	.	3	33.82	39 28.57	34.94	11.21	34 49.64	13 54.72
8	7	. .	. .	. .	. .	. .	. .	11.9	. .	. .	35 33.77	3.73	1.00	.	3	36.30	38 3.25	34.91	11.02	35 29.04	12 29.18
9	8	. .	3.4	. .	29.4	. .	. .	. .	. .	. .	37 29.18	3.72	0.99	.	1	40.625	50 9.82	34.83	12.57	37 24.47	30 24 37.22
10	8	. .	36.5	. .	. .	. .	. .	. .	. .	. .	40 1.70	3.70	1.01	.	7	39.022	10 15.00	34.67	7.53	39 56.99	29 44 37.20
11	9	. .	. .	. .	. .	36.3	. .	. .	. .	. .	40 23.70	3.69	1.01	.	7	35.844	12 38.71	34.63	7.84	40 19.00	29 47 1.18
12	8	. .	. .	. .	. .	41.	54.	5.6	. .	. .	41 28.11	3.68	1.00	.	3	41.645	34 59.35	34.52	10.64	41 23.43	30 9 24.51
13	8	. .	. .	. .	. .	. .	. .	55.2	. .	. .	42 17.08	3.68	0.99	.	2	47.516	40 21.78	34.37	11.31	42 12.41	14 47.46
14	6	. .	. .	. .	. .	. .	22.8	35.5	. .	. .	43 57.30	3.67	0.99	.	1	49.63	44 59.99	34.16	11.91	43 52.64	30 19 26.06
15	8	. .	. .	. .	. .	. .	. .	50.2	. .	. .	45 12.06	3.66	1.00	.	5	40.362	24 0.96	34.02	9.24	45 7.40	29 58 24.22
16	8	. .	. .	. .	61.5	. .	. .	. .	. .	. .	48 1.51	3.63	0.99	.	2	37.208	46 16.44	33.66	12.07	47 56.89	30 20 42.17
17	8	. .	. .	. .	. .	. .	. .	61.3	. .	. .	49 23.10	3.62	0.99	.	2	33.162	42 51.58	33.48	11.65	49 18.49	17 16.71
18	8	. .	. .	. .	. .	. .	. .	40.	. .	. .	50 1.86	3.62	1.00	.	3	52.07	29 0.67	33.40	9.87	49 57.24	3 23.94
19	7.8	. .	. .	. .	. .	. .	45.	. .	. .	. .	52 19.54	3.60	1.00	.	3	41.78	34 54.70	33.09	10.63	52 14.94	9 18.42
20	7.8	. .	. .	19.5	. .	. .	56.	. .	. .	. .	15 58 28.84	3.55	1.00	.	3	36.864	37 43.84	32.27	10.98	15 58 24.29	12 7.09
21	9	. .	. .	. .	. .	. .	. .	42.5	. .	. .	16 2 4.33	3.52	0.99	.	2	37.111	46 19.44	31.77	12.09	16 1 59.82	30 20 43.30
22	9	. .	. .	. .	. .	. .	. .	. .	. .	. .	4	. .	. .	.	6	40.87	15 1.87	31.50	8.12	4	29 49 21.49
23	7.8	4.5	17.	29.6	42.5	54.8	8.	20.	. .	. .	6 42.34	3.48	0.99	.	3	32.818	40 3.06	31.12	11.28	6 37.87	30 14 25.46
24	8	55.	. .	. .	. .	. .	. .	. .	. .	. .	10 33.21	3.45	1.00	.	4	34.354	33 14.26	30.56	10.41	9 28.76	7 35.23
25	8	. .	. .	. .	. .	56.	. .	. .	. .	. .	10 43.33	3.45	1.00	.	5	31.74	28 57.61	30.54	9.87	9 38.88	3 18.02
26	9	. .	. .	. .	. .	. .	. .	28.	. .	. .	9 49.88	3.45	0.99	.	3	31.362	40 52.80	30.66	11.39	9 45.44	30 15 14.85
27	9	. .	. .	. .	54.8	6.9	. .	. .	. .	. .	11 54.60	3.44	1.02	.	7	39.546	9 56.98	30.36	7.49	11 50.14	29 44 14.83
28	8	. .	. .	. .	30.5	. .	. .	. .	. .	. .	14 30.56	3.42	1.01	.	6	40.56	15 12.54	29.98	8.14	14 26.13	49 30.66
29	8	. .	. .	. .	45.4	57.6	. .	. .	. .	. .	14 45.24	3.41	1.01	.	6	42.695	13 59.09	29.94	7.99	14 40.82	29 48 17.02
30	10	. .	30.	42.	55.	. .	. .	. .	. .	. .	29 55.02	3.30	1.00	.	3	40.90	35 24.98	27.61	10.69	29 50.72	30 9 43.28
31	9	. .	. .	29.5	42.	55.	. .	. .	. .	. .	41 42.16	3.20	0.98	.	1	40.54	50 12.74	25.70	12.61	41 37.98	24 31.05
32	8	0.8	13.	25.8	39.	51.4	. .	. .	. .	. .	43 38.72	3.19	1.00	.	3	39.738	36 4.97	25.37	10.78	43 34.53	10 21.12
33	9	. .	. .	. .	. .	. .	39.6	52.6	. .	. .	44 14.30	3.19	1.00	.	3	41.97	34 48.01	25.27	10.61	44 10.11	9 3.89
34	7.8	. .	. .	. .	. .	. .	. .	44.	. .	. .	45 5.84	3.18	0.99	.	2	37.95	45 50.90	25.13	12.05	45 1.67	20 8.08
35	9	. .	43.	55.4	8.5	. .	. .	. .	. .	. .	47 8.34	3.16	0.99	.	2	37.95	45 50.90	24.79	12.05	47 4.19	30 20 7.74
36	9	. .	. .	. .	38.7	. .	. .	. .	. .	. .	48 38.69	3.15	1.00	.	5	39.898	24 16.94	24.52	9.26	48 34.54	29 58 30.72
37	10	. .	. .	. .	. .	. .	. .	4.5	. .	. .	49 26.35	3.14	1.01	.	6	34.154	18 52.61	24.38	8.59	49 22.20	29 53 5.58
38	10	. .	. .	. .	. .	. .	. .	21.	. .	. .	50 42.88	3.13	0.99	.	3	32.170	40 25.01	24.16	11.34	50 38.76	30 14 40.51
39	10	. .	. .	. .	. .	. .	. .	32.	. .	. .	50 53.86	3.13	0.99	.	3	28.36	42 36.09	24.13	11.63	50 49.74	30 16 51.85
40	8	. .	. .	. .	38.	. .	3.5	. .	. .	. .	55 38.12	3.10	1.01	.	7	31.122	14 46.80	23.31	8.07	55 34.01	29 48 58.18
41	8	. .	. .	. .	. .	13.	. .	38.6	. .	. .	57 0.41	3.09	1.01	.	5	43.69	22 6.46	23.07	8.99	56 56.31	56 18.52
42	7	. .	18.	30.	. .	. .	. .	. .	. .	. .	58 43.00	3.07	1.01	.	6	38.05	16 38.90	22.77	8.32	58 38.92	50 49.99
43	.	. .	32.	. .	. .	. .	. .	. .	. .	. .	58 10.00	3.08	1.02	.	7	34.585	12 47.66	22.86	7.82	58 5.90	29 46 58.34
44	6	. .	. .	. .	. .	. .	. .	54.7	. .	. .	16 59 16.57	3.07	0.99	.	3	36.928	37 41.64	22.67	10.99	16 59 12.51	30 11 55.30
45	7	. .	. .	. .	. .	. .	. .	61.	. .	. .	17 0 22.83	3.06	1.02	.	7	43.11	7 54.35	22.48	7.21	17 0 18.75	29 42 4.04
46	8	. .	57.4	11.	23.	. .	. .	. .	. .	. .	2 23.17	3.04	0.99	.	2	47.605	40 18.71	22.11	11.33	1 19.14	30 14 32.15
47	9	. .	. .	. .	. .	. .	. .	25.7	. .	. .	2 47.55	3.04	0.99	.	2	41.40	43 51.86	22.04	11.79	2 43.52	18 5.69
48	8	. .	. .	31.	42.9	56.4	. .	. .	. .	. .	5 43.42	3.02	0.98	.	2	35.475	47 16.06	21.52	12.23	5 39.42	21 29.81
49	9	. .	. .	. .	. .	. .	. .	36.	. .	. .	17 6 57.86	− 3.02	−1.00	.	4	38.10	31 5.03	−21.46	−10.14	17 5 53.84	30 5 16.63

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847. h.	s.	s.	s.	s.	s.	° ′ ″	r.
Apr. 22, 13	−12.46	g 0.020	. .	− 0.238	− 0.341	0 0 2.61	40.170

INSTRUMENT READINGS.

	Date.	CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1847. h. m.	° ′ ″				″	″	in.	°	°
Zone 96	Apr. 22, 14 49	291 5 6.4	5.6	10.3	10.4	8.07	8.18	29.964	70.5	66.6
	15 52	2.0	1.7	6.8	5.6	3.90	4.02			
	16 58	. .	. .	. .	. .	. .	. .	29.946	70.	65.2
	17 31	. .	. .	. .	. .	. .	. .	29.938	70.	65.
	17 45	. .	. .	. .	. .	. .	. .	29.928	69.5	64.4
	17 59	. .	. .	. .	. .	. .	. .	29.930	69.2	62.8

REMARKS.

(96) 11. Micrometer reading assumed as 34r.844 instead of 35r.844.
(96) 17. Micrometer reading assumed as 43r.162 instead of 33r.162.
(96) 24. Minutes assumed as 9 instead of 10.
(96) 25. Minutes assumed as 9 instead of 10.
(96) 39. "Doubtful declination."
(96) 46. Minutes assumed as 1 instead of 2.
(96) 49. Minutes assumed as 5 instead of 6.

Zone 96. April 22. Maj. $D_0=-29^\circ\ 33'\ 40''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
50	6	. .	. .	. .	. .	. .	46.	58.7	. .	. .	17 6 20.58	− 3.02	−1.00	.	4	44.025	27 41.52	−21.40	− 9.71	17 6 16.56	30 1 52.63
51	7	. .	. .	. .	. .	. .	. .	. .	. .	20.	7 22.76	3.01	0.99	.	3	39.00	36 30.36	21.25	10.83	7 18.76	30 10 42.44
52	7	. .	. .	. .	. .	. .	. .	. .	. .	40.5	30.72	3.00	1.00	.	5	38.082	25 19.41	21.20	9.40	(7) 26.72	29 59 30.01
53	8	. .	10.6	23.	36.2	. .	. .	. .	. .	. .	12 35.98	2.97	0.98	.	2	36.75	46 32.18	20.26	12.14	12 32.03	30 20 44.58
54	8	. .	. .	. .	52.4	4.5	17.4	30.9	. .	. .	52.24	2.96	1.00	.	4	42.37	28 38.46	20.20	9.83	(12) 48.28	30 2 48.49
55	8	. .	. .	. .	. .	. .	. .	. .	. .	46.	14 49.69	2.95	1.02	.	7	40.75	9 15.54	19.90	7.38	14 45.72	29 43 22.82
56	3	. .	. .	37.5	50.4	3.	15.9	. .	. .	. .	17 50.44	2.93	1.02	.	7	40.552	9 22.36	19.31	7.39	17 46.49	29 43 29.06
57	10	61.	. .	. .	. .	. .	. .	. .	. .	. .	20 39.21	2.91	1.00	.	3	43.718	33 47.69	18.79	10.50	20 35.30	30 7 56.98
58	8	. .	. .	. .	. .	14.7	28.	40.7	. .	. .	22 2.38	2.90	0.99	.	3	39.692	36 6.55	18.54	10.78	21 58.49	10 15.87
59	.	. .	. .	. .	. .	. .	. .	. .	. .	. .	22 2.40	2.90	1.00	.	.	. .	. . .	. .	. .	21 58.50	
60	7	. .	. .	. .	. .	. .	. .	20.	. .	. .	22 41.85	2.90	0.99	.	2	42.32	43 20.55	18.42	11.73	22 37.96	17 30.70
61	8	. .	. .	. .	. .	. .	. .	4.5	. .	. .	24 26.35	2.88	0.99	.	2	41.18	43 59.77	18.13	11.81	24 22.48	18 9.71
62	8	. .	. .	. .	. .	. .	. .	. .	. .	6.	24 56.08	2.88	1.00	.	3	43.988	33 38.74	18.01	10.46	24 52.20	7 47.21
63	8	. .	. .	. .	. .	. .	. .	16.	. .	. .	24 37.87	2.88	1.00	.	3	47.88	31 24.83	18.09	10.18	25 33.99	30 5 33.10
64	8	. .	. .	. .	. .	. .	. .	18.	. .	. .	27 39.84	2.86	1.02	.	6	46.66	11 42.66	17.54	7.67	27 35.96	29 45 47.87
65	8	. .	. .	. .	15.	. .	. .	. .	. .	. .	29 14.96	2.85	1.00	.	4	43.42	28 2.33	17.24	9.74	29 11.11	30 2 9.31
66	8	. .	. .	. .	54.8	7.	20.	. .	. .	. .	29 54.64	2.85	1.01	.	6	36.892	17 53.17	17.12	8.47	29 50.78	29 51 58.76
67	9	. .	. .	. .	. .	. .	13.	26.2	. .	. .	30 47.81	2.84	1.00	.	4	33.542	33 42.04	16.96	10.47	30 43.97	30 7 49.47
68	8	. .	. .	. .	. .	21.	34.	47.	. .	. .	32 8.62	2.83	1.01	.	6	29.484	21 33.62	16.71	8.93	32 4.78	29 55 39.26
69	7	. .	. .	. .	56.5	. .	22.	35.	. .	. .	33 56.63	2.82	1.00	.	4	36.907	31 46.41	16.39	10.23	33 52.81	30 5 53.03
70	10	. .	. .	. .	. .	11.	. .	. .	. .	. .	41 58.33	2.76	0.99	.	3	32.572	40 11.48	14.92	11.32	41 54.58	14 17.72
71	9	. .	. .	. .	. .	. .	. .	. .	. .	51.	42 53.76	2.76	0.99	.	3	39.41	36 15.10	14.79	10.80	42 50.01	30 10 20.69
72	8	17.7	. .	43.	. .	. .	. .	. .	. .	. .	45 55.88	2.74	1.00	.	5	38.31	25 11.56	14.22	9.38	45 52.14	29 59 15.16
73	9	26.	. .	51.2	. .	. .	. .	. .	. .	. .	46 4.02	2.74	1.01	.	5	42.972	22 31.16	14.19	9.05	46 0.27	29 56 34.40
74	.	. .	. .	. .	. .	. .	. .	30.	. .	. .	46 51.87	2.73	0.99	.	3	40.052	35 53.82	14.05	10.76	46 48.15	30 9 58.63
75	.	. .	. .	. .	. .	. .	. .	56.4	. .	. .	18.26	2.72	1.00	.	.	. .	. . .	. .	. .	(47) 14.54	
76	.	. .	. .	. .	. .	. .	. .	36.8	. .	. .	48 58.66	2.71	1.00	.	4	42.856	28 21.40	13.65	9.78	48 54.95	2 24.83
77	7	. .	. .	. .	. .	. .	. .	8.2	. .	. .	49 30.08	2.71	0.99	.	2	48.150	39 59.96	13.56	11.30	49 26.38	30 14 4.82
78	8	. .	. .	. .	3.9	. .	28.9	41.2	. .	. .	54 3.53	2.68	1.01	.	6	36.842	17 20.46	12.73	8.38	53 59.84	29 51 21.57
79	8	. .	. .	. .	. .	. .	51.4	4.5	. .	. .	55 26.15	2.67	0.99	.	3	33.615	39 35.63	12.48	11.25	55 22.49	30 13 39.36
80	3	. .	. .	. .	. .	. .	. .	51.3	. .	. .	13.08	2.66	0.98	.	1	38.998	51 5.80	12.34	12.75	56 9.44	25 10.89
81	9	. .	. .	57.2	. .	. .	. .	. .	. .	. .	59 9.87	2.65	0.99	.	3	40.218	35 48.41	11.80	10.75	59 6.23	9 50.96
82	8	. .	. .	. .	. .	. .	. .	58.7	. .	. .	17 59 20.76	− 2.65	−1.00	.	5	36.215	26 23.64	−11.77	− 9.53	17 59 17.11	30 0 24.94

Zone 97. April 25. Maj. $D_0=-28^\circ\ 56'\ 10''$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	8	. .	. .	. .	. .	. .	54.	66.5	. .	. .	12 42 28.59	− 6.49	−1.00	VI.	1	43.62	48 26.62	−47.19	−12.26	12 42 21.10	29 45 36.07
2	8	41.3	55.	67.	20.	. .	. .	. .	. .	. .	45 19.74	6.48	1.00	.	6	41.38	14 44.32	47.27	8.16	45 12.26	11 49.75
3	7	55.7	8.2	21.	33.	46.	. .	. .	. .	. .	47 33.40	6.47	1.00	.	6	35.438	18 8.77	47.34	8.53	47 25.93	15 14.64
4	10	32.	. .	57.9	11.	22.8	. .	. .	. .	. .	51 10.41	6.45	1.00	.	4	38.765	30 45.26	47.43	10.10	51 2.96	27 52.79
5	9	. .	. .	. .	67.	19.8	. .	. .	. .	. .	53 7.10	6.44	1.00	.	5	37.076	25 54.03	47.47	9.49	52 59.66	23 0.99
6	9	. .	. .	32.4	44.	57.5	. .	. .	. .	. .	54 44.63	6.43	1.00	.	4	31.842	34 40.68	47.54	10.59	54 37.20	31 48.81
7	9	. .	. .	. .	. .	. .	50.2	2.	. .	. .	55 24.59	6.43	1.00	.	7	46.518	5 56.94	47.55	7.09	55 17.16	3 1.58
8	9	. .	8.2	21.	33.4	46.5	. .	. .	. .	. .	12 59 33.59	6.40	1.00	.	2	46.99	40 39.87	47.59	11.31	12 59 26.19	37 48.77
9	9	. .	. .	. .	. .	. .	. .	. .	. .	15.	13 1 5.36	6.39	1.00	.	1	38.684	51 15.46	47.62	12.62	13 0 57.97	48 25.70
10	9	. .	. .	. .	. .	33.	45.4	57.2	. .	. .	3 19.96	6.38	1.00	.	5	36.20	26 24.12	47.64	9.57	3 12.58	23 31.33
11	8	. .	. .	. .	. .	33.	45.1	58.	. .	. .	4 20.11	6.37	1.00	.	4	34.614	33 5.31	47.66	10.39	4 12.74	30 13.36
12	7	18.2	31.	43.8	56.5	68.4	21.	34.	. .	. .	13 6 56.13	− 6.36	−1.00	.	5	37.025	25 55.78	−47.69	− 9.49	13 6 48.77	29 23 2.96

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847.	h.	s.	s.	s.	s.	s.	° ′ ″	r.
Apr. 25,	19	−14.07	g 0.020	. .	− 0.238	− 0.341	0 0 0.72	40.169

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1847. h. m.	° ′ ″				″	″	in.	°	°
Zone 97	Apr. 25, 12 42	291 42 27.5	27.6	31.3	34.4	30.25	30.20	30.242	54.2	46.7
	13 58	. .	. .	. .	. .	. .	. .	. .	. .	46.9
		. .	. .	. .	. .	. .	. .	30.234	53.5	
	14 40	. .	. .	. .	. .	. .	. .	30.22	53.8	46.2
	16 44	. .	. .	. .	. .	. .	. .	30.192	52.1	42.8
	17 29	. .	. .	. .	. .	. .	. .	30.126	51.5	42.
	18 22	. .	. .	. .	. .	. .	. .	30.15	50.5	40.5

REMARKS.

(96) 51. Transit over T. 11 assumed as recorded over T. 12.

(96) 63. Minutes assumed as 25 instead of 24.

(96) 66. Micrometer reading assumed as $35^{r}.892$ instead of $36^{r}.892$.

(96) 71. Transit over T. 11 assumed as recorded over T. 12.

(96) 77. "Beautiful double star."

ZONE 97. APRIL 25. MAJ. $D_0 = -28° 56' 10''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
13	7	. .	. .	30.5	43.8	56.	. .	. .	. .	. .	13 8 43.43	− 6.35	−1.00	.	1	39.662	50 42.95	−47.70	−12.56	13 8 36.08	29 47 53.21
14	9	. .	. .	. .	. .	45.	56.	9.5	. .	. .	9 31.57	6.34	1.00	.	3	34.080	39 19.60	47.71	11.14	9 24.23	36 28.45
15	8	. .	7.	19.5	32.	45.	. .	. .	. .	. .	11 32.18	6.33	1.00	.	3	41.002	35 21.47	47.71	10.66	11 24.85	32 29.84
16	10.11	. .	. .	. .	. .	. .	. .	. .	. .	27.	14 17.62	6.31	1.00	.	4	44.545	27 22.50	47.72	9.67	14 10.31	24 29.89
17	9	. .	34.	47.	60.2	12.	24.4	. .	. .	. .	16 59.50	6.30	1.00	.	3	35.752	38 22.10	47.72	11.03	16 52.20	35 30.85
18	9	. .	32.	44.3	57.	9.	. .	. .	. .	. .	20 56.88	6.27	1.00	.	5	37.380	25 43.56	47.72	9.46	20 49.61	22 50.74
19	8	. .	. .	. .	. .	. .	. .	40.	. .	. .	31 2.11	6.21	1.00	.	4	34.012	33 26.03	47.63	10.42	30 54.90	30 34.08
20	8	. .	. .	. .	. .	7.4	20.	32.	. .	. .	32 54.61	6.20	1.00	.	7	36.17	11 53.12	47.61	7.76	32 47.41	8 58.49
21	9	. .	. .	. .	. .	. .	44.5	. .	. .	. .	19.32	6.19	1.00	.	5	44.715	21 31.05	47.60	8.94	(33) 12.13	18 37.59
22	6.7	. .	. .	. .	. .	. .	5.	17.9	. .	. .	34 39.88	6.18	1.00	.	4	42.92	28 19.53	47.56	9.80	34 32.70	25 26.89
23	9	. .	. .	54.2	. .	. .	. .	. .	. .	. .	37 6.75	6.17	1.00	.	2	41.104	44 2.34	47.53	11.75	36 59.58	41 11.62
24	8	. .	. .	. .	54.	6.	18.8	. .	. .	. .	37 53.62	6.16	1.00	.	2	37.71	45 59.16	47.51	11.98	37 46.46	43 8.65
25	10	. .	44.	. .	. .	. .	. .	. .	. .	. .	40 9.22	6.15	1.00	.	4	37.18	31 36.88	47.47	10.20	40 2.07	28 44.55
26	8	41.5	54.	66.	19.	30.5	. .	. .	. .	. .	42 18.81	6.13	1.00	.	7	38.532	10 31.85	47.41	7.63	42 11.68	7 36.89
27	8	. .	. .	. .	. .	. .	. .	21.	. .	. .	42 43.00	6.13	0.99	.	1	37.20	52 7.66	47.40	12.73	42 35.88	49 17.79
28	8	. .	. .	. .	. .	. .	. .	45.	. .	. .	43 7.09	6.13	1.00	.	2	41.31	43 55.29	47.39	11.72	42 59.96	41 4.40
29	8	. .	. .	. .	. .	. .	. .	61.5	. .	. .	43 23.61	6.12	1.00	.	3	36.08	38 10.82	47.38	11.01	43 16.49	35 19.21
30	8	. .	. .	. .	. .	. .	48.5	. .	. .	. .	45 23.20	6.11	1.00	.	4	30.715	35 19.46	47.34	10.67	45 16.09	32 27.47
31	8	. .	. .	. .	. .	. .	. .	64.5	. .	. .	45 26.59	6.11	1.00	.	6	33.938	19 0.38	47.34	8.66	45 19.48	16 6.38
32	8	. .	. .	. .	45.	58.	70.	23.	. .	. .	47 45.13	6.10	1.00	.	7	36.61	11 37.98	47.28	7.76	47 38.03	8 43.02
33	8	. .	24.4	37.	49.	61.5	. .	. .	. .	. .	49 49.26	6.08	1.00	.	5	41.615	23 17.85	47.22	9.18	49 42.18	20 24.25
34	8	. .	. .	. .	. .	42.4	55.	7.8	. .	. .	50 29.82	6.08	1.00	.	4	43.17	28 10.93	47.19	9.78	50 22.74	25 17.90
35	8	. .	. .	. .	. .	. .	25.	. .	. .	. .	53 59.58	6.05	0.99	.	1	31.87	55 11.03	47.09	13.16	53 52.54	52 21.28
36	7.8	. .	. .	. .	. .	. .	. .	30.9	. .	. .	13 55 52.98	6.04	1.00	.	7	33.426	13 27.54	47.03	7.97	13 55 45.94	10 32.54
37	8.9	50.	2.	14.8	27.4	. .	. .	. .	. .	. .	14 0 27.48	6.01	1.00	.	5	37.07	25 54.23	46.84	9.49	14 0 20.47	23 0.56
38	6.7	. .	24.	37.	49.8	62.	. .	. .	. .	. .	1 49.50	6.00	1.00	.	5	38.025	25 21.37	46.80	9.42	1 42.50	22 27.59
39	7	. .	. .	. .	. .	. .	10.9	23.8	. .	. .	2 45.84	5.99	1.01	.	7	44.126	7 19.40	46.76	7.23	2 38.84	4 23.39
40	10	. .	. .	. .	23.	. .	48.	. .	. .	. .	4 22.91	5.98	1.00	.	5	46.262	20 37.96	46.66	8.85	4 15.93	17 43.47
41	9	. .	. .	. .	44.9	57.2	70.	. .	. .	. .	5 44.73	5.98	1.00	.	3	46.834	32 0.81	46.60	10.25	5 37.75	29 7.66
42	8	. .	. .	. .	20.7	33.	45.4	. .	. .	. .	7 20.53	5.96	1.01	.	7	41.02	9 6.25	46.53	7.45	7 13.56	6 10.23
43	9	. .	. .	. .	. .	. .	. .	50.5	. .	. .	9 12.59	5.95	1.00	.	6	33.587	19 12.12	46.46	8.67	9 5.64	16 17.25
44	10	8.5	21.5	. .	45.8	. .	. .	. .	. .	. .	11 46.28	5.93	1.00	.	5	41.552	23 20.02	46.33	9.18	11 39.35	20 25.53
45	10	28.8	41.4	53.	66.	18.	31.5	. .	. .	. .	14 6.10	5.92	1.00	.	4	44.255	27 33.61	46.22	9.69	13 59.18	24 39.52
46	9	42.2	. .	67.4	20.	33.	. .	. .	. .	. .	17 20.14	5.89	1.00	.	3	34.52	39 4.50	46.05	11.14	17 13.25	36 11.69
47	9	. .	14.	26.7	39.8	52.3	. .	. .	. .	. .	19 39.54	5.88	0.99	.	1	37.642	51 52.45	45.92	12.74	19 32.67	49 1.11
48	8	. .	. .	. .	49.	61.5	. .	. .	. .	. .	20 49.06	5.87	1.01	.	7	48.254	4 57.36	45.85	6.94	20 42.18	2 0.15
49	9	. .	. .	63.4	77.4	29.	42.	. .	. .	. .	21 16.63	5.86	1.00	.	4	42.73	28 26.07	45.82	9.82	22 9.77	25 31.71
50	9	. .	. .	. .	. .	. .	. .	34.2	. .	. .	23 56.30	5.84	1.00	.	2	43.50	42 39.62	45.67	11.58	23 49.46	39 46.87
51	7	. .	. .	15.2	28.	40.3	. .	. .	. .	. .	28 27.82	5.81	1.00	.	3	43.10	34 9.29	45.39	10.52	28 21.01	31 15.20
52	7	. .	. .	. .	60.	11.8	25.	. .	. .	. .	32 59.76	5.78	1.01	.	7	41.54	5 56.19	45.11	7.02	32 52.97	2 58.32
53	7	. .	. .	8.	20.9	. .	. .	. .	. .	. .	34 20.74	5.76	0.99	.	1	42.28	49 12.88	45.02	12.41	34 13.99	46 20.31
54	7	. .	. .	. .	. .	52.3	. .	. .	. .	. .	34 39.71	5.76	1.00	.	3	38.69	36 41.02	45.00	10.84	34 32.95	33 46.86
55	7	. .	. .	. .	. .	. .	. .	33.8	. .	. .	34 55.90	5.76	1.01	.	5	40.41	23 59.31	44.97	9.26	34 49.13	21 3.54
56	7.8	. .	. .	22.8	35.7	. .	. .	. .	. .	. .	38 35.52	5.74	0.99	.	2	38.042	45 47.73	44.71	11.99	38 28.79	42 54.43
57	7.8	. .	. .	. .	. .	34.	46.3	. .	. .	. .	39 21.16	5.73	0.99	.	1	41.025	49 56.05	44.66	12.51	39 14.44	47 3.22
58	7.8	. .	. .	. .	. .	. .	8.5	21.	. .	. .	39 43.05	5.73	0.99	.	1	37.75	51 48.73	44.63	12.75	39 36.33	48 56.11
59	9	. .	. .	16.8	30.	42.	54.8	. .	. .	. .	47 29.61	5.67	1.00	.	5	40.98	23 39.70	44.05	9.22	47 22.94	20 42.97
60	9	. .	. .	46.2	59.	11.3	. .	. .	. .	. .	50 58.83	5.64	0.99	.	1	43.95	48 15.41	43.78	12.30	50 52.20	45 21.49
61	9	. .	. .	. .	. .	. .	. .	22.	. .	. .	14 54 44.09	− 5.62	−1.00	.	6	35.542	18 4.86	−43.46	− 8.53	14 54 37.47	29 15 6.85

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847. h.	s.	s.	s.	s.	s.	° ′ ″	s.

REMARKS.

(97) 49. Minutes assumed as 22 instead of 21.
(97) 52. Micrometer reading assumed as 46r.54 instead of 41r.54.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1847. h. m.	° ′ ″				″	″	in.	°	°

ZONE 97. APRIL 25. MAJ. D₀=−28° 56′ 10″—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
62	9	. .	. .	. .	. .	. .	. .	11.	. .	. .	14 55 33.10	− 5.61	−1.00	.	5	38.304	25 11.44	−43.40	− 9.40	14 55 26.49	29 22 14.24
63	7	. .	. .	. .	. .	. .	48.5	60.7	. .	. .	14 56 23.03	5.60	1.00	.	5	35.542	26 46.80	43.33	9.59	14 56 16.43	23 49.72
64	10	. .	. .	. .	. .	51.2	67.	79.4	. .	. .	15 4 41.67	5.54	1.01	.	6	41.938	14 25.09	42.59	8.07	15 4 35.12	11 25.75
65	5.6	. .	24.5	36.5	50.7	62.	74.6	. .	. .	. .	8 49.64	5.51	1.00	.	3	35.572	38 28.30	42.21	11.07	8 43.13	35 31.58
66	9	. .	. .	. .	. .	. .	. .	21.	. .	. .	10 43.11	5.50	1.00	.	4	33.085	33 57.59	42.04	10.50	10 36.61	31 0.13
67	9	. .	. .	. .	. .	. .	. .	34.	. .	. .	10 56.11	5.50	1.00	.	4	29.04	36 16.76	42.02	10.79	10 49.61	33 19.57
68	9	. .	. .	. .	. .	40.5	52.	. .	. .	. .	13 27.26	5.48	0.99	.	2	35.60	47 11.71	41.77	12.16	13 20.79	44 15.64
69	8	. .	. .	26.5	39.3	52.	5.	. .	. .	. .	19 39.47	5.43	1.01	.	7	36.51	5 22.66	41.15	6.97	19 33.03	2 20.78
70	9	. .	. .	33.	46.	58.2	. .	. .	. .	. .	23 45.82	5.40	1.01	.	7	45.182	6 43.06	40.72	7.11	23 39.41	3 40.89
71	9	. .	. .	. .	. .	. .	28.5	41.	. .	. .	24 3.23	5.39	1.01	.	6	46.61	11 44.23	40.70	7.73	23 56.83	8 42.66
72	9	. .	. .	. .	. .	. .	13.4	26.	. .	. .	24 48.19	5.39	1.01	.	7	44.49	7 6.72	40.62	7.16	26 41.79	4 4.50
73	4	. .	9.	20.9	33.8	46.	58.8	71.	. .	. .	29 33.62	5.35	1.01	.	6	32.61	19 46.07	40.12	8.73	29 27.26	16 44.92
74	9	. .	. .	. .	61.	. .	. .	. .	. .	. .	30 48.49	5.34	1.01	.	6	35.43	18 9.04	39.96	8.53	30 42.14	15 7.53
75	9	. .	. .	. .	. .	. .	40.	52.	. .	. .	31 14.42	5.34	1.00	.	4	37.542	31 24.42	39.94	10.18	31 8.08	28 24.54
76	7.8	. .	. .	. .	. .	59.6	. .	24.6	. .	. .	32 46.86	5.33	0.99	.	2	43.88	42 26.83	39.78	11.56	32 40.54	39 28.17
77	9	. .	. .	. .	. .	. .	. .	50.4	. .	. .	35 12.48	5.31	0.99	.	1	47.694	46 6.27	39.50	12.03	35 6.18	43 7.80
78	5.6	. .	. .	25.8	37.9	50.6	. .	. .	. .	. .	36 38.09	5.30	1.00	.	2	53.685	36 49.52	39.33	10.86	36 31.79	33 49.71
79	8	. .	. .	. .	. .	. .	. .	40.5	. .	. .	49 2.50	5.27	0.99	.	2	34.84	47 37.91	38.96	12.23	39 56.24	44 39.10
80	8	. .	. .	. .	53.2	66.	17.8	. .	. .	. .	41 53.03	5.26	1.00	.	3	42.535	34 28.73	38.74	10.56	41 46.77	31 28.03
81	6	. .	. .	. .	. .	16.2	28.9	41.	. .	. .	43 3.46	5.25	1.00	.	5	32.50	28 31.47	38.61	9.82	42 57.21	25 29.90
82	9	. .	. .	. .	. .	. .	. .	20.	. .	. .	43 42.10	5.24	1.00	.	5	34.31	27 29.19	38.54	9.70	43 35.86	24 27.43
83	9	. .	. .	. .	. .	. .	. .	24.	. .	. .	46.10	5.24	1.00	.	5	36.52	26 12.82	38.50	9.52	43 39.86	23 10.84
84	8	28.4	41.	53.4	66.4	. .	31.	. .	. .	. .	48 6.13	5.21	1.00	.	3	39.726	36 5.38	38.00	10.77	47 59.92	33 4.15
85	10	. .	36.5	. .	. .	. .	. .	. .	. .	. .	50 1.75	5.20	1.00	.	3	40.874	35 25.72	37.77	10.68	49 55.55	32 24.17
86	7	. .	. .	. .	. .	39.	. .	4.2	. .	. .	50 26.36	5.19	0.99	.	2	44.925	41 50.92	37.72	11.50	50 20.18	38 50.14
87	7	. .	. .	. .	. .	39.	. .	. .	. .	. .	26.47	5.19	1.01	.	6	41.050	14 55.68	37.70	8.12	50 20.27	11 51.50
88	8	. .	. .	. .	. .	61.	. .	. .	. .	. .	53 48.41	5.17	0.98	.	1	34.96	53 24.73	37.30	12.99	53 42.26	50 25.02
89	8	. .	. .	. .	. .	32.	44.5	. .	. .	. .	15 54 19.28	5.17	0.99	.	2	37.95	45 50.90	37.24	12.00	15 54 13.12	42 50.14
90	8	. .	. .	. .	. .	. .	. .	. .	. .	38.2	16 16 28.68	4.99	0.99	.	3	37.25	37 30.57	34.20	10.95	16 16 22.70	34 25.72
91	10	. .	. .	. .	. .	. .	. .	. .	. .	15.	20 18.20	4.97	1.00	.	3	41.88	34 50.13	33.69	10.61	20 12.23	31 44.43
92	7	. .	. .	. .	. .	. .	. .	. .	. .	80.5	22 24.56	4.95	1.02	.	7	35.86	12 3.79	33.48	7.75	21 18.59	8 55.02
93	8	. .	. .	. .	. .	. .	. .	. .	. .	0.	22 50.49	4.95	0.99	.	3	38.88	36 34.48	33.29	10.83	22 44.55	33 28.60
94	.	. .	. .	. .	. .	49.5	. .	14.	. .	. .	24 49.12	4.94	1.00	.	4	33.76	33 33.65	33.01	10.46	24 43.18	30 27.12
95	8	. .	. .	. .	. .	. .	. .	. .	. .	14.5	25 5.38	4.92	1.01	.	6	39.332	15 54.79	32.80	8.23	25 59.45	12 45.82
96	9	. .	59.2	10.	22.9	. .				. .	29 22.64	4.90	0.99	.	3	36.41	37 59.46	32.29	11.03	29 16.75	34 52.78
97	7.8	. .	. .	41.	54.3	7.	. .	. .	. .	. .	28 54.09	4.90	0.99	.	3	32.398	40 17.51	32.22	11.31	29 48.20	37 11.04
98	9	. .	. .	. .	. .	. .	. .	59.5	. .	. .	32 21.58	4.88	1.02	.	7	35.44	12 17.91	31.81	7.76	32 15.68	9 7.48
99	8	. .	. .	. .	. .	. .	60.5	12.4	. .	. .	34 34.90	4.86	1.01	.	5	45.55	21 2.47	31.46	8.87	34 29.03	17 52.80
100	8	. .	. .	. .	. .	. .	36.	48.9	. .	. .	36 10.93	4.85	1.02	.	6	45.302	12 29.39	31.22	7.79	36 5.06	9 18.40
101	8	. .	. .	. .	. .	54.4	7.8	20.4	. .	. .	37 42.32	4.84	1.01	.	5	43.854	22 0.81	30.98	8.99	37 36.47	18 50.78
102	9	. .	. .	. .	. .	. .	. .	. .	. .	19.5	38 9.94	4.83	0.99	.	2	43.182	42 49.76	30.90	11.59	38 4.12	39 42.25
103	9	. .	. .	. .	. .	. .	. .	1.2	. .	. .	39 51.63	4.82	0.99	.	2	38.635	45 26.20	30.61	11.97	39 45.82	42 18.78
104	8	. .	. .	. .	56.	9.7	20.2	. .	. .	. .	41 55.98	4.81	0.98	.	1	37.182	52 8.28	30.28	12.83	41 50.19	49 1.39
105	8	. .	. .	. .	. .	. .	. .	. .	. .	20.5	42 11.45	4.80	1.02	.	7	35.92	12 1.72	30.23	7.74	42 5.63	8 49.69
106	8	. .	. .	. .	. .	. .	. .	28.5	. .	. .	43 50.56	4.79	0.98	.	2	36.61	46 37.00	29.95	12.12	43 44.79	43 29.07
107	8	. .	. .	. .	. .	. .	. .	25.	. .	. .	44 47.08	4.78	1.02	.	7	37.33	11 13.21	29.80	7.63	44 41.28	8 0.64
108	8	. .	. .	. .	. .	47.6	1.5	. .	. .	. .	45 35.59	4.78	0.99	.	3	33.30	39 46.47	29.66	11.25	45 29.82	36 37.38
109	9	44.	57.4	70.	. .	. .	. .	. .	. .	. .	48 22.36	4.76	1.01	.	5	38.738	24 56.80	29.20	9.37	48 16.59	21 45.37
110	9	. .	. .	. .	. .	. .	66.	78.9	. .	. .	16 48 40.84	− 4.75	−0.99	.	3	32.545	40 12.30	−29.14	−11.30	16 48 35.10	29 37 2.74

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847.	h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

Date.		CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
1847.	h. m.	° ′ ″				″	″	in.	°	°

REMARKS.

(97) 64. Transit over T. V assumed as at $54^s.2$ instead of $51^s.2$.

(97) 69. Micrometer reading assumed as $47^r.51$ instead of $36^r.51$.

(97) 72. Minutes assumed as 26 instead of 24.

(97) 74. Transit over T. V assumed as recorded over T. IV.

(97) 91. Transit over T. 11 assumed as recorded over T. 12.

(97) 92. Transit over T. 11 assumed as recorded over T. 12, and minutes as 21 instead of 22.

(97) 94. Transits over T.'s IV and VI assumed as recorded over T.'s V and VII.

(97) 95. Minutes assumed as 26 instead of 25.

(97) 96. Transit over T. II assumed as at $57^s.2$ instead of $59^s.2$.

(97) 97. Minutes assumed as 29 instead of 28.

ZONE 97. APRIL 25. MAJ. $D_0 = -28° 56' 10''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.				′ ″	″	″	h. m. s.	° ′ ″
111	8	. .	. .	. .	. .	. .	. .	41.2	. .	. .	16 49 3.28	− 4.75	−1.02	.	7	33.92	13 10.53	−29.08	− 7.88	16 48 57.51	29 9 57.49
112	8	. .	. .	. .	37.3	. .	62.	. .	. .	. .	51 37.00	4.74	1.00	.	4	40.802	29 32.40	28.65	9.94	51 31.26	26 20.99
113	9	. .	. .	. .	48.	. .	73.	. .	. .	. .	47.84	4.74	1.00	.	4	39.30	30 24.09	28.60	10.05	51 42.10	27 12.74
114	8.	. .	. .	. .	. .	. .	. .	. .	. .	22.	53 13.04	4.72	1.02	.	7	42.45	8 17.06	28.36	7.29	53 7.30	5 2.71
115	7.8	. .	. .	28.	40.3	. .	. .	. .	. .	. .	55 40.44	4.71	0.98	.	1	37.552	51 55.55	27.94	12.81	55 34.75	48 46.30
116	8	. .	. .	. .	. .	. .	. .	32.5	. .	. .	16 59 54.58	4.68	0.99	.	2	39.15	45 9.62	27.20	11.95	16 59 48.91	41 58.77
117	9	. .	. .	. .	. .	18.5	31.	. .	. .	. .	17 7 5.80	4.62	0.99	.	3	39.15	36 25.16	25.92	10.82	17 7 0.19	33 11.90
118	8	. .	. .	43.	55.6	8.1	. .	34.	. .	. .	8 55.68	4.61	0.98	.	2	38.71	45 24.75	25.59	11.97	8 50.09	42 12.31
119	8	. .	. .	. .	. .	. .	. .	37.5	. .	. .	59.52	4.61	0.98	.	1	39.118	51 1.68	25.58	12.70	8 53.93	47 49.96
120	8	. .	. .	. .	. .	. .	. .	42.5	. .	. .	10 4.58	4.60	1.02	.	7	37.64	11 2.55	25.39	7.61	9 58.96	7 45.55
121	7	. .	. .	. .	. .	14.5	27.	. .	. .	. .	11 1.92	4.60	1.02	.	6	40.198	15 25.00	25.21	8.16	10 56.30	12 8.37
122	8	. .	. .	. .	. .	. .	32.	. .	. .	. .	11 6.89	4.60	1.02	.	7	38.165	10 44.49	25.19	7.56	11 1.27	7 27.24
123	7	48.6	. .	13.5	. .	. .	. .	. .	. .	. .	14 26.31	4.57	0.98	.	2	42.13	43 27.09	24.60	11.74	14 20.76	40 13.43
124	7	. .	. .	. .	51.	63.4	15.7	. .	. .	. .	14 50.72	4.57	0.99	.	2	46.56	46 45.61	24.52	11.40	14 45.16	43 32.22
125	7	. .	. .	. .	. .	. .	. .	40.	. .	. .	16 2.11	4.56	0.99	.	3	40.745	34 55.34	24.31	10.71	15 56.56	31 40.36
126	7	. .	. .	. .	. .	. .	. .	31.	. .	. .	17 53.06	4.55	0.98	.	2	36.48	46 41.47	23.96	12.14	17 47.53	43 27.57
127	7	. .	26.8	39.8	52.4	64.6	. .	. .	. .	. .	29 52.20	4.47	1.00	.	4	40.965	29 26.80	21.75	9.93	29 46.73	26 8.48
128	9	. .	. .	11.8	24.9	37.	. .	. .	. .	. .	31 24.56	4.46	1.00	.	3	43.475	33 56.39	21.47	10.50	31 19.10	30 38.36
129	8	. .	34.	45.9	58.8	10.	. .	. .	. .	. .	32 58.48	4.45	1.00	.	5	39.32	24 36.82	21.18	9.33	32 53.03	21 17.33
130	9	. .	. .	. .	. .	. .	54.	6.5	. .	. .	34 28.72	4.43	1.01	.	6	37.095	17 11.61	20.91	8.36	34 23.28	13 50.88
131	9	. .	. .	. .	. .	12.5	. .	. .	. .	. .	36 47.13	4.42	0.98	.	1	41.001	49 56.84	20.44	12.57	35 41.73	46 39.85
132	8	. .	. .	. .	. .	21.	33.	. .	. .	. .	37 8.02	4.42	0.98	.	2	34.105	48 3.20	20.37	12.34	37 2.62	44 45.91
133	8	. .	. .	. .	. .	. .	. .	49.5	. .	. .	11.60	4.42	1.01	.	5	42.109	23 0.86	20.36	9.13	37 6.17	19 40.35
134	.	. .	. .	. .	. .	. .	. .	5.4	. .	. .	27.50	4.41	1.00	.	.	. .	. . .	. .	. .	(38) 22.09	
135	9	. .	. .	. .	58.2	. .	. .	. .	. .	. .	39 58.17	4.40	1.00	.	4	46.685	26 9.99	19.85	9.52	39 52.77	22 49.36
136	9	. .	. .	. .	60.3	. .	. .	. .	. .	. .	39 0.34	4.40	1.01	.	5	49.61	18 42.78	19.85	8.57	39 54.93	15 21.20
137	8	. .	. .	. .	. .	26.	38.7	51.	. .	. .	41 13.37	4.39	1.01	.	6	37.638	16 53.08	19.62	8.33	41 7.97	13 31.03
138	8	. .	. .	. .	58.5	10.	23.	. .	. .	. .	42 57.87	4.38	1.00	.	4	33.60	33 40.19	19.28	10.48	42 52.49	30 19.95
139	9	. .	. .	. .	53.	. .	. .	. .	. .	. .	44 53.04	4.37	0.98	.	1	37.125	52 10.24	18.92	12.85	44 47.69	48 52.01
140	8	. .	. .	. .	. .	51.	3.8	. .	. .	. .	45 38.40	4.36	0.98	.	1	41.102	49 53.40	18.77	12.57	45 33.06	46 34.74
141	8	. .	. .	. .	. .	. .	16.	. .	. .	. .	45 50.72	4.36	1.00	.	4	34.81	32 58.57	18.73	10.39	45 45.36	29 37.69
142	8	. .	. .	. .	. .	. .	18.	. .	. .	. .	45 52.74	4.36	1.00	.	.	. .	. . .	. .	. .	45 47.38	
143	8	. .	. .	. .	. .	59.5	. .	24.	. .	. .	49 46.52	4.34	1.01	.	5	47.922	19 40.85	18.00	8.69	49 31.17	16 17.54
144	8	. .	. .	. .	. .	. .	. .	35.5	. .	. .	50 57.52	4.33	0.97	.	1	37.709	51 50.14	17.77	12.80	50 52.22	48 30.71
145	8	. .	. .	. .	. .	. .	. .	22.	. .	. .	51 44.10	4.32	1.01	.	5	42.22	22 57.04	17.62	9.12	51 38.77	19 33.78
146	8	. .	. .	. .	. .	. .	. .	22.	. .	. .	51 44.10	4.32	1.00	.	.	. .	. . .	. .	. .	51 38.78	
147	8	. .	. .	. .	. .	. .	. .	. .	. .	54.	51 57.18	4.32	0.99	.	3	36.701	37 49.45	17.62	11.02	51 51.87	34 28.09
148	5	53.6	. .	19.2	32.	44.4	56.	. .	. .	. .	54 31.56	4.30	0.99	.	3	36.14	38 8.75	16.95	11.06	55 26.27	34 46.76
149	8	. .	. .	. .	. .	. .	. .	50.	. .	. .	56 12.10	4.29	1.01	.	6	32.03	20 6.03	16.76	8.73	56 6.80	16 41.52
150	8	. .	. .	. .	. .	. .	. .	12.	. .	. .	17 56 34.10	4.29	1.00	.	5	31.85	28 53.82	16.69	9.86	17 56 28.81	25 30.37
151	8	. .	. .	38.	50.7	3.	. .	. .	. .	. .	18 0 50.62	4.27	1.01	.	6	37.010	17 14.69	15.86	8.35	18 0 45.34	13 48.90
152	.	. .	. .	. .	. .	. .	59.	11.	. .	. .	1 33.30	4.26	0.98	.	1	41.35	49 44.72	15.73	12.57	1 28.06	46 23.02
153	.	. .	. .	. .	. .	. .	. .	84.	. .	. .	1 46.10	4.26	0.98	.	2	42.79	43 4.05	15.69	11.73	1 40.86	39 41.47
154	8	. .	. .	. .	. .	. .	. .	28.	. .	. .	2 50.12	4.25	0.99	.	2	49.52	39 12.83	15.47	11.21	2 44.88	35 49.51
155	8	. .	. .	. .	. .	39.6	. .	5.	. .	. .	4 27.06	4.24	1.00	.	3	47.35	31 43.07	15.15	10.22	4 21.82	28 18.44
156	6	. .	. .	. .	. .	. .	. .	13.	. .	. .	5 34.97	4.24	0.97	.	1	32.194	54 59.89	14.94	13.25	5 29.76	51 38.08
157	.	. .	. .	. .	. .	. .	. .	7.	. .	. .	6 29.08	4.23	1.02	.	7	30.65	15 2.71	14.76	8.08	6 23.83	11 35.55
158	.	. .	. .	. .	. .	. .	. .	23.8	. .	. .	6 45.88	4.23	1.02	.	7	35.11	12 29.27	14.71	7.76	6 40.63	9 1.74
159	8	. .	. .	. .	. .	. .	53.6	65.	. .	. .	18 8 27.76	− 4.22	−1.01	.	5	44.578	21 35.92	−14.37	− 8.91	18 8 22.53	29 18 9.20

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847.	h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.	CIRCLE.					Mean.	Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.				
	1847. h. m.	′ ″				″	″	in.	°	°

REMARKS.

(97) 124. Hor. thread assumed as 1 instead of 2.

(97) 125. Micrometer reading assumed as 41ʳ.745 instead of 40ʳ.745.

(97) 131. Transit over T. VI assumed as recorded over T. V, and minutes as 35 instead of 36.

(97) 136. Minutes assumed as 40 instead of 39.

(97) 147. Transit over T. 11 assumed as recorded over T. 12.

(97) 148. Minutes assumed as 55 instead of 54.

ZONE 97. APRIL 25. MAJ. D$_\circ$=−28° 56′ 10″—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
160	8	. .	. .	. .	. .	. .	9.	20.9	. .	. .	18 9 43.29	− 4.21	−0.98	.	1	45.68	47 15.89	−14.12	−12.24	18 9 38.10	29 43 52.25
161	8	. .	. .	. .	. .	. .	. .	50.6	. .	. .	10 12.69	4.21	0.98	.	2	41.64	43 43.94	14.03	11.79	10 7.50	40 19.76
162	8	. .	. .	. .	. .	. .	. .	. .	. .	7.5	11 58.50	4.20	1.02	.	7	37.036	10 47.78	13.68	7.72	10 53.28	7 19.18
163	8	. .	. .	32.5	. .	. .	. .	. .	. .	. .	14 45.15	4.18	1.02	.	6	44.615	12 53.03	13.13	7.79	14 39.95	9 23.95
164	9	. .	. .	. .	. .	. .	. .	33.	. .	. .	14 55.07	4.18	0.98	.	2	37.38	46 10.18	13.10	12.11	14 49.91	42 45.39
165	9	. .	. .	. .	. .	. .	. .	35.6	. .	. .	14 57.69	4.18	0.98	.	2	39.788	44 47.34	13.09	11.94	14 52.53	41 22.37
166	8	. .	. .	23.8	36.	49.	. .	. .	. .	. .	17 36.26	4.17	0.99	.	2	50.48	38 39.79	12.57	11.14	17 31.10	35 3.50
167	8	. .	19.	. .	44.	. .	. .	. .	. .	. .	19 44.08	4.15	1.00	.	4	40.735	29 34.71	12.14	9.95	19 38.93	26 6.80
168	8	. .	19.	. .	44.8	. .	. .	. .	. .	. .	19 44.48	4.15	1.01	.	5	40.110	24 9.64	12.14	9.26	19 39.32	20 41.04
169	9	. .	. .	. .	. .	. .	28.	38.5	. .	. .	20 1.68	4.15	1.00	.	4	44.082	27 39.41	12.09	9.71	19 56.53	24 11.21
170	8	. .	. .	. .	46.7	59.	11.8	. .	. .	. .	18 22 46.61	− 4.14	−1.01	.	5	45.954	20 48.56	−11.53	− 8.83	18 22 41.46	29 17 18.92
ZONE 98. MAY 4. MAJ. D$_\circ$=−25° 51′ 50″.																					
1	8	31.	13.2	54.5	7.5	19.2	. .	. .	. .	. .	12 6 7.36	−11.23	−1.00	IV.	3	37.807	37 11.40	− 5.06	− 5.68	12 5 55.13	26 29 12.14
2	10	. .	. .	. .	. .	. .	. .	18.	. .	. .	6 41.19	11.22	1.00	.	3	35.817	38 19.57	5.09	5.78	6 28.97	30 20.44
3	8	. .	. .	27.2	40.	52.	4.5	. .	. .	. .	8 39.76	11.22	1.00	.	2	41.27	43 56.67	5.19	6.32	8 27.54	35 58.18
4	9	. .	. .	. .	. .	43.8	55.4	7.6	. .	. .	9 31.08	11.22	1.00	.	4	44.93	27 10.34	5.24	4.74	9 18.86	19 10.32
5	8	. .	. .	. .	. .	14.9	27.2	39.3	. .	. .	14 2.60	11.20	1.00	.	3	42.68	34 23.74	5.42	5.42	13 50.40	26 24.58
6	9	. .	. .	. .	. .	. .	. .	19.8	. .	. .	15 42.94	11.20	0.99	.	7	40.59	9 20.75	5.52	3.11	15 30.75	26 1 19.38
7	8	. .	. .	. .	. .	59.	11.	23.8	. .	. .	17 59.08	11.20	0.99	.	7	45.258	6 40.45	5.62	2.87	17 46.89	25 58 38.94
8	8	. .	. .	. .	. .	11.2	24.	36.6	. .	. .	18 59.41	11.19	1.00	.	4	41.743	29 0.03	5.67	4.91	18 47.22	26 21 0.61
9	9	. .	. .	. .	. .	. .	32.	45.	. .	. .	21 7.84	11.18	1.00	.	5	40.602	23 52.57	5.75	4.44	20 55.66	15 52.76
10	9	. .	. .	30.9	. .	55.	7.4	. .	. .	. .	22 42.95	11.18	1.00	.	5	41.53	23 20.77	5.82	4.39	22 30.77	15 20.98
11	8	. .	. .	15.7	28.	40.8	. .	. .	. .	. .	24 28.16	11.17	1.01	.	1	37.039	52 13.20	5.88	7.08	24 15.98	44 16.16
12	8	54.2	7.	18.9	. .	. .	. .	. .	. .	. .	26 31.25	11.17	1.00	.	4	41.527	29 7.46	5.95	4.92	26 19.08	21 8.33
13	9	. .	. .	35.	47.2	58.9	. .	. .	. .	. .	26 47.06	11.17	1.00	.	5	46.317	20 36.07	5.96	4.13	26 34.89	12 36.16
14	9	. .	. .	. .	33.8	45.8	57.7	10.	. .	. .	28 33.41	11.16	1.00	.	2	41.154	44 0.66	6.02	6.32	28 21.25	36 3.00
15	6	. .	. .	. .	57.	9.	22.	34.6	. .	. .	29 57.26	11.16	1.00	.	4	46.12	26 29.43	6.07	4.68	29 45.10	18 30.18
16	8	. .	. .	. .	. .	. .	4.	. .	. .	. .	33 39.34	11.14	1.00	.	1	42.168	49 16.74	6.19	6.81	33 27.20	41 19.74
17	.	. .	. .	27.	. .	. .	. .	. .	. .	. .	34 39.25	11.14	1.00	.	.	. .	. . .	. .	. .	34 27.11	
18	.	. .	. .	. .	7.5	. .	32.	. .	. .	. .	40 7.43	11.12	1.00	.	1	36.12	52 44.81	6.35	7.14	39 55.31	44 48.30
19	6	. .	. .	27.	. .	52.	. .	. .	. .	. .	40 39.46	11.12	1.00	.	1	33.04	54 30.78	6.37	7.30	40 27.34	46 34.45
20	10	9.	21.	33.5	46.	58.	. .	. .	. .	. .	44 45.77	11.10	1.00	.	5	43.619	22 8.90	6.46	4.28	44 33.67	14 9.64
21	8	. .	. .	. .	. .	4.	16.4	. .	. .	. .	45 51.78	11.10	1.00	.	2	42.632	43 9.81	6.50	6.23	45 39.68	35 12.54
22	8	. .	. .	. .	. .	6.	. .	30.	. .	. .	48 53.48	11.09	1.00	.	2	44.492	42 5.82	6.57	6.13	48 41.39	34 8.52
23	9	. .	. .	. .	. .	. .	34.4	47.	. .	. .	50 10.03	11.09	1.00	.	4	47.50	25 41.96	6.59	4.60	49 57.94	17 43.15
24	9	. .	. .	. .	. .	. .	. .	48.7	. .	. .	50 11.85	11.09	1.00	.	6	41.038	14 55.80	6.59	3.61	49 59.76	6 56.00
25	9	. .	. .	. .	50.	2.	14.2	. .	. .	. .	54 49.80	11.07	1.00	.	5	27.28	31 31.07	6.69	5.14	54 37.73	23 32.90
26	9	. .	. .	. .	48.	60.	13.	. .	. .	. .	12 56 48.15	11.06	1.00	.	6	43.336	13 37.03	6.73	3.49	12 56 36.09	5 37.25
27	8	. .	. .	. .	. .	. .	. .	51.7	. .	. .	13 10 14.84	11.01	1.00	.	7	37.75	10 58.76	7.00	3.25	13 10 2.83	2 59.01
28	9	. .	. .	14.	. .	38.	. .	. .	. .	. .	12 26.00	11.00	1.00	.	3	41.27	35 12.25	7.04	5.49	12 14.00	27 14.78
29	8	. .	. .	. .	28.	40.	. .	. .	. .	. .	12 27.90	11.00	1.00	.	2	39.26	45 5.83	7.04	6.42	12 15.90	37 9.29
30	9	46.	58.	10.	22.8	34.8	. .	. .	. .	. .	15 22.58	10.99	1.00	.	6	33.205	19 25.60	7.08	4.03	15 10.59	11 26.71
31	9	. .	. .	43.	55.	7.	. .	. .	. .	. .	17 54.99	10.98	1.00	.	2	22.378	54 46.68	7.13	7.35	17 43.01	46 51.16
32	8	. .	2.7	15.	27.5	39.	52.	. .	. .	. .	20 27.23	10.97	1.00	.	2	39.112	45 10.95	7.16	6.42	20 15.26	37 14.53
33	8	. .	. .	. .	25.	36.9	49.	2.	. .	. .	21 24.81	10.96	1.00	.	2	40.180	44 34.18	7.17	6.38	21 12.85	36 37.73
34	9	. .	. .	. .	32.	. .	. .	. .	. .	. .	13 24 32.03	−10.95	−1.00	.	6	35.52	18 5.95	− 7.20	− 3.91	13 24 20.08	26 10 7.06

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847. h. May 4, 17	s. − 18.40	s. g 0.020	s. . .	s. − 0.048	s. − 0.531	° ′ ″ 359 59 59.61	r. 40.148

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1847. h. m.	° ′ ″				″	″	in.	°	°
Zone 98	May 4, 12 5	294 50 {5.2 4.9	15.4 13.8	13.0 14.2	14.2 14.0	11.67	{11.95 11.72}	30.224	59.	51.4
	13	. .	. .	. .	. .	. .	. .	30.228	58.	53.
	14	. .	. .	. .	. .	. .	. .	30.230	56.5	47.5
	14 25	. .	. .	. .	. .	. .	. .	30.236	55.	46.

REMARKS.

(97) 162. Minutes assumed as 10 instead of 11, and micrometer reading as 38^r.036 instead of 37^r.036.

(98) 7. Transits over T.'s IV, V, and VI assumed as recorded over T.'s V, VI, and VII.

ZONE 98. MAY 4. MAJ. $D_0 = -25° 51' 50''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
35	8	. .	. .	. .	44.5	56.2	7.6	. .	. .	. .	13 24 43.89	−10.95	−1.00	.	5	44.38	21 42.72	− 7.21	− 4.23	13 24 31.94	26 13 44.16
36	9	. .	. .	. .	45.2	. .	10.	22.	. .	. .	27 45.31	10.93	1.00	.	5	46.96	20 13.95	7.24	4.10	27 33.38	12 15.29
37	9	. .	. .	. .	25.6	37.9	. .	62.	. .	. .	29 25.48	10.93	1.00	.	4	48.15	25 19.59	7.26	4.57	29 13.55	17 21.42
38	9	. .	. .	. .	. .	. .	47.	58.4	. .	. .	30 22.06	10.92	1.00	.	6	38.64	16 18.47	7.26	3.73	30 10.14	8 19.46
39	9	. .	. .	. .	. .	. .	. .	20.	. .	. .	31 43.18	10.92	1.00	.	4	37.98	31 9.20	7.27	5.10	31 31.26	23 11.57
40	8	. .	. .	. .	. .	. .	. .	55.	. .	. .	33 18.19	10.91	1.00	.	3	40.68	35 32.55	7.28	5.52	33 6.28	27 35.35
41	9	. .	. .	. .	. .	. .	41.2	. .	. .	. .	35 16.52	10.90	1.00	.	1	37.025	52 13.55	7.29	7.10	35 4.62	44 17.94
42	9	. .	. .	. .	. .	. .	. .	63.	. .	. .	36 26.14	10.90	1.00	.	7	40.628	9 19.45	7.29	3.08	36 14.24	1 19.82
43	.	18.	30.7	43.	. .	67.	20.	. .	. .	. .	40 55.11	10.87	1.00	.	3	36.040	38 12.19	7.30	5.79	40 43.24	30 15.28
44	9	. .	. .	25.	. .	49.	. .	. .	. .	. .	49 36.01	10.83	1.00	.	3	45.048	33 2.27	7.26	5.29	49 24.18	25 4.82
45	6	. .	. .	51.2	3.3	. .	27.8	40.3	. .	. .	54 3.34	10.81	1.00	.	2	40.69	50 7.58	7.19	6.92	53 51.53	26 42 11.69
46	2.3	. .	. .	. .	. .	. .	. .	38.5	. .	. .	13 58 1.62	10.79	1.00	.	7	47.67	5 17.46	7.13	2.69	13 57 49.83	25 57 17.28
47	9	. .	. .	. .	. .	. .	5.5	18.	. .	. .	14 0 41.05	10.78	1.00	.	3	38.653	36 42.16	7.08	5.62	14 0 29.27	26 28 44.86
48	5.6	. .	58.7	10.	22.3	. .	47.	60.	. .	. .	4 22.67	10.76	1.00	.	3	31.09	41 2.50	6.96	6.05	4 10.91	33 5.51
49	8	. .	. .	. .	. .	. .	. .	. .	. .	38.	6 30.46	10.75	1.00	.	3	33.675	39 33.57	6.92	5.91	6 18.71	31 36.40
50	8	. .	. .	. .	. .	. .	52.	3.7	. .	. .	7 27.17	10.74	1.00	.	.	. .	. . .	. .	. .	7 15.43	
51	7	. .	. .	30.	42.	53.8	6.	19.	. .	. .	10 41.88	10.73	1.00	.	4	31.932	34 37.58	6.76	5.44	10 30.15	26 39.78
52	9	38.2	50.	62:3	. .	27.	39.4	. .	. .	. .	13 14.75	10.72	1.00	.	2	38.21	45 41.95	6.66	6.48	13 3.03	37 45.09
53	8	. .	. .	. .	. .	. .	39.5	52.	. .	. .	14 15.10	10.71	1.00	.	6	42.834	13 54.30	6.62	3.51	14 3.39	5 54.43
54	8	. .	. .	. .	56.	7.9	20.	. .	. .	. .	15 55.79	10.70	1.01	.	6	45.121	12 35.62	6.55	3.39	15 44.08	4 35.56
55	7	. .	. .	8.2	20.8	33.	. .	. .	. .	. .	17 20.71	10.69	1.00	.	6	35.562	18 4.50	6.49	3.89	17 9.02	10 4.88
56	7	. .	. .	. .	. .	48.	60.2	. .	. .	. .	17 35.68	10.69	1.00	.	3	31.97	40 32.22	6.48	5.99	17 23.99	32 34.69
57	8	. .	. .	. .	. .	43.5	56.	68.	. .	. .	19 31.27	10.68	1.00	.	2	38.04	45 47.80	6.40	6.48	19 19.59	37 50.68
58	9	38.7	50.6	3.	15.9	. .	. .	. .	. .	. .	22 15.42	10.67	1.00	.	6	36.204	17 42.41	6.28	3.82	22 3.75	9 42.51
59	8	. .	. .	. .	. .	. .	. .	. .	. .	15.9	22 8.42	10.67	1.00	.	4	38.10	31 5.37	6.28	5.10	21 56.75	23 6.75
60	8	. .	. .	. .	. .	. .	7.	19.8	. .	. .	23 42.76	10.66	1.00	.	6	41.052	14 55.61	6.21	3.59	23 31.10	6 55.41
61	8	. .	. .	56.	8.7	20.	. .	. .	. .	. .	31 8.30	10.62	1.01	.	7	35.125	12 29.08	5.83	3.36	30 56.67	4 28.27
62	8	. .	. .	. .	. .	36.	48.4	61.	. .	. .	30 23.93	10.63	1.00	.	3	38.535	36 46.35	5.82	5.64	31 12.30	28 47.81
63	9	. .	. .	12.	24.2	36.5	. .	. .	. .	. .	35 24.22	10.60	0.99	.	1	39.15	51 0.57	5.60	7.00	35 12.63	43 3.17
64	9	. .	. .	46.	58.	10.2	. .	. .	. .	. .	36 58.08	10.59	1.00	.	5	36.53	26 12.80	5.51	4.65	36 46.49	18 12.96
65	6	. .	. .	. .	. .	. .	47.6	59.2	. .	. .	39 22.76	10.58	1.01	.	7	41.305	8 56.45	5.36	3.03	39 11.17	0 54.84
66	7	. .	13.	. .	. .	. .	. .	. .	. .	. .	43 37.33	10.56	1.01	.	7	42.855	8 2.09	5.10	2.95	43 25.76	0 0.14
67	8	. .	. .	. .	. .	. .	15.	28.	. .	. .	44 50.75	10.55	1.00	.	1	46.12	47 0.75	5.01	6.63	44 39.20	39 2.39
68	8	. .	. .	. .	. .	29.5	42.	. .	. .	. .	14 47 17.34	10.54	1.00	.	3	35.34	38 36.28	4.86	5.82	14 47 5.80	30 36.96
69	8	. .	. .	. .	. .	. .	27.2	. .	. .	. .	15 26 2.58	10.32	1.00	.	2	46.36	46 52.48	1.68	6.63	15 25 51.26	26 38 50.81
70	8	. .	. .	. .	. .	30.	42.5	54.3	. .	. .	15 28 17.80	−10.30	−1.01	.	7	43.65	7 35.76	− 1.50	− 2.91	15 28 6.49	25 59 30.17

ZONE 99. MAY 6. MAJ. $D_0 = -26° 26' 30''$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0	Mean South Declination, 1850.0.
1	8	. .	8.	. .	33.	44.9	. .	. .	. .	. .	11 21 32.73	−12.38	−1.00	.	4	41.052	29 23.80	− 6.28	− 4.93	11 21 19.35	26 56 5.01
2	7	. .	. .	. .	. .	. .	49.2	2.5	. .	. .	22 24.94	12.38	1.01	VII.	2	38.127	45 44.51	6.35	3.13	22 11.55	27 12 27.99
3	9	. .	. .	. .	. .	. .	. .	61.	. .	. .	25 23.97	12.37	1.00	.	4	42.49	28 34.03	6.67	4.82	25 10.60	26 55 15.52
4	9	. .	. .	16.	. .	. .	. .	. .	. .	. .	28.28	12.37	1.00	.	3	34.85	38 53.10	6.70	6.21	(27) 14.91	27 5 36.01
5	9	. .	. .	61.	8.3	20.4	. .	. .	. .	. .	29 8.26	12.37	1.00	.	3	40.67	35 32.90	7.06	5.75	28 54.89	2 15.71
6	8	. .	. .	. .	. .	. .	24.	36.4	. .	. .	29 59.30	12.37	1.01	.	2	41.905	43 34.82	7.15	6.85	29 45.92	10 18.82
7	9	25.	. .	. .	2.3	15.	27.	. .	. .	. .	37 2.34	12.35	1.01	.	2	39.14	45 9.96	7.82	7.05	36 48.98	11 54.83
8	7	. .	. .	49.2	2.4	14.4	. .	. .	. .	. .	39 1.99	12.35	1.01	.	2	45.922	41 16.61	8.00	6.52	38 48.63	27 8 1.13
9	8	59.4	4.4	23.8	36.	. .	. .	. .	. .	. .	11 41 36.11	−12.34	−0.99	.	6	42.768	13 56.58	− 8.23	− 2.85	11 41 22.78	26 40 37.66

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	*m*	*n*	*c*	Zenith Point.	Mic. Co.
1847.	h.	s.	s.	s.	s.	s.	° ′ ″	r.
May 6,	8	− 19.27	*g* 0.022	. .	− 0.048	− 0.531	0 0 0.36	40.181

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	h. m.	° ′ ″				″	″	in.	°	°
Zone 99	May 6, 11 25	294 12 29.	31.2	34.8	35.2	32.69	32.55	30.072	63.	57.8
	11 35	30.	32.5	37.0	37.2	. .	. .	30.074	63.	59.5
	12 14	. .	. .	. .	. .	. .	. .	30.070	61.8	58.8
	13 9	. .	. .	. .	. .	. .	. .	. .	. .	54.
	13 27	. .	. .	. .	. .	. .	. .	30.05	60.5	
	14 50	. .	. .	. .	. .	. .	. .	30.020	57.	48.

REMARKS.

(98) 45. Hor. thread assumed as 1 instead of 2.

(98) 54. Time of transit over T. VI assumed as 20^s instead of $2^s.0$.

(98) 62. Minutes assumed as 31 instead of 30.

(98) 69. Hor. thread assumed as 1 instead of 2.

(99) 5. Transit over T. III assumed as at $56^s.1$ instead of 61^s.

(99) 9. Transit over T. II assumed as at $11^s.4$ instead of $4^s.4$.

Zone 99. May 6. Maj. $D_0 = -26^\circ 26' 30''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
10	9	. .	. .	. .	29.5	41.5	54.	66.	. .	. .	11 42 29.29	−12.34	−0.99	.	6	34.070	18 55.84	− 8.31	− 3.53	11 42 15.96	26 45 37.68
11	8	. .	. .	. .	49.3	61.4	14.8	. .	. .	. .	47 49.51	12.33	1.00	.	5	34.25	27 31.26	8.77	4.67	47 36.18	54 14.70
12	9	. .	. .	. .	. .	. .	. .	. .	. .	24.	48 29.66	12.33	0.99	.	7	37.61	11 2.56	8.82	2.49	48 16.34	37 43.87
13	7	. .	. .	31.	43.	55.	6.7	. .	. .	. .	50 42.78	12.32	1.00	.	5	40.16	24 7.92	9.01	4.22	50 29.46	50 51.15
14	9	. .	. .	. .	. .	. .	. .	. .	. .	13.2	51 18.88	12.32	0.99	.	7	40.16	9 34.83	9.04	2.31	51 5.57	36 16.18
15	8	. .	. .	. .	18.	30.8	43.7	. .	. .	. .	53 18.59	12.32	0.99	.	6	45.595	9 27.15	9.22	2.31	51 5.28	36 8.68
16	9	. .	. .	. .	46.	58.5	. .	. .	. .	. .	54 46.12	12.31	1.00	.	5	43.765	22 3.88	9.34	3.93	54 32.81	26 48 47.15
17	10	. .	16.2	. .	41.	. .	. .	. .	. .	. .	58 40.95	12.31	1.01	.	2	45.125	41 44.04	9.63	6.60	58 27.63	27 8 30.27
18	10	. .	. .	. .	. .	. .	. .	8.4	. .	. .	59 31.35	12.30	0.99	.	6	38.898	16 9.43	9.70	3.16	59 18.06	26 42 52.29
19	10	. .	. .	. .	. .	. .	. .	36.	. .	. .	11 59 58.95	12.30	0.99	.	6	39.10	16 2.48	9.73	3.15	11 59 45.66	26 42 45.36
20	8	. .	. .	. .	. .	. .	. .	. .	. .	55.4	12 0 47.46	12.30	1.01	.	2	40.10	44 36.93	9.79	6.99	12 0 34.15	27 11 23.71
21	8	. .	. .	. .	. .	. .	. .	. .	. .	66.	58.04	12.30	1.01	:	2	35.95	46 59.70	9.80	7.31	(1) 44.73	13 46.81
22	8	. .	. .	. .	21.3	33.5	45.7	58.	. .	. .	3 21.10	12.29	1.01	.	2	35.362	47 19.94	9.97	7.36	3 7.80	27 14 7.27
23	10	. .	. .	. .	27.	39.8	. .	. .	. .	. .	5 27.31	12.29	0.99	.	7	32.853	13 47.25	10.12	2.85	5 14.03	26 40 30.22
24	9	. .	. .	. .	. .	54.	66.2	. .	. .	. .	6 41.76	12.28	0.98	.	7	50.44	3 42.12	10.21	1.53	6 28.50	30 23.86
25	9	. .	. .	. .	. .	67.8	80.	. .	. .	. .	7 55.46	12.28	1.00	.	5	45.46	21 5.53	10.29	3.81	7 42.18	26 47 49.63
26	7.8	. .	. .	. .	. .	. .	55.	67.4	. .	. .	8 30.34	12.28	1.00	.	.	. .	. . .	. .	. .	8 17.06	
27	.	. .	. .	. .	. .	. .	. .	. .	. .	52.3	8 44.38	12.28	1.00	.	2	47.456	40 22.83	10.35	6.40	8 31.10	27 7 9.58
28	9	23.	36.4	48.	60.5	13.2	25.2	. .	. .	. .	13 0.55	12.27	1.00	.	3	46.40	32 15.75	10.62	5.30	12 47.28	26 59 1.67
29	9.10	. .	42.	54.	66.2	. .	. .	. .	. .	. .	15 6.37	12.26	1.00	.	4	41.50	29 8.39	10.75	4.90	14 53.11	55 54.04
30	6	. .	. .	. .	. .	. .	. .	. .	. .	35.5	17 40.58	12.25	1.00	.	4	42.846	28 22.09	10.89	4.78	17 27.33	55 7.76
31	8	. .	. .	. .	29.	41.	53.	5.8	. .	. .	19 28.74	12.25	0.99	.	6	37.732	25 31.45	11.01	4.40	19 15.50	26 52 16.86
32	8	. .	. .	. .	34.1	46.2	58.3	. .	. .	. .	23 33.86	12.24	1.00	.	3	42.995	34 12.91	11.22	5.58	23 20.62	27 0 59.71
33	9	. .	. .	. .	. .	53.	5.4	. .	. .	. .	24 40.66	12.24	1.01	.	1	41.07	49 54.46	11.29	7.72	24 27.41	27 16 43.47
34	.	. .	10.2	22.4	34.3	46.5	. .	. .	. .	. .	28 34.53	12.22	0.99	.	7	40.54	9 22.77	11.49	2.26	28 21.32	26 36 6.52
35	8	. .	. .	. .	. .	. .	53.	65.	. .	. .	35 28.21	12.20	0.99	.	7	47.12	5 36.38	11.80	1.77	35 15.02	32 19.95
36	9	. .	. .	. .	. .	24.	36.	. .	. .	. .	36 11.62	12.20	1.00	.	7	38.50	10 32.92	11.83	2.41	35 58.42	37 17.16
37	8	. .	. .	55.2	8.	20.1	32.	. .	. .	. .	40 7.71	12.18	1.00	.	6	35.94	17 51.50	12.00	3.39	39 54.53	44 36.89
38	6	. .	. .	. .	40.	51.8	4.7	. .	. .	. .	40 39.89	12.18	1.00	.	6	32.318	19 56.12	12.03	3.65	40 26.71	26 46 41.80
39	9	. .	. .	. .	. .	65.	17.	29.8	. .	. .	42 52.59	12.17	1.00	.	4	30.85	35 14.77	12.11	5.71	42 39.42	27 2 2.59
40	7	. .	. .	40.5	52.9	5.	. .	. .	. .	. .	45 52.88	12.16	1.00	.	7	41.93	8 34.94	12.21	2.16	45 39.72	26 35 19.31
41	8	. .	. .	. .	. .	. .	49.8	62.	. .	. .	46 25.02	12.16	1.00	.	2	44.84	41 53.85	12.23	6.62	46 11.86	27 8 42.70
42	10	. .	. .	. .	. .	. .	17.	29.	. .	. .	47 52.20	12.15	1.00	.	7	40.07	9 38.81	12.29	2.30	47 39.05	26 36 23.40
43	9	. .	. .	. .	. .	. .	. .	20.	. .	. .	48 42.93	12.15	1.00	.	7	45.23	6 41.11	12.31	1.90	48 29.78	33 25.32
44	8	. .	. .	. .	. .	. .	. .	30.5	. .	. .	48 53.43	12.15	1.00	.	7	43.795	7 30.78	12.31	2.01	48 40.28	34 15.10
45	9	. .	51.	3.5	15.4	26.8	40.	. .	. .	. .	51 15.33	12.14	1.00	.	4	46.338	26 21.93	12.39	4.50	51 2.19	53 8.82
46	8	61.2	14.5	26.	38.4	. .	. .	. .	. .	. .	53 38.47	12.13	1.00	.	7	45.17	6 43.47	12.45	1.90	53 25.34	33 27.82
47	9	30.5	. .	55.	7.5	19.2	32.	. .	. .	. .	55 7.34	12.13	1.00	.	6	40.89	15 1.19	12.49	3.00	54 54.21	26 41 46.68
48	10	. .	. .	. .	. .	. .	. .	39.5	. .	. .	58 2.46	12.12	1.00	.	2	39.50	44 57.28	12.56	7.05	57 49.34	27 11 46.89
49	10	. .	. .	. .	. .	31.	43.	56.2	. .	. .	12 59 18.73	12.11	1.00	.	4	35.10	32 48.55	12.60	5.38	12 59 5.62	26 59 36.53
50	9	. .	. .	. .	23.5	. .	48.	60.	. .	. .	13 1 23.25	12.11	1.00	.	4	41.018	29 24.98	12.64	4.92	13 1 10.14	56 12.54
51	8	. .	24.	37.6	50.	. .	. .	. .	. .	. .	5 49.50	12.09	1.00	.	5	41.782	23 12.10	12.71	4.09	5 36.41	49 58.90
52	8	. .	. .	. .	7.	19.2	32.3	. .	. .	. .	6 7.17	12.09	1.00	.	4	42.95	28 18.50	12.72	4.78	5 54.08	26 55 6.00
53	9	. .	. .	. .	. .	. .	. .	4.5	. .	. .	8 27.42	12.08	1.00	.	1	41.64	49 34.59	12.76	7.69	8 14.34	27 16 25.04
54	8	. .	4.5	16.	28.5	40.	. .	. .	. .	. .	12 28.42	12.06	1.00	.	7	38.68	10 26.76	12.82	2.39	12 15.36	26 37 11.97
55	9	. .	. .	. .	58.	. .	. .	. .	. .	. .	58.06	12.06	1.00	.	7	35.16	12 27.88	12.83	2.67	(14) 45.00	39 13.38
56	9	. .	. .	. .	. .	. .	53.	5.4	. .	. .	16 28.34	12.05	1.00	.	4	38.875	30 38.57	12.86	5.08	16 15.29	57 26.51
57	8	. .	. .	. .	. .	. .	20.	32.2	. .	. .	17 55.29	12.04	1.00	.	6	41.795	14 30.05	12.87	2.93	17 42.25	41 15.85
58	9	. .	. .	. .	. .	. .	. .	. .	. .	42.5	13 18 47.66	−12.04	−1.00	.	5	38.052	25 19.42	−12.87	− 4.37	13 18 34.62	26 52 6.66

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847. h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
	A.	B.	C.	D.	Corr'd Mean.	Mean.			
1847. h. m.	° ′ ″				″	″	in.	°	°

REMARKS.

(99) 12. Transit over T. 11 assumed to have been recorded over T. 12.

(99) 14. Transit over T. 11 assumed to have been recorded over T. 12.

(99) 15. Minutes assumed as 51 instead of 53, and micrometer reading as $50^r.595$ instead of $45^r.595$.

(99) 30. Transit over T. 11 assumed to have been recorded over T. 12.

(99) 31. Hor. thread assumed as 5 instead of 6.

(99) 50. Micrometer reading assumed as $42^r.018$ instead of $41^r.018$.

(99) 58. Transit over T. 11 assumed to have been recorded over T. 12.

ZONE 99. MAY 6. MAJ. $D_0=-26° 26' 30''$—Continued.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
59	8	. .	. .	. .	. .	. .	. .	4.5	. .	. .	13 20 27.44	−12.03	−1.00	.	7	38.36	10 37.77	−12.88	− 2.42	13 20 14.41	26 37 23.07
60	8	. .	. .	. .	. .	. .	. .	25.	. .	. .	21 47.94	12.02	1.00	.	7	39.55	9 56.84	12.89	2.33	21 34.92	36 42.06
61	8	. .	. .	. .	44.	56.5	8.7	. .	. .	. .	22 44.09	12.02	1.00	.	5	41.585	23 18.88	12.89	4.11	22 31.07	26 50 5.88
62	7	. .	. .	. .	. .	. .	. .	. .	. .	. .	23	. .	. .	.	1	34.752	53 31.88	12.89	8.23	(23)	27 20 23.00
63	10	. .	. .	. .	29.5	42.5	. .	. .	. .	. .	24 29.84	12.01	1.00	.	5	34.05	27 38.14	12.89	4.68	24 16.83	26 54 25.71
64	8	. .	. .	. .	. .	. .	22.8	35.	. .	. .	28 58.06	11.99	1.00	.	5	36.56	26 11.77	12.89	4.48	28 45.07	52 59.14
65	9	. .	. .	. .	. .	. .	. .	22.8	. .	. .	30 45.76	11.98	1.00	.	6	35.778	17 56.77	12.89	3.39	30 32.78	44 43.05
66	8	. .	34.5	46.5	59.2	11.8	. .	. .	. .	. .	31 59.16	11.98	1.00	.	5	43.68	22 6.80	12.88	3.93	31 46.18	48 53.61
67	9	. .	. .	. .	17.	. .	. .	54.5	. .	. .	35 17.24	11.96	1.00	.	5	51.315	17 44.11	12.86	3.37	35 4.28	44 30.34
68	9	. .	. .	. .	. .	. .	. .	16.3	. .	. .	36 39.26	11.96	1.00	.	4	45.80	26 40.14	12.85	4.55	36 26.30	26 53 27.54
69	9	. .	. .	. .	. .	34.9	46.4	59.3	. .	. .	37 22.19	11.95	1.00	.	2	49.55	39 11.77	12.84	6.26	37 9.24	27 6 0.87
70	10	. .	. .	. .	24.3	. .	. .	. .	. .	. .	41 24.28	11.94	1.00	.	5	36.687	26 7.40	12.79	4.47	41 11.34	26 52 54.66
71	8	. .	. .	. .	. .	. .	. .	17.	. .	. .	42 39.97	11.93	1.00	.	4	38.46	30 52.98	12.78	5.12	42 27.04	57 40.88
72	8	. .	. .	. .	. .	. .	35.	47.3	. .	. .	43 10.30	11.93	1.00	.	5	35.985	26 31.56	12.77	4.53	42 57.37	53 18.86
73	10	. .	24.2	. .	. .	. .	. .	. .	. .	. .	47 48.83	11.91	1.00	.	4	40.49	29 43.01	12.69	4.96	47 35.92	56 30.66
74	8	. .	. .	. .	14.	26.	. .	. .	. .	. .	48 13.92	11.91	1.00	.	6	44.612	27 21.32	12.69	4.64	48 1.01	54 8.65
75	9	. .	. .	. .	. .	49.	. .	. .	. .	. .	36.71	11.90	1.00	.	4	42.087	28 48.17	12.68	4.84	48 23.81	55 35.69
76	9	. .	. .	. .	51.	. .	. .	. .	. .	. .	51.02	11.90	1.00	.	5	46.74	20 21.52	12.67	3.70	48 38.12	26 47 7.89
77	9	. .	. .	. .	. .	. .	. .	35.4	. .	. .	50 58.39	11.89	1.00	.	2	43.87	42 26.91	12.63	6.69	50 45.50	27 9 16.23
78	8	. .	. .	. .	2.	. .	. .	56.	. .	. .	51	. .	. .	.	.	. .	. .	. .	. .	51	
79	9	. .	. .	. .	20.	. .	. .	[67.]	. .	. .	51 19.95	11.89	1.00	.	.	. .	. .	. .	. .	51 7.06	
80	9	. .	. .	. .	. .	. .	. .	. .	. .	23.2	52 15.82	11.89	1.00	.	7	42.25	8 22.92	12.60	2.12	52 2.93	26 35 7.64
81	6	. .	. .	. .	4.	. .	. .	. .	. .	. .	54 4.04	11.88	1.00	.	6	39.93	15 34.22	12.56	3.07	53 51.16	42 19.85
82	9	. .	. .	. .	. .	. .	. .	. .	. .	18.5	55 10.90	11.87	1.00	.	6	36.13	17 43.94	12.54	3.36	54 58.03	44 29.84
83	9	. .	. .	. .	40.5	52.4	4.2	. .	. .	. .	57 40.06	11.86	1.00	.	5	41.25	23 30.41	12.47	4.13	57 27.20	50 17.01
84	.	. .	. .	. .	. .	53.3	6.	17.9	. .	. .	58 41.12	11.86	1.00	.	7	31.95	11 26.11	12.44	2.53	58 28.26	38 11.08
85	9	. .	. .	. .	. .	11.2	23.	35.8	. .	. .	13 59 58.66	11.85	1.00	.	4	35.702	32 27.84	12.40	5.34	13 59 45.81	59 15.58
86	9	. .	. .	. .	. .	. .	42.4	54.8	. .	. .	14 1 30.23	11.84	1.00	.	7	33.55	13 23.14	12.36	2.79	14 1 17.39	40 8.29
87	10	. .	50.5	. .	. .	. .	. .	. .	. .	. .	4 15.03	11.83	1.00	.	6	37.99	17 40.84	12.27	3.36	4 2.20	44 26.47
88	6	. .	. .	. .	. .	35.6	48.2	60.0	. .	. .	4 23.34	11.83	1.00	.	7	45.64	6 27.30	12.26	1.86	4 10.51	26 33 11.42
89	8	. .	. .	. .	19.	30.7	43.	55.3	. .	. .	6 18.49	11.82	1.00	.	3	38.63	36 43.08	12.19	5.91	6 5.67	27 3 31.18
90	8	. .	. .	. .	55.6	7.5	20.	32.	. .	. .	7 55.26	11.81	1.00	.	2	43.02	42 56.46	12.13	6.79	7 42.45	27 9 45.38
91	8	. .	. .	35.	47.8	59.9	. .	. .	. .	. .	9 47.59	11.80	1.00	.	5	42.65	22 42.24	12.07	4.02	9 34.79	26 49 28.33
92	8	. .	. .	3.5	15.4	27.4	40.	. .	. .	. .	13 15.49	11.78	1.00	.	7	37.125	11 20.27	11.93	2.49	13 2.71	26 38 4.69
93	6	. .	. .	28.	39.8	52.	. .	. .	. .	. .	14 39.93	11.78	1.00	.	3	38.13	37 0.29	11.88	5.95	14 27.15	27 3 48.12
94	.	. .	. .	. .	. .	9.5	21.2	. .	. .	. .	14 56.86	11.77	1.00	.	.	. .	. .	. .	. .	14 44.09	
95	.	. .	. .	. .	30.4	. .	. .	. .	. .	. .	15 30.39	11.77	1.00	.	3	38.23	36 56.85	11.84	5.94	15 17.62	3 44.63
96	.	. .	. .	. .	. .	32.	44.	. .	. .	. .	17 19.48	11.76	1.00	.	3	34.09	39 19.29	11.76	6.27	17 6.72	27 6 7.32
97	.	. .	. .	. .	. .	. .	. .	. .	. .	. .	19	. .	. .	.	5	41.09	23 35.91	11.76	4.15	(16 59.)	26 50 21.82
98	8	. .	. .	. .	32.5	44.	56.2	. .	. .	. .	19 35.01	11.75	1.00	.	7	37.205	11 17.52	11.66	2.49	19 22.26	26 38 1.67
99	8	. .	. .	. .	. .	. .	. .	41.5	. .	. .	20 4.43	11.75	1.00	.	2	34.26	47 57.86	11.64	7.48	19 51.68	27 14 46.98
100	8	. .	. .	42.9	55.	7.2	. .	. .	. .	. .	21 55.03	11.74	1.00	.	1	34.55	53 38.84	11.54	8.27	21 42.29	20 28.65
101	8	. .	. .	23.8	36.	48.	. .	. .	. .	. .	23 35.93	11.73	1.00	.	3	40.715	35 31.35	11.47	5.75	23 23.20	2 18.57
102	10	. .	. .	. .	. .	58.	. .	. .	. .	. .	45.71	11.73	1.00	.	2	40.595	44 19.86	11.46	6.97	(23) 32.98	11 8.29
103	8	. .	. .	38.5	51.5	3.5	. .	. .	. .	. .	33 51.16	11.67	1.00	.	2	44.89	41 52.13	10.91	6.62	33 38.49	8 39.66
104	8	. .	. .	. .	. .	. .	. .	43.8	. .	. .	35 6.80	11.67	1.00	.	2	46.51	40 56.38	10.84	6.50	34 54.13	27 7 43.72
105	8	. .	. .	. .	. .	. .	. .	. .	. .	42.	47.73	11.66	1.01	.	7	43.97	7 24.75	10.80	1.96	(36) 35.06	26 34 7.51
106	8	. .	43.	54.5	. .	20.	. .	. .	. .	. .	39 7.39	11.65	1.00	.	2	53.95	37 14.81	10.59	5.99	38 54.74	27 4 1.39
107	8	. .	. .	. .	48.	60.5	. .	. .	. .	. .	14 42 48.09	−11.63	−1.00	.	3	43.135	34 8.09	−10.35	− 5.56	14 42 35.46	27 0 54.00

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847. h.	s.	s.	s.	s.	s.	° ′ ″	s.

INSTRUMENT READINGS.

Date.	CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
1847. h. m.	° ′ ″				″	″	in.	°	°

REMARKS.

(99) 74. Hor. thread assumed as 4 instead of 6.
(99) 78. Observation rejected.
(99) 84. Micrometer reading assumed as 36r.95 instead of 31r.95.
(99) 86. Transits over T.'s V and VI assumed to have been recorded over T.'s VI and VII.
(99) 105. Transit over T. 11 assumed to have been recorded over T. 12.
(99) 106. Micrometer reading assumed as 52r.95 instead of 53r.95.

Zone 99. May 6. Maj. $D_0 = -26° 26' 30''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
108	9	. .	. .	. .	. .	. .	. .	53.	. .	. .	14 43 15.97	−11.63	−1.00	.	3	47.15	31 49.65	−10.32	− 5.24	14 43 3.34	26 58 35.21
109	9	. .	. .	. .	. .	. .	. .	55.4	. .	. .	18.38	11.63	1.00	.	3	43.36	34 0.04	10.32	5.55	(43) 5.75	27 0 45.91
110	9	. .	. .	. .	. .	. .	. .	. .	. .	47.5	44 40.02	11.62	1.00	.	6	45.41	12 24.65	10.22	2.62	44 27.40	26 39 7.49
111	8	. .	. .	. .	43.5	. .	. .	. .	. .	. .	48 43.54	11.59	1.00	.	5	54.30	16 1.42	9.94	3.12	48 30.95	42 44.48
112	.	. .	. .	. .	. .	. .	. .	9.5	. .	. .	49 32.46	11.59	1.00	.	6	35.63	18 2.16	− 9.88	− 3.39	49 19.87	26 44 45.43
113	.	. .	. .	. .	. .	. .	. .	36.	. .	. .	14 58.97	−11.59	−1.00	.	.	. .	. . .	. .	. .	14 (55) 46.38	

Zone 100. May 6. Maj. $D_0 = -\ \ ° \ \ ' \ \ ''$.

1	8	. .	10.2	. .	35.	. .	59.	. .	. .	. .	16 2 34.73	−11.17	−1.01	.	6	34.362	18 45.79	−30.53	− 1.67	16 2 22.55	26 45 17.99
2	8	. .	. .	. .	. .	. .	52.5	4.7	. .	. .	4 27.73	11.16	1.00	.	4	32.68	34 11.85	30.26	3.23	4 15.57	27 0 45.34
3	8	. .	55.3	7.5	20.	31.8	43.5	. .	. .	. .	6 19.62	11.15	1.00	.	5	42.56	22 45.34	29.98	2.08	6 7.47	26 49 17.40
4	8	. .	. .	. .	. .	. .	41.5	53.4	. .	. .	12 16.61	11.11	1.00	.	5	37.73	25 31.52	29.16	2.34	12 4.50	52 3.02
5	8	. .	4.5	16.2	28.7	41.	53.	. .	. .	. .	15 28.69	11.09	1.01	.	5	45.11	21 17.61	28.69	1.91	15 16.59	47 48.21
6	8	. .	. .	. .	. .	. .	. .	8.5	. .	. .	21 31.46	11.06	1.00	.	5	40.20	24 6.54	27.79	2.20	21 19.40	50 36.53
7	8	. .	. .	30.	42.4	54.1	66.	. .	. .	. .	25 41.99	11.03	1.01	.	5	45.60	21 0.74	27.16	1.88	25 29.95	26 47 29.78
8	9	. .	. .	. .	14.5	. .	39.5	. .	. .	. .	27 14.62	11.02	0.99	.	2	41.62	43 44.63	26.92	4.21	27 2.61	27 10 15.76
9	8	. .	. .	. .	. .	. .	50.5	62.	. .	. .	30 25.39	11.01	1.00	.	3	45.03	32 26.48	26.44	3.06	30 13.38	26 58 55.98
10	8	. .	. .	19.5	32.5	44.4	. .	. .	. .	. .	32 32.16	10.99	1.01	.	5	43.74	22 4.74	26.11	1.99	32 21.16	48 32.84
11	9	. .	. .	. .	. .	57.6	. .	. .	. .	. .	45.31	10.99	1.00	.	.	. .	. . .	. .	. .	32 33.32	
12	8	. .	. .	. .	. .	. .	. .	. .	. .	37.5	33 29.64	10.99	1.00	.	4	34.93	32 54.44	25.96	3.10	33 17.65	26 59 23.50
13	8	. .	. .	. .	. .	. .	. .	47.	. .	. .	35 9.97	10.98	0.99	.	2	41.73	43 40.84	25.69	4.21	34 58.00	27 10 10.74
14	8	. .	. .	. .	. .	. .	. .	. .	. .	. .	36	. .	. .	.	2	41.50	43 48.76	25.60	4.22	36	10 18.58
15	8	. .	. .	. .	. .	. .	53.5	6.	. .	. .	37 28.84	10.97	0.99	.	2	38.287	45 39.31	25.32	4.42	37 16.88	27 12 9.05
16	8	. .	. .	. .	. .	. .	. .	65.	. .	. .	38 27.94	10.96	1.01	.	7	38.045	10 48.61	25.16	0.84	38 15.97	26 37 14.61
17	9	. .	. .	. .	12.	. .	. .	. .	. .	. .	40 12.09	10.95	1.01	.	7	42.65	8 10.17	24.89	0.58	40 0.13	34 35.64
18	9	. .	. .	. .	. .	. .	. .	18.6	. .	. .	40 41.55	10.95	1.01	.	6	39.915	15 34.74	24.81	1.33	40 29.59	42 0.88
19	8	. .	. .	. .	23.2	35.	. .	60.	. .	. .	42 23.96	10.94	1.00	.	5	39.038	24 46.53	24.53	2.27	42 12.02	51 13.33
20	.	. .	. .	. .	. .	. .	. .	45.	. .	. .	43 7.94	10.93	1.01	.	7	34.91	13 4.37	24.42	1.08	42 56.00	39 29.86
21	8	. .	. .	11.5	24.	35.4	. .	. .	. .	. .	48 23.65	10.90	1.00	.	5	36.98	25 57.32	23.39	2.39	49 11.75	52 23.10
22	8	. .	. .	. .	. .	28.5	41.	53.5	. .	. .	50 16.33	10.89	1.00	.	4	39.62	30 13.08	23.24	2.82	50 4.44	26 56 39.14
23	8	33.	45.8	58.2	11.2	. .	. .	. .	. .	. .	52 10.56	10.88	1.00	.	3	41.76	34 55.39	22.92	3.30	51 58.68	27 1 21.61
24	9	. .	. .	. .	. .	. .	44.	56.2	. .	. .	52 19.23	10.88	0.99	.	3	39.30	36 19.91	22.90	3.44	52 7.36	27 2 46.25
25	8	. .	. .	44.	56.	7.8	. .	. .	. .	. .	53 55.94	10.87	1.00	.	5	36.65	26 8.67	22.64	2.40	53 44.07	26 52 33.71
26	8	. .	. .	. .	53.2	5.4	. .	. .	. .	. .	54 53.14	10.87	1.00	.	4	34.23	33 18.53	22.46	3.14	54 41.27	59 44.13
27	8	. .	. .	. .	. .	. .	. .	45.	. .	. .	55 7.95	10.87	1.01	.	6	38.935	16 8.45	22.42	1.38	54 56.07	42 32.25
28	8	. .	. .	. .	61.3	13.4	26.2	. .	. .	. .	56 1.36	10.86	1.01	.	6	36.412	17 35.25	22.27	1.54	55 49.49	43 59.06
29	9	52.2	. .	16.5	. .	. .	. .	. .	. .	. .	16 59 28.98	10.84	1.02	.	7	36.55	11 40.02	21.68	0.93	16 59 17.12	38 2.63
30	9	. .	. .	. .	. .	. .	54.	5.2	. .	. .	17 1 28.77	10.83	1.01	.	5	43.63	22 8.39	21.33	1.99	17 1 16.93	26 48 31.71
31	8	. .	19.	. .	43.8	55.2	. .	. .	. .	. .	11 43.50	10.77	0.98	.	1	42.09	44 43.94	19.53	4.26	11 31.75	27 11 7.74
32	7	. .	. .	. .	. .	. .	. .	7.5	. .	. .	19 42.68	10.72	1.02	.	7	40.25	9 32.45	18.13	0.71	19 30.94	26 35 51.29
33	8	. .	. .	. .	. .	. .	47.3	59.5	. .	. .	21 22.54	10.71	1.00	.	3	45.64	38 26.20	17.80	3.68	21 10.83	27 4 47.68
34	8	. .	. .	. .	. .	. .	20.5	32.5	. .	. .	29 55.66	10.67	1.01	.	5	40.02	24 12.73	16.20	2.21	29 43.98	26 50 31.14
35	8	. .	. .	. .	. .	. .	64.	. .	. .	. .	31 39.18	10.66	0.98	.	1	36.95	52 16.25	15.88	5.11	31 27.54	27 18 37.24
36	9	. .	. .	. .	. .	6.7	18.9	31.2	. .	. .	32 54.30	10.65	1.01	.	6	33.042	19 31.17	15.65	1.73	32 42.64	26 45 48.55
37	8	. .	. .	. .	. .	. .	. .	45.	. .	. .	34 7.98	10.64	0.99	.	2	41.96	43 32.93	15.42	4.21	33 56.35	27 9 52.56
38	8	. .	. .	. .	. .	. .	. .	70.2	. .	. .	35 33.18	10.63	0.99	.	2	42.675	43 8.34	15.13	4.17	35 21.56	27 9 27.64
39	8	. .	. .	. .	. .	2.5	14.6	26.2	. .	. .	17 36 49.78	−10.63	−1.00	.	4	43.59	27 56.48	−14.90	− 2.59	17 36 38.15	26 54 13.97

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847. h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1847. h. m.	° ′ ″				″	″	in.	°	°
Zone 100	May 6, 16 2	30.4	33.9	38.6	39.2	35.67	35.52	29.992	55.	45.2
	17 34	. .	. .	. .	. .	. .	. .	29.982	53.	44.8
	18	32.2	36.0	39.8	40.2	. .	. .	29.968	52.	44.8

REMARKS.

(100) 9. Micrometer reading assumed as $46^{r}.03$ instead of $45^{r}.03$.

(100) 20. Micrometer reading assumed as $34^{r}.091$ instead of $34^{r}.91$.

(100) 21. Minutes assumed as 49 instead of 48.

(100) 31. Micrometer reading assumed as $50^{r}.09$ instead of $42^{r}.09$.

(100) 32. Transit over T. VI assumed to have been recorded over T. VII.

(100) 33. Micrometer reading assumed as $35^{r}.64$ instead of $45^{r}.64$.

ZONE 100. MAY 6. MAJ. D$_\circ$ = − ° ′ ″—Continued.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
40	6.7	39.6	51.4	4.5	14.5	27.	40.5	53.4	. .	. .	17 39 15.84	−10.61	−1.00	.	4	42.295	28 41.04	−14.43	− 2.67	17 39 4.23	26 54 58.14
41	8	. .	. .	42.4	55.	7.8	. .	. .	. .	. .	40 55.11	10.61	1.01	.	5	48.75	19 12.36	14.12	1.70	40 43.49	26 45 28.18
42	8	. .	. .	. .	. .	. .	. .	5.4	. .	. .	40 28.38	10.61	1.00	.	3	42.98	34 13.42	14.20	3.23	40 16.77	27 0 30.85
43	8.9	. .	. .	. .	. .	. .	18.	30.5	. .	. .	42 53.41	10.60	1.01	.	5	39.222	24 40.19	13.74	2.26	42 41.80	26 50 56.19
44	8	. .	. .	. .	. .	. .	46.	58.	. .	. .	44 21.07	10.59	0.98	.	1	43.73	48 22.98	13.46	4.73	44 9.50	27 14 41.17
45	8	. .	. .	. .	. .	. .	. .	57.	. .	. .	45 19.94	10.58	1.02	.	7	40.85	9 12.10	13.27	0.66	45 8.34	26 35 26.03
46	8	. .	. .	. .	. .	. .	50.4	3.	. .	. .	46 25.84	10.58	1.00	.	4	40.09	27 39.17	13.06	2.52	46 14.26	53 54.65
47	7	. .	. .	. .	. .	. .	. .	50.9	. .	. .	47 13.86	10.57	1.01	.	5	50.555	18 10.27	12.91	1.59	47 2.28	44 24.77
48	9	. .	. .	. .	. .	. .	3.2	15.	. .	. .	47 38.24	10.57	1.00	.	3	45.104	33 0.21	12.83	3.11	47 26.67	26 59 16.15
49	8	. .	. .	. .	. .	. .	29.3	. .	. .	. .	50 4.59	10.56	1.00	.	3	43.182	34 6.47	12.35	3.22	49 53.03	27 0 22.04
50	8	. .	. .	. .	. .	. .	. .	. .	. .	19.2	50 11.31	10.56	0.99	.	3	38.43	36 49.96	12.32	3.49	49 59.76	3 5.77
51	9	. .	. .	. .	33.	45.	57.8	. .	. .	. .	52 32.93	10.54	0.99	.	3	36.23	38 5.66	11.87	3.65	52 21.40	4 21.18
52	8	. .	. .	. .	. .	31.	43.	55.5	. .	. .	55 18.49	10.53	0.99	.	3	39.18	36 24.17	11.32	3.45	55 6.97	27 2 38.94
53	8	. .	. .	. .	. .	58.	11.2	23.	. .	. .	56 46.06	10.52	1.00	.	4	35.425	32 37.41	11.04	3.07	56 34.54	26 58 51.52
54	8	. .	. .	. .	. .	. .	. .	26.4	. .	. .	57 49.40	10.52	0.99	.	3	32.165	40 25.53	10.84	3.88	57 37.89	27 6 40.25
55	8	. .	. .	. .	. .	52.	4.5	16.	. .	. .	17 59 39.57	10.51	1.02	.	7	42.84	8 3.64	10.47	0.54	17 59 28.04	26 34 14.65
56	10	. .	. .	54.	. .	. .	32.	. .	. .	. .	18 2 6.90	10.50	1.02	.	6	42.84	13 54.07	9.99	1.14	18 1 55.38	26 40 5.20
57	9	. .	. .	. .	26.	38.6	50.8	. .	. .	. .	3 26.12	10.49	0.99	.	2	41.009	44 5.65	9.73	4.28	3 14.64	27 10 19.66
58	7.8	. .	. .	. .	. .	. .	. .	43.2	. .	. .	4 6.12	10.49	0.98	.	1	43.34	48 36.40	9.59	4.76	3 54.65	27 14 50.75
59	9	. .	. .	62.3	15.2	26.	37.9	. .	. .	. .	13 13.67	10.44	1.00	.	3	46.209	32 22.32	7.77	3.04	13 2.23	26 58 33.13
60	8	. .	. .	. .	60.2	. .	. .	. .	. .	. .	14 0.31	10.44	1.02	.	7	48.13	5 1.63	7.42	0.23	14 48.85	31 9.28
61	8	. .	. .	. .	. .	. .	. .	. .	25.	. .	18 15 29.93	−10.43	−1.02	.	7	43.13	7 53.66	− 7.32	− 0.52	18 15 18.48	26 34 1.50

ZONE 101. JUNE 21. MS. D$_\circ$ = − ° ′ ″.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0
1	9	. .	. .	. .	16.2	28.2	. .	. .	. .	. .	16 24 16.04	−20.85	−0.99	VI.	2	47.369	40 26.70	−36.75	− 7.02	16 23 54.20	27 47 22.88
2	3	. .	30.5	42.	55.	7.2	. .	. .	. .	. .	26 54.88	20.85	0.99	VII.	1	46.108	47 0.86	36.38	7.68	26 33.04	53 57.33
3	8	30.2	43.	. .	7.	. .	. .	. .	. .	. .	30 7.36	20.84	1.00	V.	3	43.066	33 36.04	35.93	6.36	29 45.52	40 30.74
4	8	2.5	. .	28.	40.5	. .	. .	. .	. .	. .	32 40.16	20.84	1.00	VI.	4	51.051	23 39.65	35.56	5.37	32 18.32	30 32.99
5	9	. .	. .	. .	. .	. .	. .	48.	. .	. .	40 10.84	20.83	1.01	VII.	6	47.789	11 3.51	34.47	4.16	39 49.00	17 54.55
6	9	. .	. .	. .	. .	. .	. .	2.5	. .	. .	42 25.37	20.83	1.00	VII.	3	46.73	32 4.08	34.14	6.21	42 3.54	38 56.84
7	8	13.	26.2	38.	50.5	. .	. .	. .	. .	. .	45 50.46	20.82	1.00	V.	5	42.469	22 48.44	33.62	5.28	45 28.64	29 39.75
8	9	. .	. .	43.	55.	. .	. .	. .	. .	. .	48 55.20	20.82	1.01	V.	6	40.591	15 11.45	33.16	4.54	48 33.37	22 1.56
9	9	. .	. .	. .	21.2	. .	. .	. .	. .	. .	50 21.16	20.81	1.00	VII.	4	42.821	28 22.63	32.95	5.84	49 59.35	35 13.83
10	9	. .	. .	. .	. .	51.5	. .	. .	. .	. .	51 39.19	20.81	1.00	VI.	4	45.76	26 41.69	32.75	5.67	51 17.38	33 32.52
11	8	. .	. .	. .	. .	. .	20.	32.5	. .	. .	52 55.30	20.81	1.00	VII.	3	40.299	35 45.35	32.56	6.57	52 33.49	42 36.89
12	10	. .	. .	. .	. .	. .	. .	2.5	. .	. .	55 47.84	20.81	1.01	VII.	7	39.830	9 46.89	32.18	4.03	55 26.04	16 35.51
13	10	58.5	. .	23.5	. .	. .	. .	. .	. .	. .	16 58 35.76	20.80	1.00	VI.	3	39.552	36 11.24	31.68	6.62	16 58 13.96	43 1.95
14	9	. .	43.5	. .	8.2	. .	. .	. .	. .	. .	17 1 8.18	20.80	1.00	V.	4	44.338	27 30.72	31.30	5.75	17 0 46.38	34 20.18
15	7	. .	. .	11.5	23.5	. .	. .	. .	. .	. .	3 23.66	20.80	1.00	V.	4	44.793	27 15.07	30.95	5.73	3 1.86	34 4.16
16	8	. .	. .	48.5	. .	13.2	. .	. .	. .	. .	6 0.86	20.79	1.00	V.	4	40.364	29 47.44	30.53	5.98	4 39.07	36 36.36
17	10	52.8	. .	. .	. .	. .	. .	. .	. .	. .	7 29.77	20.79	1.01	III.	7	38.918	16 9.01	30.30	4.63	7 7.97	22 53.94
18	10	. .	. .	. .	26.5	. .	. .	. .	. .	. .	8 26.52	20.79	1.01	V.	6	31.960	28 50.01	30.15	5.88	8 4.72	35 36.04
19	8	. .	. .	52.	5.	. .	. .	. .	. .	. .	12 4.74	20.78	1.02	VII.	7	41.759	8 40.51	29.58	3.91	11 42.94	15 26.41
20	8	. .	. .	. .	. .	. .	42.	. .	. .	. .	14 17.11	20.78	0.98	VII.	1	36.494	52 31.63	29.23	8.25	13 55.35	59 21.52
21	9	26.5	. .	51.5	3.5	. .	. .	. .	. .	. .	17 3.66	20.78	1.00	VII.	5	31.263	20 32.11	28.80	5.05	16 41.88	27 18.36
22	8	30.	42.5	54.5	. .	. .	. .	. .	. .	. .	29 7.10	20.76	0.98	IV.	1	40.820	50 3.10	26.83	8.01	28 45.36	56 50.35
23	9	1.5	. .	26.8	38.5	. .	. .	. .	. .	. .	17 38.77	−20.76	−0.99	V.	2	45.706	41 24.02	−26.75	− 7.13	17 (31) 17.02	27 48 10.31

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847.	h.	s.	s.	s.	s.	s.	° ′ ″	r.
June 21,	7	− 28.32	g 0.010	. .	+ 0.173	− 0.752	*359 59 32.82	. .

INSTRUMENT READINGS.

	Date.	CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1847. h. m.	° ′ ″				″	″	in.	°	°
Zone 102	June 21, 17 8	*293 53 59.4	59.8	7.6	28.	62.41	62.40	30.260	68.5	62.
	19 5	. .	. .	. .	. .	. .	. .	30.200	67.	60.8

*The originally recorded values of zenith-point and circle-reading were found to give all the declinations about 37″ too far south. Another value of the zenith-point, found in the Washington Observations for 1847, page 119, would double the amount of apparent error. No time seems to have been noted for either determination. The microscope-readings are very discordant, and the minutes of the circle-reading are certainly erroneous by at least 22′. The circle-reading has therefore been arbitrarily assumed as 293° 31′ 40″.0.

REMARKS.

(100) 46. Micrometer reading assumed as $44^r.09$ instead of $40^r.09$.
(100) 59. Time of transit over T. IV assumed as $13^s.2$ instead of $15^s.2$.
(100) 60. Minutes assumed as 15 instead of 14.
(101) 3. Micrometer reading assumed as $44^r.066$ instead of $43^r.066$.
(101) 12. Transit over T. VII assumed as 25^s instead of $2^s.5$.
(101) 16. Minutes assumed as 5 instead of 6.
(101) 17. Hor. thread assumed as 6 instead of 7.
(101) 18. Hor. thread assumed as 5 instead of 6.
(101) 21. Hor. thread assumed as 6 instead of 5.

NOTE.—Increase the quantities in the column d_1, of Zone 101, numerically $2''.4^r$.

ZONE 101. JUNE 21. MS. D_0=— ° ′ ″—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
24	7	36.2	. .	1.5	13.5	. .	. .	. .	. .	. .	17 34 13.57	−20.75	−0.99	V.	2	45.623	41 26.88	−26.00	− 7.13	17 33 51.83	27 48 12.42
25	10	. .	. .	. .	. .	. .	. .	5.2	. .	. .	17 37 28.05	20.75	1.01	VII.	6	40.167	15 25.76	25.44	4.56	17 37 6.29	22 8.17
26	9	. .	. .	44.5	. .	. .	. .	. .	. .	. .	18 16 56.86	20.69	1.00	IV.	5	35.989	17 49.81	18.71	4.78	18 16 35.17	24 25.71
27	10	. .	. .	. .	52.2	. .	. .	. .	. .	. .	19 52.25	20.69	1.01	VII.	6	42.189	14 16.19	18.21	4.44	19 30.55	20 51.25
28	10	. .	9.5	. .	. .	. .	. .	. .	. .	. .	24 34.19	20.69	1.00	IV.	4	42.038	28 49.89	17.39	5.88	24 12.50	35 25.57
29	9	54.5	. .	19.2	32.	. .	. .	. .	. .	. .	26 31.72	20.68	1.01	V.	5	46.469	20 30.81	17.06	5.05	26 10.03	27 5.33
30	9	. .	21.2	33.5	. .	. .	. .	. .	. .	. .	32 45.87	20.68	1.00	IV.	4	43.373	28 3.95	15.96	5.81	32 24.19	34 38.13
31	8	24.	37.5	48.8	1.5	. .	. .	. .	. .	. .	37 1.50	20.67	1.00	V.	3	46.238	32 21.30	15.21	6.23	36 39.83	38 55.15
32	9	. .	. .	. .	. .	. .	. .	31.5	. .	. .	38 54.33	20.67	1.02	VII.	7	42.952	7 59.47	14.88	3.81	38 32.64	14 30.57
33	9	. .	. .	. .	. .	. .	2.	. .	. .	. .	40 37.38	20.67	1.01	VII.	7	32.814	10 21.70	14.57	4.06	40 15.70	16 52.74
34	9	. .	. .	. .	. .	. .	30.5	. .	. .	. .	44 5.63	20.66	0.98	VII.	1	41.900	49 25.63	13.96	7.98	43 43.99	55 59.98
35	.	. .	. .	. .	. .	. .	. .	3.5	. .	. .	48 26.37	20.66	1.00	VII.	3	46.654	32 6.69	13.19	6.21	48 4.71	38 38.50
36	8	42.2	55.8	7.5	19.5	. .	44.5	. .	. .	. .	18 58 19.79	20.65	1.01	VII.	4	50.555	23 56.54	11.67	5.39	18 56 58.13	30 26.01
37	8	8.2	. .	32.5	. .	. .	. .	. .	. .	. .	19 1 45.08	20.64	1.01	IV.	5	42.260	22 55.66	10.83	5.29	19 1 23.43	29 24.19
38	9	. .	16.5	. .	. .	. .	. .	. .	. .	. .	19 5 41.18	−20.64	−1.00	V.	4	43.855	27 47.33	−10.14	− 5.78	19 5 19.54	27 34 15.66
											ZONE 102. JUNE 25. MS. D_0=— ° ′ ″.										
1	8	30.5	42.8	54.8	. .	. .	31.	. .	. .	. .	18 4 7.01	−20.22	−1.00	VII.	3	43.435	33 57.47	−24.32	− 3.36	18 3 45.79	26 25 35.15
2	9	. .	48.2	. .	. .	25.2	. .	. .	. .	. .	7 12.82	20.22	1.00	VII.	4	40.636	29 37.83	23.79	2.96	6 51.60	21 14.58
3	10	. .	. .	43.5	. .	8.8	. .	. .	. .	. .	8 56.12	20.22	0.98	VII.	1	42.005	49 22.22	23.49	4.75	8 34.92	40 59.55
4	10	. .	. .	. .	. .	20.8	32.	. .	. .	. .	10 8.10	20.22	1.01	VII.	5	43.158	22 24.48	23.28	2.33	9 46.87	14 0.09
5	9	. .	. .	. .	23.4	35.	. .	. .	. .	. .	13 23.10	20.22	0.99	VI.	3	37.332	37 27.61	22.71	3.67	13 1.89	29 3.99
6	9	. .	. .	. .	. .	24.2	37.2	. .	. .	. .	14 12.33	20.22	0.99	VII.	3	33.291	39 46.49	22.57	3.88	13 51.12	31 22.94
7	10	35.	47.	59.2	. .	23.8	. .	. .	. .	. .	20 11.54	20.21	1.01	VI.	5	39.298	24 37.45	21.52	2.51	19 50.32	16 11.48
8	10	. .	. .	. .	46.2	. .	. .	. .	. .	. .	20 46.24	20.21	1.01	VII.	6	40.109	15 27.77	21.42	1.71	20 25.02	7 0.98
9	10	. .	. .	56.2	8.8	. .	. .	. .	. .	. .	24 8.61	20.21	1.00	VI.	5	36.839	26 2.04	20.83	2.64	23 47.40	17 35.51
10	11	. .	. .	. .	51.8	. .	. .	. .	. .	. .	32 51.78	20.20	1.00	VI.	3	42.495	34 29.98	19.28	3.40	32 30.58	26 2.66
11	10	. .	. .	58.8	. .	. .	35.	. .	. .	. .	38 10.68	20.20	0.99	VII.	2	37.336	46 11.74	18.34	4.46	37 49.49	37 44.54
12	9	34.8	47.2	59.2	. .	. .	. .	. .	. .	. .	40 11.56	20.20	0.99	VII.	2	43.732	42 31.67	17.97	4.13	39 50.37	34 3.77
13	9	39.2	52.5	4.5	16.8	. .	. .	. .	. .	. .	42 16.57	20.20	1.01	V.	5	47.499	19 55.38	17.61	2.10	41 55.36	11 25.09
14	10	. .	. .	. .	. .	. .	. .	38.	. .	. .	44 1.28	20.19	0.99	VII.	2	43.535	42 38.45	17.30	4.14	43 40.10	34 9.89
15	2.3	. .	. .	. .	. .	. .	44.6	. .	. .	. .	45 20.07	20.19	0.99	VII.	3	37.519	37 21.02	16.89	3.66	45 58.89	28 51.57
16	9	32.5	. .	56.8	. .	21.5	. .	. .	. .	. .	50 9.20	20.19	0.99	VI.	3	36.365	38 0.87	16.20	3.73	49 48.02	29 30.80
17	10	. .	. .	. .	. .	59.5	. .	24.2	. .	. .	18 53 47.40	20.19	1.01	VII.	5	45.015	21 20.59	15.56	2.23	18 53 26.20	12 48.38
18	9	28.4	40.2	52.1	4.5	. .	. .	. .	. .	. .	19 2 4.66	20.18	1.00	V.	3	43.315	34 1.86	14.08	3.36	19 1 43.48	25 29.30
19	9	. .	. .	. .	21.5	. .	46.2	. .	. .	. .	4 21.63	20.18	1.01	VI.	5	41.003	17 54.73	13.68	1.91	4 0.44	9 20.32
20	9	. .	26.2	. .	50.5	. .	. .	. .	. .	. .	10 50.55	20.18	1.00	V.	4	41.399	29 11.83	12.71	2.93	9 29.37	20 37.47
21	9	. .	. .	. .	. .	. .	. .	15.4	. .	. .	10 38.68	20.18	1.00	VII.	4	44.772	27 15.52	12.58	2.75	10 17.50	18 40.85
22	9	. .	. .	. .	. .	. .	16.8	. .	. .	. .	(12) 52.28	20.17	0.99	VII.	3	41.156	35 15.89	12.18	3.47	12 31.12	26 41.54
23	10	. .	20.8	. .	45.2	. .	. .	. .	. .	. .	19 45.22	20.17	1.00	VI.	3	42.700	34 22.92	10.96	3.40	19 24.05	25 47.28
24	10	. .	. .	. .	. .	51.5	. .	. .	. .	. .	20 39.36	20.17	1.01	VII.	6	40.782	15 4.61	10.81	1.66	20 18.18	6 27.08
25	10	. .	. .	. .	. .	. .	52.5	. .	. .	. .	22 28.15	20.17	1.02	VII.	6	47.163	11 25.08	10.49	1.31	22 6.96	2 46.88
26	10	. .	. .	. .	. .	15.5	. .	. .	. .	. .	24 3.31	20.17	1.00	VII.	4	41.082	29 22.48	10.22	2.95	23 42.14	26 20 45.65
27	10	38.2	50.8	2.8	15.2	. .	39.5	. .	. .	. .	27 15.08	20.17	1.02	V.	7	43.300	7 47.78	9.65	0.99	26 53.89	25 59 8.42
28	10	. .	. .	. .	51.5	. .	. .	. .	. .	. .	51.56	20.17	1.02	V.	6	48.49	10 39.67	9.55	1.25	(33) 30.37	26 2 0.47
29	10	. .	. .	14.8	. .	38.5	. .	. .	. .	. .	37 26.68	20.16	1.00	VI.	4	48.005	25 24.62	7.88	2.59	37 5.52	16 45.09
30	10	. .	. .	. .	. .	32.5	. .	. .	. .	. .	19 39 20.33	−20.16	−1.01	VI.	4	49.433	24 35.32	− 7.54	− 2.51	19 38 59.16	26 15 55.37

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847.	h.	s.	s.	s.	s.	s.	° ′ ″	r.
June 25,	14	− 28.38	g 0.002	. .	+ 0.173	− 0.752		

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1847. h. m.	° ′ ″				″	″	in.	°	°
Zone 102	June 25, 18 19	*295 8 4.1	7.8	9.6	13.8	8.75	8.82	30.020	73.	69.5
	19 20	. .	. .	. .	. .	. .	. .	30.428	73.	69.8

REMARKS.

(101) 26. Hor. thread assumed as 6 instead of 5.
(101) 33. Micrometer reading assumed as 38r.814 instead of 32r.814.
(101) 36. Minutes assumed as 57 instead of 58.
(102) 15. Minutes assumed as 46 instead of 45.
(102) 19. Micrometer reading assumed as 51r.003 instead of 41r.003.
(102) 20. Minutes of transit assumed as 9 instead of 10.

* 18′ seem to be subtracted from this reading, as if it should have been 294° 50′.

ZONE 102. JUNE 25. Ms. $D_0 = -$ ° ′ ″—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
31	.	..	..	..	..	6.5	18.2	..	..	..	19 41 53.98	−20.16	−0.99	VII.	2	45.610	41 27.06	− 7.09	− 4.05	19 41 32.83	26 32 48.20
32	8	..	..	..	10.8	..	..	..	..	..	50 10.81	20.15	0.99	VII.	2	40.025	44 39.22	5.66	4.37	49 49.67	35 59.25
33	8	..	..	..	..	..	34.2	..	..	..	52 9.62	20.15	0.99	VII.	2	36.495	46 40.67	5.32	4.54	51 48.48	38 0.53
34	9	..	..	16.4	..	40.8	..	..	..	..	19 54 28.60	20.15	0.99	VII.	3	39.699	36 6.02	4.93	3.56	54 7.46	27 24.51
35	10	32.5	44.	..	9.2	..	..	..	..	..	20 0 8.96	20.15	1.00	VII.	4	39.195	30 27.41	3.97	3.05	19 59 47.81	21 44.43
36	10	..	..	45.	..	10.5	..	..	..	..	20 15 57.78	−20.15	−1.00	VII.	4	44.155	27 36.76	− 1.32	− 2.78	20 15 36.63	26 18 50.80

ZONE 103. AUGUST 30. Ms. $D_0 = -24°\ 33'\ 0''$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	9	..	22.	34.	46.	58.	10.	..	..	..	18 11 46.00	−49.68	−1.00	VII.	4	46.352	26 21.19	−40.17	− 3.76	18 10 55.32	25 0 5.12
2	7	..	..	..	..	..	..	44.5	..	..	13 8.42	49.69	1.00	VII.	4	48.888	24 53.94	40.42	3.66	12 17.73	24 58 38.02
3	10	..	..	..	51.	..	15.2	..	..	..	19 51.10	49.72	1.00	VII.	4	50.288	24 5.78	38.12	3.61	19 0.38	24 57 47.51
4	8	..	..	..	..	44.	56.5	..	..	..	21 32.23	49.73	1.00	VII.	3	43.288	34 2.57	37.85	4.27	20 41.50	25 7 44.60
5	9	..	..	..	..	41.5	53.2	..	..	..	24 29.32	49.74	0.99	VII.	3	37.000	37 38.91	37.33	4.51	23 38.59	11 20.75
6	9	30.2	42.	54.	6.	..	..	..	..	..	28 6.07	49.76	1.01	VII.	4	42.825	28 22.54	36.67	3.90	27 15.30	25 2 3.11
7	8	57.2	10.	21.	34.	58.	..	..	..	..	31 33.65	49.78	1.01	VII.	5	45.865	20 51.37	36.06	3.40	30 42.86	24 54 31.83
8	8	37.	49.5	1.5	13.8	..	..	..	..	..	33 13.48	49.79	1.00	V.	3	43.058	33 36.28	35.77	4.24	32 22.69	25 7 16.29
9	8	..	..	..	..	54.2	..	..	..	..	34 30.13	49.80	0.99	VII.	3	38.965	36 31.30	35.47	4.44	33 39.34	10 11.21
10	7	..	2.5	14.	26.2	..	..	..	..	..	35 26.23	49.80	1.00	IV.	3	40.568	35 36.41	35.37	4.38	35 35.43	9 16.16
11	8	..	6.	18.5	30.2	..	..	..	..	..	18 38 30.22	−49.82	−1.00	IV.	3	49.449	30 30.85	−34.83	− 4.03	18 37 39.40	25 4 9.71

ZONE 104. AUGUST 30. Ms. $D_0 = -24°\ 30'\ 0''$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	8	..	..	..	18.2	60.	..	..	..	..	18 40 48.12	−49.83	−1.00	VII.	4	48.960	24 51.46	−31.62	− 3.66	18 39 57.29	24 55 26.74
2	8	..	..	38.2	..	2.5	..	..	..	..	41 50.40	49.83	1.01	VI.	5	51.873	17 24.80	31.44	3.18	40 59.56	47 59.42
3	8	..	..	18.2	..	43.	..	..	..	..	43 30.65	49.84	1.01	VI.	5	49.615	18 42.50	31.16	3.26	42 39.80	49 16.92
4	7	25.2	37.5	49.5	1.5	..	..	..	..	..	46 1.44	49.86	1.00	V.	4	47.015	25 58.62	30.71	3.73	45 10.58	56 33.16
5	9	..	15.2	27.2	..	..	..	..	..	..	47 39.19	49.86	1.00	IV.	4	45.199	27 1.12	30.41	3.81	46 48.33	57 35.34
6	9	..	..	..	24.	..	46.8	..	..	..	48 23.40	49.87	1.01	VII.	4	51.330	17 43.78	30.24	3.16	47 32.52	24 48 17.18
7	7	26.4	38.5	50.5	3.2	..	..	..	..	..	52 2.68	49.89	0.99	IV.	3	35.770	38 21.48	29.66	4.50	51 11.80	25 8 55.64
8	7	30.8	43.	55.2	7.	..	..	..	..	..	54 7.03	49.90	1.00	IV.	4	35.778	32 25.26	29.29	4.17	53 16.13	2 58.72
9	8	..	42.	..	..	..	..	..	..	..	56 6.00	49.91	1.00	III.	4	38.395	30 55.19	28.95	4.07	55 15.09	1 28.21
10	7	..	..	34.5	46.8	..	..	..	..	..	18 57 46.64	49.92	0.99	VII.	3	37.111	37 35.10	28.67	4.52	18 56 55.73	25 8 8.29
11	8	7.2	19.8	31.5	43.8	..	..	..	..	..	19 7 43.60	49.98	1.00	V.	4	43.961	27 43.69	26.93	3.76	19 6 52.62	24 58 14.38
12	8	22.5	35.8	47.	59.2	..	..	..	..	..	16 59.12	50.03	1.01	V.	6	37.355	17 2.79	25.35	3.16	16 8.08	47 31.30
13	10	..	1.5	13.8	..	..	..	..	..	..	20 25.64	50.05	1.00	IV.	5	35.445	26 50.14	24.77	3.80	19 34.59	57 18.71
14	10	..	57.2	9.2	21.	..	..	..	..	..	23 21.12	50.06	1.01	V.	5	42.748	22 38.85	24.28	3.54	22 30.05	24 53 6.67
15	10	..	3.2	15.2	27.8	..	..	..	..	..	24 27.39	50.07	1.00	V.	3	41.451	35 6.00	24.09	4.35	23 36.32	25 5 34.44
16	10	..	40.8	52.8	..	16.8	..	..	..	..	26 4.81	50.08	1.00	V.	4	46.508	26 16.06	23.82	3.76	25 13.73	24 56 43.64
17	8	..	22.2	33.8	45.	..	..	..	..	..	27 45.65	50.09	1.00	IV.	3	47.622	32 8.14	23.54	4.13	26 54.56	25 2 35.81
18	10	..	14.	26.2	38.2	..	..	..	..	..	31 38.12	50.11	1.00	V.	4	44.930	27 10.35	22.84	3.83	30 47.01	24 57 37.02
19	9	..	56.	8.	20.2	..	..	..	..	..	33 20.07	50.12	0.99	V.	2	47.712	40 15.00	22.60	4.68	32 28.96	25 10 42.28
20	8	..	..	..	7.	19.2	..	..	..	..	34 7.12	50.13	0.99	V.	2	45.109	41 44.56	22.36	4.79	33 16.00	12 11.71
21	9	..	..	..	29.	42.	54.	..	..	..	35 29.65	50.14	1.00	VII.	3	44.365	33 25.51	22.23	4.84	34 38.51	3 52.58
22	9	..	46.4	58.2	10.4	22.	..	..	..	..	19 38 10.26	−50.15	−0.99	VI.	2	41.758	43 39.77	−21.78	− 4.91	19 37 19.12	25 14 6.46

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847.	h.	s.	s.	s.	s.	s.	° ′ ″	r.
Aug. 30,	23	− 58.07	g 0.024	. .	− 0.142	− 0.437	0 0 0.18	40.090

INSTRUMENT READINGS.

	Date.		CIRCLE.						Barom.	Attached Thermom.	External Thermom.
			A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1847.	h. m.	° ′ ″				″	″	in.	°	°
Zone 103	Aug. 30,	18 11	*297 23 6	5.8	10.4	10.6	8.20	8.20	30.154	74.9	72.5
Zone 104		19 16	. .	. .	. .	. .	. .	. .	30.154	74.4	70.8
		20 19	. .	. .	. .	. .	. .	. .	30.150	74.	70.3
		20 32	. .	. .	. .	. .	. .	. .	30.150	73.8	70.
		21 2	. .	. .	. .	. .	. .	. .	30.142	73.5	69.

REMARKS.

(103) 8. Micrometer reading assumed as 44ʳ.058 instead of 43ʳ.058.
(103) 9. Transit over T. VI assumed to have been recorded over T. V.
(103) 10. Minutes assumed as 36 instead of 35.
(104) 6. Hor. thread assumed as 5 instead of 4.
(104) 17. Micrometer reading assumed as 46ʳ.622 instead of 47ʳ.622.

* The instrument appears to have been insecurely clamped as well as incorrectly read on the 30th of August. The circle-reading previous to $18^h\ 39^m$ is assumed as 296° 4′ 38″.2, and from that time till $20^h\ 48^m$ it is empirically assumed as 296° 7′ 40″. The subsequent observations of the night have been found irreconcilable, and are rejected.

ZONE 104. AUGUST 30. MS. $D_0 = -24° 30' 0''$—Continued.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
23	9	24.2	36.2	48.9	0.2	. .	. .	. .	. .	. .	19 43 0.44	−50.18	−0.99	V.	1	48.088	45 53.02	−21.26	− 5.06	19 42 9.24	25 16 19.34
24	9	. .	. .	. .	. .	. .	16.2	. .	. .	. .	43 52.24	50.18	1.01	VII.	5	50.222	18 21.46	20.84	3.24	43 1.05	24 48 45.54
25	10	. .	. .	. .	. .	58.5	. .	22.5	. .	. .	45 46.48	50.19	1.01	VII.	4	52.195	23 0.16	20.50	3.56	44 55.28	53 24.22
26	10	14.2	27.2	39.	51.	. .	. .	. .	. .	. .	49 50.82	50.22	1.02	V.	7	44.108	7 19.99	19.82	2.53	48 59.58	37 42.34
27	10	. .	. .	. .	. .	60.5	12.	24.	. .	. .	49 48.17	50.22	1.01	VII.	5	48.700	19 13.82	19.82	3.29	48 57.94	24 49 36.93
28	10	. .	. .	. .	. .	8.	20.2	32.	. .	. .	19 58 56.03	50.27	0.99	VII.	2	45.175	41 42.06	18.34	4.79	19 58 4.77	25 12 5.19
29	10	. .	. .	4.8	16.2	28.8	. .	. .	. .	. .	20 2 16.58	50.29	0.98	VI.	1	38.748	51 14.29	17.82	5.43	20 1 25.31	21 37.54
30	10	1.5	13.8	26.2	38.5	. .	. .	. .	. .	. .	4 38.03	50.31	1.00	IV.	3	40.335	35 44.42	17.46	4.38	3 46.72	25 6 6.26
31	10	. .	39.2	. .	3.2	. .	. .	. .	. .	. .	8 3.18	50.33	1.01	V.	4	51.623	23 20.07	16.92	3.58	7 11.84	24 53 40.57
32	10	22.	35.	47.8	0.5	. .	. .	. .	. .	. .	10 59.34	50.34	1.00	V.	3	48.522	31 2.71	16.46	4.07	10 8.00	25 1 23.24
33	9	. .	13.2	25.2	37.5	. .	. .	. .	. .	. .	12 37.31	50.35	0.99	V.	1	48.849	45 26.83	16.21	5.03	11 45.97	25 15 46.07
34	.	. .	40.	52.	4.2	. .	. .	. .	. .	. .	15 4.05	50.37	1.01	V.	4	44.08	27 39.60	15.84	3.86	14 12.67	24 57 59.30
35	10	. .	. .	. .	. .	. .	2.	14.2	. .	. .	16 38.08	50.38	1.01	VI.	6	43.26	13 39.53	15.61	2.95	15 46.69	43 58.09
36	.	35.	47.8	. .	11.8	. .	. .	. .	. .	. .	19 11.52	50.40	1.01	V.	5	47.44	19 57.41	15.17	3.34	18 20.11	50 15.92
37	9	. .	. .	. .	. .	31.5	44.	56.	. .	. .	32 19.84	50.47	1.01	VII.	6	33.238	19 24.21	13.30	3.32	31 28.36	24 49 40.83
38	10	56.	8.	20.	32.	. .	. .	. .	. .	. .	35 32.04	50.50	0.99	IV.	2	41.795	43 38.61	12.84	4.91	34 40.55	25 13 56.36
39	10	11.2	23.2	35.2	47.	. .	. .	. .	. .	. .	37 47.17	50.51	1.00	V.	4	37.105	31 39.58	12.53	4.12	36 55.66	1 56.23
40	10	. .	51.2	3.2	15.5	. .	. .	. .	. .	. .	39 15.29	50.52	1.00	V.	4	37.856	31 13.74	12.31	4.08	38 23.77	25 1 30.13
41	9	27.2	39.2	51.5	3.5	. .	. .	. .	. .	. .	46 3.36	−50.56	−1.01	V.	5	40.900	20 15.82	−11.39	− 3.35	20 45 11.79	24 50 30.56
42	9	6.	18.8	31.	42.8	. .	. .	. .	. .	. .	49 42.68	. .	. .	V.	3	43.250					
43	10	16.8	29.2	41.5	53.	. .	. .	. .	. .	. .	55 53.13	. .	. .	V.	5	38.885					
44	10	. .	. .	. .	6.6	. .	. .	. .	. .	. .	20 58 6.63	. .	. .	VI.	6	35.568					
45	9	1.5	14.5	. .	39.	. .	. .	. .	. .	. .	21 0 38.36	. .	. .	V.	5	30.066					
46	10	. .	. .	. .	. .	. .	22.	34.5	. .	. .	21 1 58.20	. .	. .	VII.	3	49.525					

ZONE 105. SEPTEMBER 6. MS. $D_0 = -\ \ °\ \ '\ \ ''$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	8	. .	. .	. .	12.	24.2	. .	. .	. .	. .	19 29 12.02	+25.63	+0.99	VII.	5	46.272	20 37.33	−31.33	− 1.21	19 29 38.64	26 11 49.87
2	8	25.	37.2	49.	1.8	. .	. .	. .	. .	. .	32 1.55	25.61	0.98	VI.	6	48.528	10 38.27	30.87	0.37	32 28.14	1 49.51
3	8	. .	30.	42.5	55.	6.5	. .	. .	. .	. .	35 54.61	25.58	1.00	VI.	4	44.721	27 17.44	30.23	1.78	36 21.19	26 18 29.45
4	9	40.	52.	4.2	. .	. .	. .	. .	. .	. .	45 16.44	25.52	0.98	VII.	7	43.584	7 37.74	28.70	0.12	45 42.94	25 58 46.56
5	8	. .	14.8	26.5	39.	. .	. .	. .	. .	. .	47 39.00	25.50	1.02	V.	1	48.68	45 32.64	28.30	3.33	48 5.52	26 36 44.27
6	7	. .	. .	. .	21.8	. .	45.2	57.2	. .	. .	50 20.98	25.48	1.02	VII.	1	50.445	44 31.66	27.88	3.25	49 47.48	35 42.79
7	9	. .	. .	. .	. .	. .	29.	41.	. .	. .	51 4.40	25.48	1.00	VII.	3	51.168	29 31.42	27.76	1.96	51 30.88	20 41.14
8	.	. .	. .	. .	26.8	38.	51.2	. .	. .	. .	53 26.42	25.46	1.01	VII.	2	55.112	36 0.14	27.39	2.52	53 52.89	26 27 10.05
9	9	28.	40.2	52.2	4.5	. .	. .	. .	. .	. .	19 57 4.52	25.44	0.98	V	6	51.821	8 44.80	26.81	0.22	57 30.94	25 59 51.83
10	9	42.8	35.	7.	19.	. .	. .	. .	. .	. .	20 0 19.30	25.42	1.00		3	49.667	30 23.32	26.45	2.03	19 59 45.72	26 21 31.80
11	9	. .	. .	. .	. .	. .	53.	5.	. .	. .	0 28.41	25.41	1.00	VII.	3	55.218	27 12.07	26.28	1.77	20 0 54.82	18 20.12
12	9	44.2	57.	9.	21.	. .	. .	. .	. .	. .	4 21.16	25.39	1.00	VII.	3	46.925	31 57.39	25.68	2.16	4 47.55	23 5.23
13	9	33.	46.	58.2	10.2	. .	. .	. .	. .	. .	11 10.22	25.34	1.02	V.	1	48.320	45 45.03	24.66	3.35	11 36.58	36 53.04
14	9	. .	. .	. .	. .	58.	10.	. .	. .	. .	13 45.66	25.32	1.00	VII.	3	49.580	30 26.05	24.25	2.03	14 11.98	21 32.33
15	8	. .	. .	. .	. .	34.	46.	. .	. .	. .	15 21.65	25.31	1.00	VII.	3	44.835	33 9.31	24.01	2.27	15 47.96	24 15.59
16	9	. .	41.	53.5	5.5	. .	. .	. .	. .	. .	18 5.57	25.29	1.02	VI.	1	40.522	50 13.23	23.59	3.74	18 31.88	41 20.56
17	9	30.5	. .	55.	7.	19.2	. .	. .	. .	. .	23 7.12	25.25	1.00	V.	4	40.707	29 35.64	22.86	1.97	23 33.37	26 20 40.47
18	9	9.2	22.	34.	46.	. .	. .	. .	. .	. .	25 46.13	25.23	0.98	V.	7	42.338	8 20.88	22.47	0.19	26 12.34	25 59 23.54
19	8	. .	. .	14.8	27.	39.	51.	. .	. .	. .	27 26.88	25.22	0.99	VII.	6	35.889	17 52.96	22.20	0.98	27 53.09	26 8 56.14
20	9	. .	. .	. .	13.2	26.	38.	. .	. .	. .	29 13.56	25.21	0.99	VII.	6	32.617	19 45.54	21.97	1.14	29 39.76	10 48.65
21	8	22.	34.8	47.8	59.8	. .	. .	. .	. .	. .	20 31 59.46	+25.19	+1.01	V.	2	47.380	40 26.42	−21.58	− 2.90	20 32 25.66	26 31 30.90

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847. h.	s.	s.	s.	s.	s.	° ′ ″	r.
Sept. 6, 19	+ 19.61	g 0.040	. .	− 0.142	− 0.437	359 59 58.80	40.111

INSTRUMENT READINGS.

	Date.	CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1847 h. m.	° ′ ″				″	″	in.	°	°
Zone 105	Sept. 6, 19 29	295 8 1.3	56.	1.8	2.4	2.63	2.78	30.050	75.	68.4
	20 51	. .	55.5	25.	. .	. .	. .	30.050	74.2	66.5
	21 52	. .	. .	. .	. .	. .	. .	. .	. .	64.5

REMARKS.

(104) 41. Micrometer reading assumed as 46r.900 instead of 40r.900.

(105) 3. "Accidentally moved the circle."

(105) 6. Minutes assumed as 49 instead of 50.

(105) 10. Time of transit over T. II assumed as 55^s instead of 35^s, and minutes of transit as 59^m instead of 0^m.

ZONE 105. SEPTEMBER 6. Ms. $D_\circ$ = − ° ′ ″—Continued.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d'_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
22	8	51.	3.8	15.5	28.	. .	. .	. .	. .	. .	20 34 27.93	+25.17	+1.00	V.	3	49.591	30 25.94	−21.23	− 2.04	20 34 54.10	26 21 29.21
23	9	. .	40.	52.	4.5	16.5	29.	. .	. .	. .	37 4.39	25.15	1.00	VII.	2	. .	. . .	. .	. .	37 30.54	
24	7	19.	32.	43.8	56.	8.	20.	. .	. .	. .	39 55.92	25.13	1.00	VII	4	42.438	28 35.83	20.48	1.88	40 22.05	19 38.19
25	9	14.	26.	39.	51.	3.	15.5	. .	. .	. .	41 50.88	25.12	0.99	VII	6	37.207	17 7.62	20.22	0.91	42 16.99	8 8.75
26	9	. .	11.2	23.2	36.	48.	. .	. .	. .	. .	51 35.73	25.05	0.99	VI	6	49.779	15 39.24	18.92	0.78	52 1.77	6 36.94
27	9	. .	46.	58.2	11.	23.	. .	. .	. .	. .	55 10.67	25.02	0.99	V	6	34.498	18 41.09	18.47	1.05	55 36.68	9 40.61
28	8	1.0	14.	. .	. .	. .	2.5	. .	. .	. .	20 58 38.04	25.00	0.99	V *or* VII	6	35.101	18 20.34	18.01	1.02	20 59 4.03	9 19.
29	9	6.	18.8	31.	43.	55.5	. .	. .	. .	. .	21 1 43.09	24.97	0.99	VI	6	34.021	18 57.40	17.63	1.07	21 2 9.05	9 56.10
30	8	54.	6.8	18.5	31.	43.	. .	. .	. .	. .	5 30.91	24.95	1.00	VII	4	32.199	40 24.06	17.16	2.88	5 56.86	31 24.10
31	9	. .	43.	55.	7.5	. .	. .	. .	. .	. .	8 7.40	24.93	1.01	V.	1	46.528	46 46.69	16.84	3.45	8 33.34	37 46.98
32	9	. .	. .	. .	. .	. .	. .	42.	. .	. .	9 5.28	24.92	1.00	VII.	4	42.97	28 51.91	16.72	1.78	9 31.20	19 50.41
33	10	. .	. .	15.	. .	39.5	. .	. .	. .	. .	13 27.26	24.89	1.00	VII.	3	47.777	31 28.08	16.21	2.12	13 53.15	22 26.41
34	9	. .	. .	32.	48.0	18.8	29.	. .	. .	. .	14 4.52	24.89	1.00	VII.	3	46.117	32 25.20	16.14	2.20	14 30.41	23 23.54
35	8	55.	. .	21.	32.	. .	57.	. .	. .	. .	20 32.38	24.84	1.00	VII.	4	46.312	26 22.53	15.51	1.69	19 58.22	17 19.73
36	8	. .	11.5	. .	36.	48.	0.5	. .	. .	. .	21 35.93	24.84	1.00	VII.	3	49.182	30 39.75	15.27	2.06	22 1.77	21 37.08
37	9	. .	. .	26.5	40.	52.2	. .	. .	. .	. .	23 39.63	24.82	0.99	VII.	6	44.179	13 7.74	15.05	0.57	24 5.44	4 3.36
38	9	. .	. .	. .	. .	5.5	18.	. .	. .	. .	26 53.42	24.80	1.00	VII.	4	42.109	28 47.15	14.68	1.90	27 19.22	19 43.73
39	9	25.	37.5	49.8	. .	14.2	. .	. .	. .	. .	29 1.94	24.78	1.00	VII.	3	46.038	32 27.92	14.44	2.21	29 27.72	23 24.57
40	.	. .	44.	56.2	8.5	20.2	. .	. .	. .	. .	32 8.34	24.76	1.00	VI.	4	44.891	27 11.60	14.13	1.76	32 34.10	18 7.49
41	10	9.2	22.	. .	. .	. .	. .	. .	. .	. .	36 46.25	24.73	1.01	V.	2	42.238	43 23.35	13.64	3.15	37 11.99	34 20.14
42	9	31.	42.5	54.8	6.8	19.	31.	43.	. .	. .	39 6.87	24.71	1.01	VII.	2	43.00	42 56.86	13.39	3.11	39 32.59	33 53.36
43	9	. .	. .	. .	. .	. .	8.	19.	. .	. .	40 42.90	24.70	1.00	VII.	4	41.648	29 3.01	13.25	1.92	41 8.60	19 58.18
44	9	56.2	9.	21.2	33.	. .	. .	. .	. .	. .	42 33.24	24.68	1.02	V.	1	37.188	52 8.05	12.99	3.92	43 58.94	43 4.96
45	9	. .	. .	. .	55.5	8.2	20.	. .	. .	. .	44 55.65	24.67	1.01	VII.	3	37.010	37 38.54	12.88	2.66	45 21.33	28 34.08
46	9	. .	. .	53.	4.8	. .	. .	. .	. .	. .	47 5.00	24.65	1.01	V.	3	34.764	38 56.07	12.66	2.77	47 30.66	29 51.50
47	9	8.2	20.5	32.8	. .	57.2	. .	. .	. .	. .	49 44.98	24.64	1.00	V.	5	37.212	25 49.31	12.45	1.64	50 10.62	16 43.40
48	.	14.2	27.	39.2	52.	4.2	16.	28.5	. .	. .	21 52 51.59	+24.61	+0.99	VII.	5	48.140	19 33.06	−12.22	− 1.11	21 53 17.19	26 10 26.39

ZONE 106. SEPTEMBER 6. Ms. $D_\circ$ = − ° ′ ″.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d'_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	10	40.5	. .	5.	17.2	. .	. .	. .	. .	. .	23 51 17.21	+23.86	+1.00	VI.	6	48.424	10 41.84	−10.19	− 8.27	23 51 42.07	26 1 30.30
2	10	. .	. .	. .	43.5	56.	8.	20.	. .	. .	54 43.50	23.84	1.00	VII.	1	47.388	46 16.84	10.17	11.47	54 8.34	37 8.48
3	10	. .	15.	27.	39.	. .	. .	. .	. .	. .	23 56 39.22	23.83	1.00	VII.	4	47.390	25 45.45	10.16	9.62	23 57 4.05	16 35.23
4	8	38.2	51.2	3.5	15.	27.2	39.5	52.	. .	. .	24 0 15.23	23.81	1.00	VII.	5	46.884	20 16.27	10.15	9.12	0 0 40.04	11 5.54
5	9	. .	. .	42.5	. .	. .	. .	. .	. .	. .	1 54.62	23.80	1.00	III.	1	37.812	51 46.57	10.15	11.99	2 19.42	42 38.71
6	9	8.2	21.	. .	. .	. .	9.5	. .	. .	. .	12 45.14	23.74	1.00	VII.	4	45.162	27 2.11	10.18	9.73	13 9.88	17 52.02
7	9	. .	. .	. .	15.	26.8	39.	52.	. .	. .	13 14.90	23.74	1.00	VII.	6	46.281	11 55.42	10.19	8.37	14 39.64	2 43.98
8	10	22.	34.	46.	59.	11.	. .	. .	. .	. .	23 58.65	23.69	1.00	VI.	2	45.521	41 30.29	10.35	11.05	24 23.34	32 21.69
9	9	3.	16.	28.	40.	52.	4.	16.5	. .	. .	28 39.93	23.67	1.00	VII.	5	42.755	22 38.34	10.45	9.33	28 4.60	13 28.12
10	9	. .	. .	35.	47.	59.5	11.5	. .	. .	. .	29 47.14	23.66	1.00	VII.	5	36.065	31 38.18	10.48	10.14	30 11.80	22 28.80
11	9	7.2	20.	32.2	44.	56.	8.5	. .	. .	. .	33 44.11	23.64	1.00	VII.	6	49.194	10 15.19	10.56	8.23	34 8.75	1 3.98
12	9	37.	49.5	1.5	14.	26.	38.	. .	. .	. .	38 13.80	23.62	1.00	VII.	5	45.321	21 10.06	10.70	9.20	38 38.42	11 59.96
13	9	. .	. .	35.	. .	59.	11.2	. .	. .	. .	39 46.95	23.62	1.00	VII.	5	43.811	22 2.01	10.75	9.28	40 11.57	12 52.04
14	9	. .	10.	22.	34.	. .	. .	. .	. .	. .	40 34.21	23.61	1.00	V.	5	39.224	24 40.09	10.77	9.52	40 58.82	15 30.38
15	9	. .	39.	51.	4.	. .	. .	. .	. .	. .	44 3.54	23.60	1.00	V.	6	40.112	9 37.47	10.88	7.70	44 28.14	0 26.05
16	.	53.	5.	. .	29.5	. .	. .	. .	. .	. .	29.56	23.60	1.00	.	.	. .	. . .	. .	. .	(47) 54.16	
17	9	. .	. .	. .	34.	. .	. .	. .	. .	. .	24 48 33.96	+23.58	+1.00	V.	3	48.480	31 4.15	−11.05	−10.10	0 48 58.54	26 21 55.30

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847.	h. m.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.		CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1847.	h. m.	° ′ ″				″	″	in.	°	°
Zone 106	Sept. 6,	23 51	*295 8 0.0	55.5	2.5	2.8	0.05	0.20	31.052	71.	64.
		. .	. .	. .	. .	. .	. .	. .	. .	. .	63.9
		24 50	. .	. .	. .	. .	. .	. .	31.052	70.2	63.5

REMARKS.

(105) 26. Micrometer reading assumed as 39ʳ.779 instead of 49ʳ.779.
(105) 30. Hor. thread assumed as 3 instead of 4.
(105) 32. Micrometer reading assumed as 41ʳ.97 instead of 42ʳ.97.
(105) 34. The following times of transit assumed: 52.0, 4.8, 16.3.
(105) 35. Minutes assumed as 19 instead of 20.
(105) 44. Minutes assumed as 43 instead of 42.
(106) 2. Minutes assumed as 53 instead of 54.
(106) 7. Minutes assumed as 14 instead of 13.
(106) 9. Minutes assumed os 27 instead of 28.
(106) 10. Micrometer reading assumed as 27ʳ.065 instead of 36ʳ.065.
(106) 15. Hor. thread assumed as 7 instead of 6,

*The circle-reading is written $\left\{ \begin{matrix} 254^\circ\ 50' \\ +18 \end{matrix} \right\}$ it should have been 294.

Zone 106. September 6. Ms. $D_\circ = -$ ° ′ ″—Continued.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a^1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
18	9	. .	. .	. .	. .	. .	53.4	5.5	. .	. .	24 50 28.76	+23.57	+1.00	VII.	1	40.106	50 27.39	−11.12	−11.89	0 50 53.33	26 41 20.40
19	9	. .	47.2	. .	12.	. .	36.	. .	. .	. .	24 59 11.71	23.54	1.00	VII.	5	36.228	26 22.91	11.50	9.67	0 59 36.25	17 14.08
20	9	29.5	42.	54.	6.2	19.	31.	. .	. .	. .	1 1 6.40	+23.53	+1.00	VII.	2	32.445	49 0.02	−11.59	−11.76	1 1 30.93	26 39 53.37
Zone 107. September 16. Ms. $D_\circ = -26° 29′ 40′$.																					
1	10	. .	60.	12.	25.	37.	. .	. .	. .	. .	19 17 24.57	+16.89	+1.00	V.	3	43.035	34 11.50	−38.06	− 4.35	19 17 42.46	27 4 33.91
2	7	. .	. .	5.	17.5	29.8	42.	. .	. .	. .	20 17.46	16.87	1.01	VI.	1	46.250	46 56.16	37.57	5.36	20 35.34	27 17 19.09
3	10	. .	. .	. .	57.2	9.	22.	. .	. .	. .	28 57.29	16.81	0.99	VII.	5	45.760	20 54.96	36.04	3.28	29 15.09	26 51 14.28
4	10	35.	47.2	59.	. .	. .	. .	. .	. .	. .	32 11.29	16.79	0.99	III.	6	43.921	13 16.87	35.47	2.68	32 29.07	43 35.02
5	9	. .	. .	. .	53.	5.	17.	. .	. .	. .	32 53.91	16.78	0.99	VII.	5	52.472	17 4.03	35.35	2.96	33 11.68	47 22.34
6	9	. .	. .	. .	. .	. .	. .	32.5	. .	. .	34 56.00	16.77	0.99	VII.	5	49.948	18 30.88	34.99	3.08	35 13.76	48 48.95
7	9	53.2	6.2	18.	30.	. .	. .	. .	. .	. .	38 30.07	16.74	0.99	IV.	5	46.150	20 41.82	34.37	3.25	38 47.80	50 59.44
8	9	. .	. .	37.2	49.8	2.	. .	. .	. .	. .	39 49.70	16.73	0.99	V.	5	48.065	19 35.91	34.14	3.17	40 7.42	49 53.22
9	9	15.	27.2	39.8	52.	. .	. .	. .	. .	. .	40 51.71	16.72	0.99	IV.	5	41.728	23 13.96	33.96	3.45	41 9.42	26 53 31.37
10	9	37.	49.5	1.5	14.	26.5	. .	. .	. .	. .	43 13.87	16.71	1.01	VI.	2	43.262	42 48.01	33.57	5.04	43 31.59	27 13 6.62
11	9	. .	. .	. .	. .	56.	7.2	. .	. .	. .	44 43.38	16.70	1.00	VII.	3	42.538	34 28.35	33.32	4.37	45 1.08	27 4 46.04
12	8	. .	. .	. .	24.	36.5	48.5	. .	. .	. .	46 24.20	16.68	1.00	VII.	4	46.728	26 8.23	33.04	3.68	46 41.88	26 56 24.95
13	9	. .	12.2	24.2	37.	. .	. .	. .	. .	. .	48 36.59	16.67	0.99	IV.	6	44.22	13 6.62	32.64	2.66	48 54.25	43 21.92
14	9	. .	4.	15.5	28.	40.5	. .	. .	. .	. .	50 28.09	16.65	0.98	VI.	7	43.735	7 32.72	32.33	2.22	50 45.72	26 37 47.27
15	10	11.	24.	36.	. .	60.5	13.2	. .	. .	. .	53 48.24	16.63	1.00	VII.	3	45.892	32 33.00	31.79	4.21	54 5.87	27 2 49.00
16	9	. .	. .	32.	45.	57.	. .	. .	. .	. .	55 44.66	16.61	1.01	VII.	2	41.658	43 43.04	31.47	5.11	56 2.28	27 13 59.62
17	9	. .	16.	28.	40.	52.8	. .	. .	. .	. .	19 59 40.29	16.58	0.98	VI.	7	41.225	8 59.08	30.84	2.34	19 59 57.85	26 39 12.26
18	9	. .	. .	27.	39.8	52.	. .	. .	. .	. .	20 1 39.63	16.57	0.99	VI.	5	44.062	21 53.55	30.52	3.35	20 1 57.19	26 52 7.42
19	9	. .	. .	. .	. .	37.	49.	. .	. .	. .	3 24.79	16.55	1.00	VII.	4	40.258	29 50.85	30.25	3.99	3 42.34	27 0 5.09
20	10	. .	. .	. .	. .	43.	55.	7.	. .	. .	6 30.67	16.53	1.01	VII.	2	41.187	43 59.25	29.75	5.13	6 48.21	27 14 14.13
21	10	. .	. .	. .	10.	22.	34.	. .	. .	. .	10 9.85	16.50	1.00	VII.	3	50.78	29 44.77	29.17	3.98	10 27.35	26 59 57.92
22	10	. .	. .	. .	37.	49.5	1.	. .	. .	. .	12 37.12	16.48	0.98	VII.	6	50.43	9 32.67	28.79	2.37	12 54.58	26 39 43.83
23	8	50.	2.8	14.8	27.5	39.5	. .	. .	. .	. .	16 27.08	16.45	1.00	VI.	3	46.66	32 6.68	28.18	4.17	16 44.53	27 2 19.03
24	9	. .	. .	. .	15.	27.	39.	51.	. .	. .	18 14.82	16.44	0.99	VII.	6	47.408	11 16.66	27.91	2.51	18 32.25	26 41 27.08
25	10	. .	19.	31.	43.5	56.	8.	. .	. .	. .	20 43.51	16.42	0.99	VII.	5	45.122	21 16.91	27.54	3.30	21 0.92	26 51 27.75
26	10	59.2	12.	24.	36.5	. .	. .	. .	. .	. .	25 36.17	16.39	1.01	V.	2	47.29	40 29.52	26.80	4.85	25 53.57	27 10 41.17
27	8	. .	9.2	22.	34.	46.	59.	. .	. .	. .	25 34.03	16.38	1.01	VI.	1	46.036	47 3.53	26.80	5.38	26 51.42	27 17 15.71
28	10	. .	. .	. .	. .	42.	54.	6.2	. .	. .	28 29.78	16.35	1.00	VII.	4	45.845	26 38.62	26.38	3.72	28 47.13	26 56 48.72
29	9	41.	54.	6.	18.	30.5	. .	. .	. .	. .	31 18.07	16.33	1.01	VIII.	2	47.049	40 2.80	25.97	4.83	31 35.41	27 10 13.59
30	9	49.2	1.	13.	25.5	38.	50.	. .	. .	. .	34 25.53	16.31	0.99	VII.	5	52.721	16 55.46	25.52	2.95	34 42.83	26 47 3.93
31	9	. .	. .	53.	5.5	17.5	. .	. .	. .	. .	37 5.40	16.29	0.99	VI.	6	44.576	12 54.26	25.12	2.62	37 22.67	43 2.00
32	9	31.	43.	55.2	8.	20.	. .	. .	. .	. .	40 7.59	16.26	0.99	V.	5	41.530	23 20.74	24.70	3.46	40 24.84	26 53 28.90
33	9	. .	. .	55.	8.	20.	. .	. .	. .	. .	42 7.66	16.25	1.01	VI.	1	50.850	50 1.94	24.42	5.64	42 24.92	27 20 12.00
34	9	. .	18.5	30.5	43.	55.	7.	. .	. .	. .	44 42.80	16.23	0.99	VII.	4	52.863	22 37.15	24.05	3.40	45 0.02	26 52 44.60
35	7	. .	10.	22.	34.5	46.5	59.	. .	. .	. .	47 34.41	16.20	0.99	VII.	4	54.361	21 45.62	23.65	3.33	47 51.60	26 51 52.60
36	9	40.8	53.	5.	17.	30.	. .	. .	. .	. .	55 17.34	16.14	1.01	VI.	1	41.857	49 27.30	22.65	5.60	55 34.49	27 19 35.55
37	9	. .	56.	8.	21.	. .	. .	. .	. .	. .	59 20.47	16.11	1.01	II.	2	44.11	42 18.94	22.12	5.00	59 37.59	27 12 26.06
38	10	. .	. .	. .	. .	. .	44.	57.	. .	. .	20 59 20.10	16.11	1.00	VII.	3	50.960	29 38.58	22.12	3.97	20 59 37.21	26 59 44.67
39	9	. .	. .	51.	3.	15.	. .	40.	. .	. .	21 2 3.13	16.08	1.00	VII.	4	30.933	35 11.68	21.79	4.43	21 2 20.21	27 5 17.90
40	9	1.	14.	26.	38.	. .	. .	. .	. .	. .	5 37.94	16.05	0.99	V.	7	29.274	15 50.36	21.35	2.86	5 54.98	26 45 54.57
41	9	56.	8.	20.5	33.	45.	. .	. .	. .	. .	8 32.67	16.03	1.00	VI.	3	39.208	36 23.09	21.00	4.52	8 49.70	27 6 28.61
42	8	. .	23.	35.	47.2	60.	12.	. .	. .	. .	21 10 47.43	+16.01	+1.00	VII.	4	45.499	26 47.08	−20.73	− 3.73	21 11 4.44	26 56 51.54

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847.	h.	s.	s.	s.	s.	s.	° ′ ″	r.
Sept. 16,	18	+ 10.63	g 0.035	. .	− 0.142	− 0.437	0 0 2.74	40.117

INSTRUMENT READINGS.

	Date.	CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean	Barom.	Attached Thermom.	External Thermom.
	1847. h. m.	° ′ ″				″	″	in.	°	°
Zone 107	Sept. 16, 19 16	295 55 54.	51.8	57.	56.	54.50	54.70	30.096	67.0	63.7
	20 55	. .	. .	. .	. .	. .	. .	30.097	66.7	62.5
	21 15	. .	. .	. .	. .	. .	. .	30.098	65.5	60.9
	22 22	. .	. .	. .	. .	. .	. .	30.102	65.	59.
	22 30	. .	. .	. .	. .	. .	. .	30.094	65.	58.6
	23 20	. .	. .	. .	. .	. .	. .	30.094	64.7	57.2

REMARKS.

(106) 19. Minutes assumed as 58 instead of 59.
(107) 26. Minutes assumed as 24 instead of 25.
(107) 27. Minutes assumed as 26 instead of 25.
(107) 29. Micrometer reading assumed as 48r.049 instead of 47r.049.
(107) 33. Micrometer reading assumed as 40r.850 instead of 50r.850.

ZONE 107. SEPTEMBER 16. Ms. $D_0 = -26° 29' 40''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
43	9	4.	17.	29.	41.	54.	. .	. .	. .	. .	21 22 41.16	+15.92	+1.00	VI.	4	44.892	27 11.57	−19.33	− 3.76	21 22 58.08	26 57 14.66
44	9	. .	. .	. .	. .	13.	25.	37.	. .	. .	24 0.69	15.91	1.01	VII.	2	47.557	40 20.09	19.20	4.85	24 17.61	27 10 24.14
45	10	. .	. .	. .	55.	7.	19.5	32.	. .	. .	26 55.16	15.88	1.00	VII.	4	48.666	25 1.56	18.88	3.59	27 12.04	26 55 4.03
46	10	12.	24.	36.	. .	. .	. .	. .	. .	. .	29 48.24	15.86	1.00	IV.	4	51.819	23 13.35	18.56	3.45	30 5.10	53 15.36
47	9	. .	. .	42.	54.	6.	18.	. .	. .	. .	34 54.02	15.82	0.99	VII.	6	48.628	10 34.68	18.02	2.43	34 10.83	40 35.13
48	9	. .	. .	42.	54.	6.2	19.	. .	. .	. .	35 54.22	15.81	1.00	VII.	3	52.086	28 59.85	17.92	3.92	36 11.03	26 59 1.69
49	10	. .	. .	. .	. .	. .	14.	26.2	. .	. .	37 49.64	15.79	1.01	VII.	1	46.582	46 44.57	17.73	5.38	38 6.44	27 16 47.68
50	9	. .	. .	. .	. .	47.	59.	11.	. .	. .	39 34.72	15.78	1.00	VII.	4	47.912	25 27.50	17.55	3.63	39 51.50	26 55 28.68
51	9	. .	. .	. .	14.	26.	39.	. .	. .	. .	41 14.21	15.77	1.00	VII.	4	51.490	23 9.63	17.39	3.45	41 30.98	26 53 10.47
52	.	50.	3.	15.	27.2	40.	52.	. .	. .	. .	45 27.28	15.73	1.01	.	1	47.415	46 16.20	17.06	5.34	44 44.02	27 16 18.60
53	9	. .	46.2	59.	71.	83.	96.	. .	. .	. .	48 11.03	15.71	1.01	VII.	2	46.080	41 10.90	16.71	4.92	48 27.75	27 11 12.53
54	10	. .	. .	. .	7.	19.	31.	. .	. .	. .	50 6.92	15.69	0.99	VII.	5	52.225	17 12.53	16.54	2.95	50 23.60	26 47 12.02
55	10	. .	. .	. .	. .	14.8	27.8	40.	. .	. .	52 3.20	15.68	1.01	VII.	1	50.722	44 22.13	16.37	5.20	52 19.89	27 14 23.70
56	10	. .	17.	29.	41.	53.	6.	18.2	. .	. .	21 54 41.31	15.65	0.99	VII.	7	45.452	6 33.49	16.13	2.08	21 54 57.95	26 36 31.70
57	10	32.	44.2	57.	. .	. .	. .	. .	. .	. .	22 0 8.72	15.61	1.00	V.	2	48.388	39 51.74	15.64	4.83	22 0 25.33	27 9 52.21
58	8	. .	48.2	1.	13.	. .	. .	. .	. .	. .	4 12.86	15.58	1.00	V.	3	43.506	33 55.30	15.29	4.32	4 29.44	3 54.91
59	9	. .	. .	. .	28.	40.	52.	. .	. .	. .	7 27.85	15.55	1.00	VII.	4	39.655	30 11.59	15.03	4.02	7 44.40	27 0 10.64
60	10	49.	. .	14.	26.	. .	. .	. .	. .	. .	11 25.88	15.52	1.00	V.	4	40.749	29 34.20	14.72	3.97	11 42.40	26 59 32.89
61	9	. .	5.2	17.2	29.5	42.	54.5	. .	. .	. .	14 29.72	15.50	0.99	VII.	7	46.	6	14.	2.	14 46.21	26 36
62	9	23.	36.	48.	60.2	12.3	. .	. .	. .	. .	19 0.06	15.46	1.00	VI.	2	46.631	40 52.10	14.15	4.90	19 15.52	27 10 51.15
63	10	23.	45.	57.	. .	. .	. .	. .	. .	. .	21 9.20	15.44	0.99	V.	7	44.771	6 57.17	13.99	2.11	21 25.63	26 36 53.27
64	8	. .	. .	. .	16.	28.	40.5	. .	. .	. .	22 16.07	15.43	1.00	VII.	5	46.882	20 16.35	13.91	3.20	22 32.50	26 50 13.46
65	9	26.2	38.	51.	63.	75.	88.	. .	. .	. .	33 2.95	15.35	1.00	VII.	3	46.561	32 9.93	13.18	4.17	33 19.30	27 2 7.28
66	9	20.	. .	45.	57.2	69.	82.	. .	. .	. .	35 57.08	15.33	1.00	VII.	3	42.139	34 42.08	13.01	4.39	36 13.41	4 39.48
67	9	47.	59.5	72.	84.	. .	. .	. .	. .	. .	38 23.86	15.31	1.00	V.	3	40.954	35 23.09	12.85	4.45	39 40.17	5 20.39
68	9	. .	. .	. .	. .	35.2	48.	60.	. .	. .	40 23.41	15.29	1.01	VII.	1	41.021	49 55.91	12.75	5.66	40 39.71	19 54.32
69	9	. .	. .	. .	. .	. .	54.	6.	. .	. .	42 29.52	15.28	1.01	VII.	1	40.394	50 17.48	12.63	5.70	42 45.81	20 15.81
70	9	7.	20.	32.	. .	. .	. .	. .	. .	. .	48 43.99	15.23	1.00	III.	3	39.29	30 36.29	12.28	4.04	49 0.22	27 0 32.61
71	8	. .	. .	. .	20.	32.	44.5	. .	. .	. .	49 20.05	15.22	1.00	VII.	5	39.680	23 49.72	12.24	3.50	49 36.27	26 53 45.46
72	8	16.	28.5	41.	53.	65.	77.5	. .	. .	. .	51 52.92	15.20	1.00	VII.	4	45.518	27 7.06	12.12	3.75	52 9.12	57 2.93
73	9	37.3	50.	62.	74.	86.	98.5	. .	. .	. .	22 56 14.05	15.17	1.00	VII.	4	41.050	29 40.79	11.91	3.97	22 56 30.22	59 36.67
74	9	. .	10.	22.	34.5	46.	59.	. .	. .	. .	23 10 24.32	15.07	0.99	VII.	5	54.776	15 44.76	11.35	2.82	23 10 40.38	26 45 38.93
75	9	29.	42.	54.	66.	79.	. .	. .	. .	. .	15 6.17	15.03	1.00	VI.	2	43.092	42 53.86	11.17	5.10	15 22.20	27 12 50.13
76	10	. .	. .	9.	21.	34.	. .	. .	. .	. .	17 21.38	15.01	1.00	V.	6	40.831	15 3.19	11.10	2.76	17 37.39	26 44 57.05
77	8	. .	. .	30.	42.2	55.	67.	. .	. .	. .	19 42.44	15.00	1.00	VII.	1	46.578	46 44.72	11.03	5.41	19 58.44	27 16 41.16
78	10	45.	58.	10.	. .	. .	. .	. .	. .	. .	23 21.98	14.97	1.00	IV.	3	49.252	30 37.63	10.93	4.05	23 37.95	27 0 32.61
79	10	. .	. .	29.5	42.	54.2	. .	. .	. .	. .	25 41.99	14.96	0.99	IV.	7	46.920	5 43.25	10.89	1.98	25 57.94	26 35 36.12
80	9	24.	36.	48.	60.	12.2	. .	. .	. .	. .	29 0.18	14.93	1.00	VI.	6	46.738	11 39.86	10.80	2.47	29 16.12	26 41 33.13
81	8	41.	53.	65.	78.	90.	. .	. .	. .	. .	32 17.56	14.91	1.00	VI.	3	47.388	31 41.64	10.76	4.14	32 33.47	27 1 36.54
82	8	47.	59.5	11.8	. .	36.	49.	. .	. .	. .	36 23.96	14.87	1.00	VII.	3	42.007	34 46.62	10.69	4.40	38 39.83	4 41.71
83	10	3.	15.5	. .	40.5	. .	. .	. .	. .	. .	39 40.03	14.86	1.00	V.	4	37.828	31 14.70	10.67	4.10	39 55.89	27 1 9.47
84	10	. .	. .	. .	54.	66.	. .	. .	. .	. .	40 53.95	14.85	1.00	VII.	5	37.470	25 40.19	10.67	3.64	41 9.80	26 55 34.50
85	10	32.5	45.	57.	. .	. .	. .	. .	. .	. .	45 9.11	14.82	1.00	IV.	5	40.956	23 40.53	10.67	3.48	45 24.93	53 34.68
86	10	29.	41.	53.	6.	. .	. .	. .	. .	. .	49 5.44	14.79	1.00	IV.	6	40.522	14 39.44	10.67	2.67	49 21.23	44 32.78
87	10	40.	53.	5.	17.	. .	. .	. .	. .	. .	52 16.96	14.77	1.00	V.	5	41.883	23 8.60	10.68	3.43	51 32.73	53 2.71
88	10	15.	28.	40.	52.2	. .	. .	. .	. .	. .	53 51.97	14.76	1.00	VII.	7	44.121	7 19.29	10.70	2.09	54 7.73	37 12.08
89	10	. .	45.	57.	. .	. .	. .	. .	. .	. .	23 57 9.16	+14.74	+1.00	VII.	6	43.251	13 39.68	−10.76	− 2.62	23 56 24.90	26 43 33.06

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847. h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
	A.	B.	C.	D.	Corr'd Mean.	Mean.			
1847. h. m.	° ′ ″				″	″	in.	°	°

REMARKS.

(107) 47. Minutes assumed as 33 instead of 34.
(107) 52. Minutes assumed as 44 instead of 45.
(107) 70. Micrometer reading assumed as 49r.29 instead of 39r.29.
(107) 71. Micrometer reading assumed as 40r.680 instead of 39r.680.
(107) 72. Micrometer reading assumed as 45r.018 instead of 45r.518.
(107) 73. Micrometer reading assumed as 41r.550 instead of 41r.050.
(107) 86. Minutes assumed as 48 instead of 49, and micrometer reading as 41r.522 instead of 40r.522.
(107) 87. Minutes assumed as 51 instead of 52.
(107) 89. Minutes assumed as 56 instead of 57.

ZONE 108. SEPTEMBER 16. MS. $D_\circ = -26^\circ\ 29'\ 40''$.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
1	8	44.	56.	68.	. .	. .	. .	. .	. .	. .	1 38 20.32	+14.20	+1.00	IV.	3	34.582	39 2.36	−12.46	− 6.80	1 38 35.52	27 9 11.62
2	8	47.2	12.	. .	. .	. .	. .	. .	. .	. .	40 23.94	14.19	1.00	IV.	4	39.778	30 7.64	12.70	6.01	41 39.13	0 16.35
3	10	. .	53.	5.	17.2	. .	. .	. .	. .	. .	47 17.19	14.17	1.00	V.	3	41.611	35 0.49	13.24	6.44	47 32.36	5 10.17
4	10	. .	. .	. .	. .	. .	. .	9.	. .	. .	48 32.55	14.17	1.00	VII.	2	49.22	39 22.87	13.33	6.83	48 47.72	9 33.03
5	10	. .	. .	. .	. .	. .	. .	43.	. .	. .	50 6.50	14.16	0.99	VII.	1	46.031	47 3.54	13.47	7.53	50 21.65	17 14.54
6	9	. .	. .	. .	12.	24.	36.	. .	. .	. .	52 11.84	14.16	1.00	VII.	3	33.220	39 48.94	13.66	6.87	52 27.00	9 59.47
7	10	. .	. .	. .	. .	47.2	60.	. .	. .	. .	55 35.34	14.14	0.99	VII.	2	42.541	43 12.67	13.99	7.18	1 55 50.47	27 13 23.84
8	10	20.2	33.	45.	57.	9.5	22.	. .	. .	. .	1 59 57.03	14.13	1.01	VII.	6	37.424	17 0.16	14.40	4.86	2 0 12.17	26 47 9.42
9	10	40.	53.	5.	17.	. .	. .	. .	. .	. .	2 2 16.98	14.12	1.00	V.	4	40.620	29 38.64	14.61	5.96	2 32.10	26 59 49.21
10	10	55.	8.	. .	. .	. .	. .	. .	. .	. .	4 31.92	14.11	1.00	IV.	3	40.855	35 26.53	14.88	6.48	4 47.03	27 5 37.89
11	9	55.	8.	20.	32.	44.	. .	. .	. .	. .	6 31.96	14.11	1.00	VI.	4	37.245	31 34.67	15.08	6.14	6 47.07	1 45.89
12	9	. .	13.	25.	37.	50.	. .	. .	. .	. .	8 37.31	14.10	0.99	IV.	2	42.362	43 19.10	15.29	7.19	8 52.40	13 31.58
13	8	11.	23.8	36.	48.	60.	. .	. .	. .	. .	11 47.92	14.09	1.00	VI.	3	36.400	37 59.69	15.63	6.71	12 3.01	27 8 12.03
14	10	. .	. .	9.	21.	. .	. .	. .	. .	. .	18 21.09	14.07	1.01	V.	7	47.765	19 46.23	16.33	5.10	18 36.17	26 49 57.66
15	9	42.	54.5	. .	19.	31.5	. .	. .	. .	. .	21 18.93	14.07	1.00	IV.	3	39.400	36 16.60	16.65	6.55	21 34.00	27 6 29.80
16	8	45.	57.	9.	22.	. .	. .	. .	. .	. .	26 21.47	14.06	1.00	IV.	4	45.102	27 4.46	17.24	5.75	26 36.53	26 57 17.45
17	10	. .	21.	34.	. .	. .	. .	. .	. .	. .	28 45.71	14.05	0.99	V.	2	45.995	41 14.08	17.51	7.00	29 0.75	27 11 28.59
18	9	38.	50.	2.	15.	. .	. .	. .	. .	. .	32 14.48	14.04	1.00	V.	4	44.601	27 21.67	17.93	5.77	32 29.52	26 57 35.37
19	10	. .	. .	. .	. .	. .	26.	38.5	. .	. .	33 1.86	14.04	1.00	VII.	4	43.561	27 57.20	18.03	5.82	33 16.90	58 11.05
20	10	28.	41.	53.	5.	. .	. .	. .	. .	. .	37 4.93	14.03	1.01	V.	6	50.098	9 44.35	18.54	4.23	37 19.97	39 57.12
21	10	. .	28.	40.	52.	. .	. .	. .	. .	. .	37 52.12	14.03	1.00	VI.	6	31.002	20 41.27	18.65	5.18	38 7.15	50 55.10
22	10	. .	. .	. .	23.	35.	48.	. .	. .	. .	39 23.25	14.03	1.01	VI.	6	35.278	18 14.16	18.83	4.96	39 38.29	48 27.95
23	9	. .	. .	. .	. .	. .	30.	42.	. .	. .	41 5.65	14.02	1.01	VII.	7	33.766	13 15.56	19.03	4.52	41 20.68	43 29.11
24	10	7.2	20.	32.	. .	. .	. .	. .	. .	. .	45 43.99	14.01	1.01	VI.	5	48.380	19 24.97	19.62	5.07	45 59.01	49 39.66
25	10	. .	. .	. .	. .	4.	17.	. .	. .	. .	46 52.36	14.01	1.01	VII.	5	54.200	16 4.58	19.76	4.77	47 7.38	46 19.11
26	8	. .	. .	. .	. .	32.	44.	. .	. .	. .	49 19.86	14.01	1.01	VII.	5	49.998	18 29.41	20.09	4.99	49 34.88	48 44.49
27	9	57.	9.	21.5	34.	. .	. .	. .	. .	. .	2 52 33.57	+14.00	+1.01	V.	5	50.581	18 9.34	−20.52	− 4.95	2 52 48.58	26 48 24.81

ZONE 109. OCTOBER 4. MS. $D_\circ = -\ ^\circ\ '\ ''$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	8	. .	19.2	31.	43.5	55.	7.5	. .	. .	. .	20 59 43.27	+ 3.52	+1.01	VII.	6	50.757	9 21.44	−31.48	− 4.53	20 59 47.80	24 48 17.45
2	.	. .	. .	. .	. .	24.	36.2	. .	. .	. .	20 12.15	3.50	1.00	.	.	. .	. . .	. .	. .	21 2 16.65	
3	8	52.5	5.2	17.	29.	. .	. .	. .	. .	. .	21 4 28.92	3.47	0.99	V.	1	43.392	48 34.58	30.85	7.36	4 33.38	25 27 32.79
4	10	. .	. .	. .	21.	. .	. .	. .	. .	. .	10 20.99	3.42	1.00	VI.	5	41.175	23 32.88	30.07	5.53	10 25.41	2 28.48
5	9	. .	19.	31.5	43.	. .	. .	. .	. .	. .	12 43.13	3.40	0.99	IV.	2	45.276	41 38.85	29.78	6 86	12 47.52	20 35.49
6	8	. .	. .	. .	4.	16.	29.	. .	. .	. .	14 4.35	3.38	1.00	VII.	3	41.315	35 10.44	29.60	6.38	13 8.73	14 6.42
7	8	. .	. .	23.8	36.	47.8	60.	. .	. .	. .	15 35.93	3.37	1.00	VII.	4	49.165	24 44.42	29.42	5.62	15 40.30	3 39.46
8	8	. .	11.5	23.5	35.8	. .	. .	. .	. .	. .	17 35.55	3.35	1.00	VII.	3	52.616	28 41.63	29.17	5.91	17 39.90	7 36.71
9	10	11.	23.	35.	. .	. .	. .	. .	. .	. .	20 46.98	3.32	0.99	IV.	1	43.798	48 20.65	28.77	7.35	20 51.29	25 27 16.77
10	9	. .	. .	28.	40.5	53.	5.	. .	. .	. .	21 40.70	3.31	1.01	VII.	6	46.035	12 3.91	28.66	4.70	21 45.02	24 50 57.27
11	7	14.	26.	38.	50.	2.2	. .	. .	. .	. .	23 50.05	3.29	1.00	VI.	2	54.980	36 4.86	28.40	6.45	23 54.34	25 14 59.71
12	10	. .	. .	. .	. .	34.	46.	. .	. .	. .	25 22.05	3.28	1.00	VII.	3	48.846	30 51.34	28.23	6.06	25 26.33	9 45.63
13	8	17.5	30.	42.	54.	6.	. .	. .	. .	. .	28 53.88	3.25	1.00	VI.	4	42.967	28 17.81	27.80	5.88	28 58.13	7 11.49
14	9	. .	. .	. .	18.	30.	42.	54.	. .	. .	30 18.03	3.23	1.00	VII.	4	42.772	28 24.36	29.64	5.89	30 22.26	7 19.89
15	9	. .	. .	. .	. .	. .	55.5	7.	. .	. .	31 31.26	3.22	0.99	VII.	2	42.105	43 27.69	27.49	6.98	31 35.47	22 22.16
16	9	. .	. .	. .	20.	32.	44.	. .	. .	. .	33 20.00	3.20	0.99	VII.	2	46.179	41 7.51	27.29	6.82	33 24.19	20 1.62
17	10	. .	0.5	12.5	24.2	. .	. .	. .	. .	. .	35 24.35	3.18	1.00	V.	3	44.695	33 14.39	27.07	6.25	35 28.53	12 7.71
18	8	58.5	10.5	23.	35.	. .	. .	. .	. .	. .	21 37 34.74	+ 3.16	+0.99	V.	1	38.150	51 34.94	−26.79	− 7.59	21 37 38.89	25 30 29.32

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847. h.	s.	s.	s.	s.	s.	° ′ ″	r.
Oct. 4, 3	− 2.52	g 0.050	. .	− 0.142	− 0.437	359 59 59.01	40.118

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1847. h. m.	° ′ ″				″	″	in.	°	°
Zone 108	Sept. 16, 1 37	. .	. .	. .	. .	. .	. .	*30.070	63.8	56.2
	3	. .	. .	. .	. .	. .	. .	30.062	63.2	54.7
Zone 109	Oct. 4, 20 59	297 46 59.5	57.	59.3	6.2	60.45	60.50	†31.100	61.	52.9
	21 33	. .	. .	. .	. .	. .	. .	30.090	60.1	50.8
	22 39	. .	. .	. .	. .	. .	. .	30.082	59.8	50.
	22 48	. .	. .	. .	. .	. .	. .	30.082	59.8	50.
	24 0	. .	. .	. .	. .	. .	. .	30.054	58.4	49.

REMARKS.

(108) 2. Transit over T. III assumed to have been recorded over T. II.
(108) 3. Transit over T.'s II–IV assumed to have been recorded over T.'s I–III.
(109) 2. Minutes assumed as 2.
(109) 10. Declination differs 1° from Arg. Z. 251, 60, and 251, 62.

* Used as 30.067.

† Used as 30.100.

ZONE 109. OCTOBER 4. Ms. D_0=— ° ′ ″—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
19	9	. .	10.7	22.5	. .	. .	. .	. .	. .	. .	21 39 34.49	+ 3.14	+1.02	IV.	7	46.372	6 2.11	−26.58	− 4.28	21 39 38.65	24 44 52.97
20	.	. .	. .	. .	. .	22.5	35.	. .	. .	. .	40 10.80	3.14	1.00	.	.	. .	. . .	. .	. .	20 40 14.94	
21	10	. .	8.	20.	. .	. .	. .	. .	. .	. .	42 31.94	3.11	1.00	IV.	4	45.758	26 41.89	26.27	5.76	21 42 36.05	25 5 33.92
22	9	. .	. .	. .	47.	58.9	. .	. .	. .	. .	44 47.06	3.09	1.01	VI.	7	46.991	6 49.51	26.03	4.35	44 51.16	24 45 39.89
23	8	. .	. .	58.	70.2	82.	. .	. .	. .	. .	48 10.16	3.06	1.01	VI.	7	49.815	4 3.55	25.66	4.14	48 14.23	24 42 53.35
24	9	14.	26.	38.2	50.5	. .	. .	. .	. .	. .	50 50.14	3.04	1.00	V.	3	45.651	32 41.49	25.36	6.21	50 54.18	25 11 33.06
25	10	. .	. .	. .	0.	. .	. .	. .	. .	. .	52 0.03	3.02	1.01	VII.	5	49.142	18 58.88	25.25	5.21	52 4.06	24 57 49.34
26	10	. .	. .	. .	. .	16.	. .	. .	. .	. .	54 4.07	3.00	0.99	VII.	1	48.018	45 55.20	25.05	7.17	54 8.06	25 24 47.42
27	10	. .	. .	27.	39.5	. .	. .	. .	. .	. .	55 39.26	2.99	1.01	VI.	5	52.192	17 13.83	24.90	5.08	55 43.26	24 56 3.81
28	9	31.5	43.8	56.9	8.	20.	. .	. .	. .	. .	21 59 8.02	2.95	1.00	VI.	4	42.746	28 25.42	24.54	5.89	21 59 11.97	25 7 15.85
29	8	49.	1.5	13.2	. .	37.	50.	. .	. .	. .	22 2 25.33	2.92	0.99	VII.	1	44.195	48 6.73	24.25	7.35	22 2 29.24	26 58.33
30	10	. .	7.	19.	. .	. .	. .	. .	. .	. .	9 30.94	2.86	1.00	VI.	3	38.101	37 1.18	23.57	6.52	9 34.80	25 15 51.27
31	10	. .	. .	20.	32.	. .	. .	. .	. .	. .	10 32.01	2.85	1.01	VI.	5	49.350	18 51.62	23.49	5.20	10 35.87	24 57 40.31
32	6	28.5	40.8	52.8	. .	17.2	29.5	. .	. .	. .	15 4.95	2.80	0.99	VII.	1	36.619	52 27.38	23.08	7.67	15 8.74	25 31 18.13
33	10	11.2	23.8	. .	48.	60.	. .	. .	. .	. .	17 47.75	2.78	1.00	VI.	3	44.546	33 19.44	22.85	6.25	17 51.53	25 12 8.54
34	9	. .	11.2	23.2	. .	47.5	. .	. .	. .	. .	20 35.25	2.75	1.01	VI.	6	41.028	14 56.33	22.60	4.91	20 39.01	24 53 43.84
35	9	52.	4.8	16.8	28.8	. .	53.	. .	. .	. .	22 28.66	2.73	1.01	VII.	6	36.876	17 19.03	22.44	5.09	22 32.40	24 56 6.56
36	9	. .	. .	. .	. .	32.5	44.5	. .	. .	. .	24 20.52	2.71	0.99	VII.	2	40.378	44 27.11	22.30	7.07	24 24.22	25 23 16.48
37	10	. .	. .	. .	. .	2.5	14.5	. .	. .	. .	26 50.55	2.69	1.00	VII.	5	34.360	27 27.21	22.11	5.82	25 54.24	25 6 15.14
38	10	. .	25.	37.2	49.2	. .	. .	. .	. .	. .	32 49.08	2.64	1.01	VI.	6	38.930	16 8.51	21.61	5.00	32 52.73	24 54 55.12
39	9	. .	. .	. .	. .	23.5	36.	48.	. .	. .	35 11.88	2.61	1.00	VII.	3	48.315	31 9.60	21.43	6.08	35 15.49	25 9 57.11
40	10	59.5	12.	. .	36.	. .	. .	. .	. .	. .	39 35.74	2.57	1.01	V.	5	54.45	15 56.23	21.13	4.99	39 39.32	24 54 42.35
41	10	. .	. .	. .	. .	. .	28.	40.5	. .	. .	48 4.32	2.49	1.00	VII.	5	50.511	18 11.52	20.54	5.15	48 7.81	56 57.21
42	10	50.	2.5	14.5	. .	. .	. .	. .	. .	. .	51 26.24	2.46	1.00	IV.	5	50.525	15 19.27	20.34	4.91	51 29.70	54 4.52
43	10	. .	. .	. .	. .	23.	35.	. .	. .	. .	53 11.05	2.45	1.00	VII.	2	. .	. . .	. .	. .	53 14.50	
44	10	39.5	52.	3.5	. .	. .	. .	. .	. .	. .	22 55 15.59	2.43	1.00	IV.	5	53.290	16 36.16	20.09	5.03	22 55 19.02	55 21.28
45	10	. .	. .	51.	. .	15.	. .	. .	. .	. .	23 2 3.08	2.37	1.01	VII.	7	44.842	6 54.50	19.70	4.32	23 1 6.46	24 45 38.52
46	10	. .	9.	21.	34.	45.	57.	. .	. .	. .	8 33.19	2.31	0.99	VII.	1	47.350	46 18.18	19.35	7.21	8 36.49	25 25 4.74
47	10	28.5	41.	53.	5.5	. .	. .	. .	. .	. .	11 4.96	2.29	1.00	V.	4	44.635	27 20.50	19.24	5.80	11 8.25	6 5.54
48	9	43.	55.	7.	19.	31.	. .	. .	. .	. .	14 18.98	2.26	1.00	VI.	4	47.672	25 35.93	19.11	5.68	14 22.24	4 20.72
49	10	. .	. .	. .	. .	. .	37.5	. .	. .	. .	15 13.44	2.25	0.99	VII.	1	45.256	47 30.23	19.07	7.32	15 16.68	25 26 16.62
50	7	38.	50.	2.	14.	26.	38.	. .	. .	. .	33 14.00	2.09	1.00	VII.	5	46.155	20 41.39	18.41	5.33	33 17.09	24 59 25.13
51	10	. .	. .	15.5	. .	40.	. .	. .	. .	. .	35 27.74	2.07	1.00	VI.	2	42.122	43 27.25	18.36	6.99	35 30.81	25 22 12.60
52	10	24.	36.5	49.	. .	. .	. .	. .	. .	. .	39 0.46	2.04	1.00	IV.	4	41.921	28 53.90	18.28	5.92	39 3.50	7 38.10
53	10	. .	. .	. .	. .	48.	59.	. .	. .	. .	39 35.52	2.04	1.00	VII.	2	48.190	39 58.32	18.28	6.75	39 38.56	25 18 43.35
54	9	32.	44.	56.	8.	20.2	. .	. .	. .	. .	42 8.02	2.01	1.00	VI.	5	45.480	21 4.76	18.21	5.36	42 11.03	24 59 48.33
55	10	. .	36.	48.5	0.5	. .	. .	. .	. .	. .	44 0.29	2.00	1.00	V.	5	53.715	16 21.51	18.18	5.00	44 3.29	24 55 4.69
56	7	. .	7.5	19.5	32.	44.	56.	. .	. .	. .	45 31.80	1.99	1.00	VII.	4	48.849	24 55.28	18.16	5.62	45 34.79	25 3 39.06
57	10	15.	27.5	39.	51.5	. .	. .	. .	. .	. .	47 51.20	1.97	1.00	V.	4	48.655	25 2.18	18.12	5.63	47 54.17	3 45.93
58	9	8.5	21.	32.5	. .	57.	. .	. .	. .	. .	50 44.72	1.95	1.00	VI.	5	44.809	21 27.85	18.10	5.38	50 47.67	0 11.33
59	9	. .	. .	. .	58.	22.5	. .	. .	. .	. .	51 58.72	1.94	1.00	VII.	1	40.819	50 2.88	18.08	7.51	52 1.66	25 28 48.47
60	7	47.	59.	11.	. .	. .	47.	59.	. .	. .	55 22.98	1.91	1.00	VII.	5	47.409	19 58.25	18.05	5.27	55 25.89	24 58 41.57
61	10	55.5	8.	. .	32.	. .	. .	. .	. .	. .	23 58 31.84	1.89	1.00	V.	2	45.44	41 33.17	18.01	6.85	23 58 34.73	25 20 18.03
62	9	. .	21.	33.	45.	57.	. .	. .	. .	. .	0 0 44.99	+ 1.87	+1.00	VI.	6	37.628	16 53.32	−18.00	− 5.03	0 0 47.86	24 55 36.35

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847.	h.	s.	s.	s.	s.	s.	° ′ ″	s.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1847. h. m.	° ′ ″				″	″	in.	°	°

REMARKS.

(109) 22. Micrometer reading assumed as 44r.991 instead of 46r.991.

(109) 37. Minutes assumed as 25 instead of 26.

(109) 42. Micrometer reading assumed as 55r.525 instead of 50r.525.

(109) 45. Minutes assumed as 1 instead of 2.

(109) 59. Transit over T. VI assumed to have been recorded over T. V.

Zone 110. October 18. Ms. $D_\circ = -$ ° ′ ″.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.				′ ″	″	″	h. m. s.	° ′ ″
1	8	. .	. .	4.	16.	28.	. .	. .	. .	. .	23 4 16.02	− 8.44	−1.00	V.	4	48.208	25 17.57	− 2.77	− 5.57	23 4 6.58	26 13 5.91
2	8	. .	28.2	40.	52.2	. .	. .	. .	. .	. .	6 52.38	8.47	1.00	V.	3	41.708	34 57.15	2.67	6.45	6 42.91	22 46.24
3	9	. .	8.5	20.5	33.	. .	. .	. .	. .	. .	8 32.90	8.48	1.00	V.	4	40.875	29 29.86	2.59	5.96	8 23.42	17 18.41
4	9	. .	. .	43.	52.2	7.5	. .	. .	. .	. .	10 55.23	8.51	1.00	V.	4	42.260	28 42.21	2.51	5.88	10 45.72	16 30.60
5	9	. .	. .	1.5	13.2	. .	. .	. .	. .	. .	11 13.46	8.51	1.00	VI.	4	39.98	30 0.56	2.50	6.00	11 3.95	17 49.06
6	8	39.	51.5	3.5	16.	. .	. .	. .	. .	. .	13 15.87	8.53	1.00	VI.	6	37.88	16 44.62	2.43	4.83	13 6.34	4 31.88
7	9.10	54.	6.5	18.5	. .	. .	. .	. .	. .	. .	16 30.80	8.57	1.00	V.	6	40.656	15 9.11	2.32	4.68	16 21.23	2 56.11
8	9.10	30.2	42.5	54.5	6.5	. .	. .	. .	. .	. .	19 6.85	8.59	1.00	V.	2	40.083	44 37.49	2.23	7.31	18 57.26	32 27.03
9	7	2.5	15.	27.	39.5	51.	. .	. .	. .	. .	20 39.27	8.61	1.00	V.	4	45.250	26 59.34	2.21	5.73	20 29.66	14 47.28
10	10	. .	. .	. .	. .	. .	. .	46.5	. .	. .	21 9.68	8.61	1.00	VII.	3	48.182	31 14.14	2.19	6.11	21 0.07	19 2.44
11	7	34.5	46.5	59.	11.	23.5	. .	. .	. .	. .	24 11.20	8.64	1.00	VI.	1	46.715	46 40.15	2.12	7.50	24 1.56	34 29.77
12	10	45.	58.	. .	. .	. .	. .	. .	. .	. .	26 22.21	8.66	1.00	VII.	3	43.328	34 1.15	2.06	6.36	26 12.55	21 49.57
13	8	21.	34.	46.	58.5	10.	. .	. .	. .	. .	28 58.16	8.69	1.00	VI.	6	38.401	16 26.70	2.00	4.80	28 48.47	4 13.50
14	8.9	. .	2.5	14.5	26.5	. .	. .	. .	. .	. .	30 26.74	8.70	1.00	VI.	6	40.358	15 19.37	1.97	4.70	30 17.04	26 3 6.04
15	9	47.	59.5	11.5	23.5	. .	. .	. .	. .	. .	32 23.73	8.72	1.00	V.	7	38.958	10 17.17	1.94	4.25	33 14.01	25 58 3.36
16	8.9	1.	17.2	29.2	41.5	53.5	. .	. .	. .	. .	35 41.47	8.76	1.00	VI.	5	40.66	23 50.58	1.88	5.45	35 31.71	26 11 37.91
17	9	. .	46.5	59.	11.2	23.5	. .	. .	. .	. .	37 11.19	8.77	1.00	VI.	2	45.331	41 36.82	1.86	7.04	37 1.42	29 25.72
18	7.8	36.	48.5	1.	13.	25.5	37.	49.5	. .	. .	42 12.93	8.82	1.00	VII.	5	43.680	22 6.50	1.81	5.30	42 3.11	26 9 53.61
19	10	. .	54.5	6.5	18.5	. .	. .	. .	. .	. .	45 18.74	8.85	1.00	VI.	6	48.813	10 28.46	1.80	4.27	45 8.89	25 58 14.53
20	10	56.5	9.	21.	23.	. .	. .	. .	. .	. .	48 33.25	8.88	1.00	V.	5	47.986	20 13.03	1.80	5.11	48 23.37	26 7 59.94
21	10	. .	. .	41.	53.	. .	. .	. .	. .	. .	51 53.12	8.91	1.00	V.	5	41.804	23 11.31	1.80	5.39	51 43.21	10 58.50
22	9	. .	. .	47.5	0.	12.	. .	. .	. .	. .	52 59.83	8.93	1.00	VII.	2	48.585	39 44.69	1.79	6.88	52 49.90	27 33.36
23	10	. .	58.	10.	. .	. .	. .	. .	. .	. .	55 22.36	8.94	1.00	V.	4	46.658	26 10.89	1.79	5.65	55 12.42	13 58.33
24	10	. .	. .	. .	. .	. .	. .	12.	. .	. .	55 35.18	8.95	1.00	VII.	5	50.890	29 40.97	1.79	5.97	55 25.23	17 28.73
25	10	. .	. .	. .	. .	. .	39.	51.5	. .	. .	57 14.58	8.97	1.00	VII.	3	52.063	29 0.62	1.79	5.91	57 4.01	16 48.32
26	8	. .	. .	38.5	51.0	. .	15.5	. .	. .	. .	23 59 50.92	− 8.99	−1.00	VII.	4	51.418	23 26.85	− 1.78	− 5.41	23 59 40.93	26 11 14.04

Zone 111. October 18. Ms. $D_\circ = -$ ° ′ ″.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	9	23.2	36.	47.	0.	12.	. .	. .	. .	. .	1 1 59.91	− 9.53	−1.00	VI.	3	46.090	32 26.28	− 1.12	− 8.23	1 1 49.38	26 20 15.63
2	10	. .	. .	31.	43.	55.	. .	. .	. .	. .	5 43.05	9.56	1.00	VI.	6	42.118	14 18.82	1.30	6.56	5 32.49	2 6.68
3	9.10	2.5	15.	27.5	39.5	. .	. .	. .	. .	. .	9 39.54	9.59	1.00	V.	2	47.581	40 19.51	1.52	8.97	9 28.95	28 10.00
4	10	. .	. .	26.	38.2	50.5	. .	. .	. .	. .	11 38.22	9.61	1.01	VI.	1	34.401	53 43.84	1.64	10.23	11 27.60	26 41 35.71
5	9	. .	22.5	. .	48.	0.5	12.5	. .	. .	. .	13 47.85	9.63	0.99	VII.	7	46.910	5 43.30	1.77	5.77	13 37.23	25 53 30.84
6	10	. .	. .	. .	. .	. .	10.	. .	. .	. .	15 45.60	9.64	0.99	VII.	6	49.351	10 9.79	1.89	6.17	15 34.97	25 57 57.85
7	9	. .	11.5	23.	35.	. .	. .	. .	. .	. .	17 35.41	9.65	1.00	VII.	5	49.977	18 29.78	2.01	6.94	17 24.76	26 6 18.73
8	9	3.5	16.	28.5	40.5	. .	. .	. .	. .	. .	20 40.50	9.67	1.00	V.	5	49.110	18 59.96	2.18	6.98	20 29.83	6 49.12
9	10	. .	. .	37.5	. .	. .	. .	. .	. .	. .	21 49.69	9.68	1.00	V.	1	50.780	44 20.39	2.25	9.35	21 39.01	32 11.99
10	8	. .	. .	. .	48.5	. .	12.5	. .	. .	. .	23 48.20	9.69	1.00	VII.	2	55.142	35 59.09	2.39	8.56	22 37.51	23 50.04
11	10	. .	. .	15.2	. .	. .	. .	. .	. .	. .	25 27.45	9.71	1.00	IV.	5	37.880	25 26.36	2.52	7.58	25 16.74	13 16.46
12	10	. .	. .	24.5	. .	. .	1.	. .	. .	. .	28 36.57	9.73	1.00	VII.	3	40.798	35 28.20	2.73	8.51	28 25.84	23 19.44
13	9	13.	25.5	38.	50.	. .	. .	. .	. .	. .	30 50.02	9.75	1.00	V.	3	46.525	32 11.42	2.89	8.20	30 39.27	26 20 2.51
14	10	. .	. .	. .	12.5	24.5	. .	. .	. .	. .	32 12.45	9.76	0.99	VII.	6	45.483	6 32.41	2.99	5.82	32 1.70	25 54 21.22
15	9.10	43.2	56.	8.2	21.	. .	. .	. .	. .	. .	38 20.53	9.80	1.01	V.	1	43.372	48 35.27	3.49	9.76	38 9.72	26 36 28.52
16	10	. .	59.	. .	23.5	. .	. .	. .	. .	. .	40 23.52	9.81	1.00	V.	3	34.616	39 1.10	3.65	8.85	40 12.71	26 53.60
17	10	. .	. .	. .	29.	41.5	53.5	. .	. .	. .	(41) 29.06	9.82	1.00	VII.	4	34.315	33 15.30	3.74	8.31	41 18.24	21 7.35
18	10	. .	. .	. .	. .	. .	33.8	. .	. .	. .	43 9.30	9.83	1.00	VII.	5	41.090	23 35.61	3.88	7.41	42 58.47	11 26.90
19	9	. .	41.5	54.	6.2	18.2	. .	. .	. .	. .	1 46 6.12	− 9.85	−1.01	VI.	2	37.121	46 19.30	− 4.14	− 9.53	1 45 55.26	26 34 12.97

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847. h.	s.	s.	s.	s.	s.	° ′ ″	r.
Oct. 18, 19	− 15.40	g 0.020	. .	− 0.286	− 0.293	0 0 1.72	40.156

INSTRUMENT READINGS.

	Date.	CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1847. h. m.	° ′ ″				″	″	in.	°	°
Zone 110	Oct. 18, 23 4	294 50 1.5	24.	8.4	6.1	4.41	4.60	30.140	59.2	55.9
	23 57	. .	. .	. .	. .	. .	. .	30.142	58.9	53.5
	0 59	. .	. .	. .	. .	. .	. .	30.126	58.6	52.4
Zone 111	Oct. 18, 1 55	. .	. .	. .	. .	. .	. .	30.110	57.8	52.
	2 58	. .	. .	. .	. .	. .	. .	30.100	57.2	51.6

REMARKS.

(110) 15. Minutes assumed as 33 instead of 34.
(110) 20. Micrometer reading assumed as $46^r.986$ instead of $47^r.986$.
(111) 10. Minutes assumed as 22 instead of 23.
(111) 14. Hor. thread assumed as 7 instead of 6.

ZONE 111. OCTOBER 18. Ms. D_0= − ° ′ ″—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
20	10	..	..	23.	..	..	..	..	..	..	1 47 35.26	− 9.86	−1.00	V.	5	43.980	21 56.45	− 4.27	− 7.25	1 47 24.40	26 9 47.97
21	9	55.	8.	20.	..	..	..	..	..	..	49 32.12	9.87	0.99	V.	6	44.172	13 8.24	4.45	6.44	49 21.26	0 59.13
22	8.9	..	..	..	16.	28.5	40.	..	..	..	50 15.90	9.88	1.00	VI.	3	44.172	33 32.28	4.51	8.34	50 5.02	21 25.13
23	9.10	..	..	3.	..	..	..	..	..	..	52 15.18	9.89	1.01	III.	1	44.172	48 7.75	4.69	9.73	52 4.28	36 2.17
24	11	18.2	30.5	42.5	55.	..	..	..	..	..	53 54.91	9.90	0.99	V.	6	41.125	14 53.07	4.85	6.60	53 44.02	2 44.52
25	9	..	..	..	..	6.	18.	30.	..	..	1 54 53.47	9.91	1.00	VII.	3	43.805	33 44.73	4.93	8.35	1 54 42.56	21 38.01
26	9	24.5	36.5	48.5	0.5	..	..	..	..	..	2 2 0.91	9.95	1.00	III.	2	48.970	39 31.71	5.64	8.89	2 1 49.96	27 26.24
27	8.9	43.5	56.2	8.	26.	..	..	..	..	..	4 20.46	9.97	1.00	V.	3	43.909	33 41.42	5.88	8.34	4 9.49	21 35.64
28	10	40.	52.	4.5	..	..	..	..	..	..	6 16.72	9.98	1.01	IV.	2	43.272	42 47.79	6.08	9.21	6 5.73	30 43.08
29	10	..	..	..	..	..	19.2	31.5	..	..	6 54.71	9.98	0.99	VII.	6	41.945	14 24.59	6.14	6.56	6 43.74	2 17.29
30	10	48.	0.5	12.2	24.5	36.5	..	..	..	..	10 24.61	10.00	1.00	VI.	4	47.790	25 31.85	6.51	7.59	10 13.61	13 25.95
31	7	49.5	1.5	13.5	26.5	..	..	..	..	..	12 26.19	10.01	1.01	VI.	1	38.020	51 39.31	6.72	10.05	12 15.17	39 36.08
32	8	21.5	34.	..	58.5	10.2	..	..	..	..	15 58.33	10.03	1.00	VI.	4	44.189	27 35.75	7.13	7.78	15 47.30	15 30.66
33	7.8	10.2	22.5	34.5	46.5	..	..	..	..	..	17 46.85	10.04	1.01	III.	2	41.140	44 1.11	7.31	7.32	17 35.80	31 55.74
34	9	..	..	..	..	..	13.5	26.	..	..	18 48.96	10.05	1.02	VII.	1	35.246	47 23.64	7.42	7.76	18 37.89	35 18.82
35	9	..	7.5	19.2	32.	..	..	..	..	..	24 31.81	10.08	0.99	V.	7	43.260	7 49.18	8.08	5.94	24 20.74	55 43.20
36	10	..	..	9.	..	..	..	..	..	..	26 21.25	10.09	1.00	III.	3	47.278	31 45.52	8.34	8.16	26 10.16	19 42.02
37	10	..	..	..	5.	17.5	29.5	..	..	..	27 5.08	10.09	1.00	VII.	5	35.775	26 38.48	8.40	7.69	26 53.99	14 34.57
38	10	..	..	..	18.	31.	43.	..	..	..	30 18.40	10.11	1.00	VII.	4	34.838	32 57.31	8.79	8.29	30 7.29	20 54.39
39	7.8	49.5	2.5	14.5	26.5	..	..	..	..	..	33 26.66	10.12	1.00	VI.	3	40.492	35 38.89	9.15	8.53	32 15.54	23 36.57
40	9	21.3	34.	46.	58.	..	..	..	..	..	35 58.27	10.13	1.01	V.	2	40.925	44 8.51	9.51	9.34	35 47.13	32 7.36
41	7.8	20.5	33.5	46.	58.5	..	..	..	..	..	37 45.71	10.14	0.99	V.	5	47.007	20 12.31	9.76	7.10	37 34.58	26 8 9.17
42	8.9	..	..	29.	41.	53.5	..	..	..	..	39 41.21	10.15	0.99	VI.	5	49.548	10 3.19	9.97	6.14	39 30.07	25 57 59.30
43	9.10	..	..	..	..	12.5	25.	..	..	..	41 0.47	10.16	0.99	VII.	6	47.586	11 10.51	10.14	6.24	40 49.32	25 59 6.89
44	9	..	37.5	49.5	1.	..	..	..	..	..	49 1.60	10.19	1.01	V.	1	49.895	44 50.85	11.21	9.41	48 50.40	26 32 51.47
45	9	..	56.	8.5	..	..	..	..	..	..	51 20.62	10.20	1.00	IV.	3	43.886	33 42.25	11.51	8.35	51 9.42	21 42.11
46	10	..	..	..	..	..	21.	..	..	..	51 44.28	10.20	1.01	VII.	2	45.00	41 48.04	11.59	9.12	51 33.07	29 48.75
47	9	40.	52.5	4.5	16.5	..	..	..	..	..	55 16.73	10.22	0.99	V.	6	43.590	13 28.26	12.06	6.46	55 5.52	1 26.78
48	10	..	..	..	..	..	8.5	20.5	..	..	54 43.86	10.22	0.99	VII.	6	40.708	15 7.15	12.00	6.61	55 32.65	3 5.76
49	9	46.8	59.5	11.5	23.7	..	..	..	..	..	2 58 23.78	−10.23	−1.00	V.	3	43.368	34 0.04	−12.51	− 8.38	2 58 12.55	26 22 0.93

ZONE 112. OCTOBER 26. Ms. D_0= − ° ′ ″.

1	8.9	..	9.2	21.2	33.5	45.	..	..	..	..	21 3 33.20	−13.40	−0.99	V.	1	48.539	45 37.49	−11.55	− 5.09	21 3 18.81	24 44 4.13
2	9	..	..	18.	30.	..	..	..	..	..	8 29.93	13.46	1.00	V.	3	44.109	33 34.55	10.82	4.25	8 15.47	31 59.62
3	9	..	..	..	..	..	..	42.	..	..	10 6.26	13.47	0.99	VII.	2	44.778	41 55.73	10.60	4.83	9 51.80	40 21.16
4	9	..	..	..	..	..	42.5	55.	..	..	10 18.94	13.48	1.00	VII.	4	44.232	27 34.15	10.57	3.83	10 4.46	25 58.55
5	9	..	..	..	..	..	..	41.8	..	..	11 6.00	13.48	1.00	VII.	4	48.005	25 24.33	10.46	3.68	10 51.52	23 48.47
6	10	..	..	..	41.5	52.5	..	..	..	..	14 41.08	13.52	0.98	VI.	1	35.131	53 18.74	9.95	5.65	14 26.58	51 44.34
7	9	..	..	38.5	51.	2.5	..	..	..	..	16 50.69	13.54	1.01	VI.	5	45.899	20 50.35	9.65	3.36	16 36.14	19 13.36
8	8	..	..	..	..	18.	..	..	..	..	17 6.17	13.54	1.01	V.	5	51.612	17 33.86	9.61	3.13	16 51.62	15 56.60
9	8	..	..	49.5	1.5	13.2	..	..	..	..	21 19 1.44	−13.57	−1.01	V.	5	52.788	17 27.82	− 9.35	− 3.12	21 18 46.86	24 15 50.29

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847.	h.	s.	s.	s.	s.	s.	° ′ ″	r.
Oct. 26,	20	− 21.64	g 0.045	. .	− 0.286	− 0.293	0 0 2.44	40.147

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	h. m.	° ′ ″				″	″	in.	°	°
Zone 112	Oct. 26, 21 3	298 27 36.	31.6	36.4	38.5	35.57	35.62	30.435	52.5	41.5
	21 19	. .	. .	. .	. .	. .	. .	30.453	52.	41.3

REMARKS.

(111) 27. Transit over T. IV assumed as at 20^s.6 instead of 26^s.
(111) 34. Hor. thread assumed as 2 instead of 1.
(111) 39. Minutes assumed as 32 instead of 33.
(111) 41. Transits over T.'s II–V assumed to have been recorded over T.'s I–IV.
(111) 42. Hor. thread assumed as 6 instead of 5.
(111) 46. Transit over T. VII assumed to have been recorded over T. VI.
(111) 48. Minutes assumed as 55 instead of 54.
(112) 9. Micrometer reading assumed as 51^r.788 instead of 52^r.788.

ZONE 113. OCTOBER 28. Ms. D_0=— ° ′ ″.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
1	10	. .	. .	4.	16.5	28.	40.5	. .	. .	. .	21 24 16.25	−15.44	−0.99	VII.	1	37.345	52 2.42	−19.32	− 7.56	21 23 59.82	24 48 29.30
2	7	. .	33.5	46.2	57.2	8.8	. .	. .	. .	. .	26 57.39	15.47	1.01	VI.	6	48.400	10 42.69	18.95	4.66	26 40.91	7 6.30
3	9	47.5	0.	12.2	24.5	. .	. .	. .	. .	. .	29 23.92	15.49	1.00	V.	4	48.881	25 28.82	18.60	5.66	29 7.43	21 53.08
4	9	48.2	0.2	12.	24.	. .	. .	. .	. .	. .	32 23.98	15.52	0.99	IV.	2	50.732	38 31.12	18.20	6.62	32 7.47	34 55.94
5	7	. .	39.	51.5	3.5	. .	. .	. .	. .	. .	35 3.26	15.54	0.99	IV.	1	35.502	53 6.08	17.84	7.65	34 46.73	49 31.57
6	10	. .	. .	43.5	. .	. .	. .	. .	. .	. .	39 55.33	15.59	0.99	VI.	1	43.623	48 26.56	17.21	7.32	39 38.75	44 51.09
7	10	. .	. .	. .	. .	. .	. .	43.	. .	. .	45 7.00	15.64	0.99	VII.	1	42.308	49 11.67	16.53	7.38	44 50.37	45 35.58
8	10	. .	. .	58.5	. .	23.5	. .	. .	. .	. .	47 11.01	15.66	1.00	VI.	F W	40.127	29 55.52	16.30	5.99	46 54.35	26 17.81
9	10	. .	. .	. .	36.5	. .	. .	. .	. .	. .	47 36.48	15.67	1.00	VII.	3	41.715	34 56.69	16.25	6.35	47 19.81	31 19.29
10	8	. .	. .	54.	6.2	. .	. .	. .	. .	. .	51 6.03	15.70	1.00	V.	3	39.295	36 20.18	15.82	6.45	50 49.33	32 42.45
11	.	. .	. .	. .	. .	. .	. .	8.	. .	. .	32.20	15.70	1.00	.	5	41.002	23 38.69	15.77	5.55	(52) 15.50	20 0.01
12	9	. .	. .	3.	15.	27.5	. .	. .	. .	. .	54 15.18	15.73	1.00	VI.	5	41.002	23 38.83	15.44	5.55	53 58.45	19 59.82
13	9	. .	. .	. .	. .	. .	. .	17.5	. .	. .	56 41.72	15.76	1.00	VII.	4	38.678	30 45.24	15.27	6.05	56 24.96	27 6.56
14	10	. .	. .	45.	57.	. .	. .	. .	. .	. .	21 58 56.96	15.78	1.00	V.	5	37.952	25 23.85	14.89	5.67	58 40.18	21 44.41
15	9	. .	. .	55.	7.	19.2	. .	. .	. .	. .	22 1 7.06	15.80	1.00	VI.	4	37.772	31 16.54	14.65	6.09	21 59 50.26	27 37.28
16	7	. .	. .	9.	22.	34.	. .	. .	. .	. .	1 21.67	15.80	1.00	VI.	5	34.058	27 3.35	14.61	5.80	22 1 4.87	23 23.76
17	10	12.	24.	36.2	. .	. .	. .	. .	. .	. .	5 47.90	15.85	1.00	IV.	4	42.569	28 31.61	14.13	5.90	5 31.05	24 51.64
18	9	. .	. .	28.	40.	. .	. .	. .	. .	. .	6 39.92	15.86	0.99	V.	1	43.889	48 19.54	14.03	7.32	6 23.07	44 40.89
19	10	. .	1.	. .	. .	. .	. .	. .	. .	. .	8 24.80	15.87	1.00	IV.	3	48.699	30 56.65	13.84	6.07	8 7.93	27 16.56
20	9	47.2	59.5	11.2	. .	. .	. .	. .	. .	. .	11 23.15	15.90	1.00	III.	3	38.847	36 35.59	13.53	6.47	11 6.25	32 55.59
21	9	56.8	8.5	20.8	. .	. .	. .	. .	. .	. .	16 32.46	15.95	1.01	IV.	6	47.889	11 0.38	13.01	4.66	16 15.50	7 18.05
22	8	33.5	46.	58.	9.8	. .	. .	. .	. .	. .	18 9.70	15.97	1.00	V.	3	50.195	30 5.15	12.84	6.01	17 52.73	26 24.00
23	9	16.5	29.	41.	52.8	. .	. .	. .	. .	. .	21 52.71	16.00	0.99	V.	2	46.992	40 39.77	12.48	6.77	21 35.72	36 59.02
24	10	. .	. .	. .	. .	. .	0.5	12.5	. .	. .	22 36.69	16.01	1.00	VII.	4	43.626	27 55.00	12.41	5.85	22 19.68	24 13.26
25	10	36.	48.	. .	. .	. .	. .	. .	. .	. .	26 11.63	16.05	1.01	III.	7	43.979	7 24.41	12.08	4.41	25 54.57	3 40.90
26	7	2.	13.5	26.5	. .	. .	. .	. .	. .	. .	27 37.85	16.06	0.99	IV.	1	41.932	49 24.84	11.96	7.40	27 20.80	45 44.20
27	10	. .	. .	. .	. .	22.	34.	. .	. .	. .	28 10.08	16.06	0.99	VII.	1	40.692	50 7.26	11.90	7.45	27 53.03	46 26.61
28	10	7.8	20.	32.	. .	. .	. .	. .	. .	. .	31 43.78	16.10	1.00	IV.	3	48.966	30 47.47	11.59	6.06	31 26.68	27 5.12
29	10	. .	. .	. .	35.	. .	. .	. .	. .	. .	32 34.97	16.11	1.00	V.	3	45.905	32 32.75	11.51	6.18	32 17.86	28 50.44
30	9	. .	. .	. .	. .	. .	32.5	45.	. .	. .	33 8.98	16.11	1.01	VII.	7	44 680	7 0.08	11.46	4.38	32 51.86	3 15.92
31	10	. .	. .	. .	. .	. .	57.5	. .	. .	. .	34 33.64	16.13	1.00	VII.	3	44.215	32 30.68	11.34	6.18	34 16.51	28 48.20
32	9	. .	. .	19.	31.	43.	. .	. .	. .	. .	36 30.99	16.15	1.00	VI.	3	38.920	36 32.99	11.17	6.47	36 13.84	32 50.63
33	10	. .	. .	. .	. .	58.	10.	. .	. .	. .	38 46.10	16.17	0.99	VII.	2	44.559	42 3.27	10.98	6.87	37 28.94	38 21.12
34	10	. .	1.5	13.5	26.5	. .	. .	. .	. .	. .	25.74	16.27	0.99	V.	2	43.815	42 29.08	10.27	6.90	48 8.48	38 46.25
35	10	. .	. .	. .	29.5	41.5	. .	. .	. .	. .	49 29.56	16.28	0.99	V.	2	44.77	41 56.22	10.19	6.86	49 12.29	38 13.27
36	10	. .	. .	. .	. .	59.5	. .	23.5	. .	. .	50 47.70	16.29	0.99	VII.	2	44.428	42 7.78	10.09	6.88	50 30.42	38 24.75
37	9	5.	17.5	29.5	41.5	. .	. .	. .	. .	. .	54 41.24	16.33	1.00	V.	4	45.648	26 45.65	9.82	5.76	54 23.91	23 1.23
38	10	58.	10.	. .	. .	. .	. .	. .	. .	. .	56 33.84	16.35	1.00	IV.	2	49.64	39 8.70	9.70	6.66	56 16.49	35 25.06
39	10	. .	. .	14.5	. .	. .	. .	. .	. .	. .	57 26.36	16.36	1.00	VI.	1	53.843	43 34.93	9.64	6.98	57 9.00	39 51.55
40	7	. .	. .	42.8	. .	. .	. .	. .	. .	. .	22 58 54.68	16.37	1.00	VII.	2	53.843	36 43.84	9.54	6.48	22 58 37.31	32 59.86
41	10	. .	. .	. .	24.	. .	. .	. .	. .	. .	23 1 24.02	16.39	0.99	V.	1	42.252	49 13.81	9.38	7.38	23 1 6.64	45 30.57
42	8	9.5	22.	34.	. .	. .	. .	. .	. .	. .	4 45.69	16.43	1.00	IV.	2	45.375	41 35.44	9.18	6.83	4 28.26	37 51.45
43	10	. .	39.5	. .	. .	. .	. .	. .	. .	. .	7 3.36	16.45	1.00	IV.	2	43.883	42 26.77	9.06	6.90	6 45.91	38 42.73
44	10	. .	. .	11.5	. .	36.	. .	. .	. .	. .	9 23.72	16.47	0.99	VI.	1	38.318	51 29.08	8.92	7.56	9 6.26	47 45.56
45	9	. .	37.5	49.	1.	. .	. .	. .	. .	. .	12 1.11	16.50	1.01	V.	7	46.890	5 44.26	8.77	4.27	11 43.60	1 57.30
46	8	34.	46.5	. .	. .	. .	. .	. .	. .	. .	15 9.98	16.53	1.00	III.	5	47.662	19 49.77	8.62	5.27	14 52.45	16 3.66
47	9	. .	. .	. .	. .	. .	49.5	. .	. .	. .	15 25.74	16.53	1.00	VII.	5	53.698	16 21.88	8.60	5.03	15 8.21	12 35.51
48	9	. .	7.	19.	. .	. .	. .	. .	. .	. .	17 30.85	16.55	1.00	IV.	3	50.585	29 51.76	8.51	5.99	17 13.30	26 6.26
49	10	. .	16.5	. .	. .	. .	. .	. .	. .	. .	23 21 40.16	−16.59	−1.01	III.	7	43.42	7 43.65	− 8.33	− 4.41	23 21 22.56	24 3 56.39

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847. h.	s.	s.	s.	s.	s.	° ′ ″	r.
Oct. 28, 22	−23.39	g 0.040	. .	− 0.286	− 0.293	0 0 2.86	40.127

INSTRUMENT READINGS.

	Date.	CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1847. h. m.	° ′ ″				″	″	in.	°	°
Zone 113	Oct. 28, 21 24	*278 27 37.0	36.2	29.4	35.9	34.75	34.62	. .	. .	. .
	21 50	. .	. .	. .	. .	. .	. .	30.762	44.8	34.7
	22 40	. .	. .	. .	. .	. .	. .	30.704	43.1	33.2
	23	. .	. .	. .	. .	. .	. .	30.708	42.5	33.2
	0	. .	. .	. .	. .	. .	. .	30.702	41.	32.

REMARKS.

(113) 3. Micrometer reading assumed as 47r.881 instead of 48r.881.

(113) 7. Transit over T. VII assumed to have been recorded over T. VI.

(113) 15. Minutes assumed as 0 instead of 1.

(113) 16. Micrometer reading assumed as 35r.058 instead of 34r.058.

(113) 33. Minutes assumed as 37 instead of 38.

(113) 34. Minutes assumed as 48.

* It is doubtful what reading belongs to the zone of October 28.

ZONE 113. OCTOBER 28. Ms. D_0 = – ° ′ ″—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
50	10	. .	24.	. .	. .	. .	. .	. .	. .	. .	23 30 47.74	−16.68	−1.00	IV.	5	45.838	20 52.56	− 8.00	− 5.35	23 30 30.06	24 17 5.91
51	10	. .	. .	. .	. .	29.	41.	54.	. .	. .	31 17.50	16 68	1.00	VII.	3	42.142	34 7.57	7.98	6.31	30 59.82	30 21.86
52	9	36.	48.	0.	12.2	. .	. .	. .	. .	. .	34 11.93	16.71	1.00	V.	4	39.982	30 0.59	7.88	6.00	33 54.22	26 14.47
53	9	. .	. .	27.	39.	51.	. .	. .	. .	. .	35 38.99	16.72	1.00	V.	3	48.421	33 58.22	7.85	6.28	35 21.27	30 12.35
54	9	46.5	58.5	10.5	23.	. .	. .	. .	. .	. .	37 22.49	16.74	1.00	V.	5	40.812	23 45.45	7.78	5.55	37 4.75	19 58.78
55	10	. .	39.	50.5	3.	. .	. .	. .	. .	. .	39 2.75	16.76	1.00	V.	2	38.487	45 32.39	7.75	7.13	38 44.99	41 47.27
56	10	5.	17.	28.5	. .	. .	. .	. .	. .	. .	41 40.58	16.78	1.00	IV.	7	44.688	7 0.06	7.69	4.36	41 22.80	3 12.11
57	10	. .	59.2	. .	. .	. .	. .	. .	. .	. .	43 22.86	16.80	1.00	IV.	6	49.208	10 15.01	7.64	4.59	43 5.06	6 27.24
58	10	59.5	12.	. .	. .	. .	. .	. .	. .	. .	45 35.56	16.82	1.00	III.	4	45.238	26 59.76	7.59	5.78	45 17.74	23 13.13
59	10	47.	59.5	. .	23.5	. .	. .	. .	. .	. .	48 23.20	16.84	1.00	IV.	F W	40.127	29 55.63	7.53	5.99	48 5.36	26 9.15
60	10	16.2	28.2	40.	. .	. .	. .	. .	. .	. .	52 51.94	16.88	1.00	V.	5	45.748	20 55.63	7.45	5.35	52 34.06	17 8.43
61	10	. .	. .	. .	39.	. .	. .	. .	. .	. .	53 39.02	16.89	1.00	V.	5	47.695	19 48.64	7.44	5.27	53 21.13	16 1.35
62	10	17.5	29.5	41.	. .	. .	. .	. .	. .	. .	23 55 53.18	−16.91	−1.00	IV.	3	49.392	30 32.81	− 7.41	− 6.04	23 55 35.27	24 26 46.26

ZONE 114. OCTOBER 28. Ms. D_0 = – ° ′ ″.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	8	. .	36.5	48.5	. .	. .	. .	. .	. .	. .	1 42 0.36	−17.88	−1.00	V.	2	47.859	40 9.94	− 7.61	−10.77	1 41 41.48	24 36 38.32
2	9	. .	. .	26.5	38.5	. .	. .	. .	. .	. .	43 38.43	17.89	1.00	V.	3	42.245	34 38.68	7.77	10.35	43 19.54	31 6.80
3	10	. .	. .	. .	. .	. .	. .	36.5	. .	. .	44 0.70	17.90	1.00	VII.	5	39.25	24 39.20	7.80	9.60	43 41.80	21 6.60
4	9	54.	6.	18.8	30.5	. .	. .	. .	. .	. .	49 30.16	17.91	0.99	V.	6	44.444	12 58.88	8.29	8.72	49 11.23	9 25.89
5	10	. .	. .	. .	. .	. .	30.5	42.	. .	. .	50 6.44	17.94	1.00	VII.	5	40.730	23 48.05	8.34	9.53	49 47.50	20 15.92
6	9	9.	21.	33.	. .	. .	. .	. .	. .	. .	52 44.81	17.96	1.00	IV.	5	43.003	22 30.10	8.58	9.43	52 25.85	18 58.11
7	10	33.	45.5	. .	. .	. .	. .	. .	. .	. .	55 9.10	17.98	1.00	III.	2	48.56	39 45.82	8.82	10.74	54 50.12	36 15.38
8	9	. .	. .	. .	15.	28.	. .	. .	. .	. .	56 15.56	17.99	1.00	VI.	2	47.901	40 8.42	8.91	10.77	55 56.57	36 38.10
9	9	18.	30.	42.	54.	. .	. .	. .	. .	. .	1 59 53.86	18.01	1.00	V.	5	46.278	20 37.39	9.28	9.29	1 59 34.85	17 5.96
10	10	37.5	49.	. .	. .	. .	. .	. .	. .	. .	2 2 13.12	18.03	1.01	III.	1	44.075	48 11.09	9.51	11.38	2 1 54.08	44 41.98
11	10	. .	. .	. .	. .	. .	47.	59.	. .	. .	2 23.18	18.03	1.00	VII.	3	42.205	35 14.25	9.53	10.40	2 4.15	31 44.18
12	9	52.	4.	16.	28.	. .	. .	. .	. .	. .	8 28.84	18.08	0.99	V.	6	45.925	17 51.98	10.16	9.07	8 9.77	14 21.24
13	9	. .	. .	24.	36.	. .	. .	. .	. .	. .	10 35.93	18.09	1.01	III.	1	42.430	49 7.68	10.39	11.46	10 16.83	45 39.53
14	9	. .	. .	. .	32.	43.5	. .	. .	. .	. .	11 31.82	18.09	1.00	VI.	5	42.509	22 46.99	10.50	9.45	11 12.73	19 16.94
15	10	. .	. .	. .	10.	. .	. .	. .	. .	. .	13 9.98	18.10	1.00	V.	3	42.509	34 29.60	10.68	10.34	12 50.88	31 0.62
16	7	23.5	35.	48.	0.	. .	. .	. .	. .	. .	16 59.48	18.13	1.00	V.	5	44.163	21 50.17	11.10	9.38	16 40.35	18 20.65
17	9	. .	. .	52.	4.	. .	. .	. .	. .	. .	19 3.93	18.14	1.01	IV.	2	43.687	42 33.51	11.33	10.96	18 44.78	39 5.80
18	10	. .	. .	. .	. .	. .	47.	. .	. .	. .	19 23.12	18.15	1.00	VII.	3	41.965	34 48.09	11.37	10.37	19 3.97	31 19.83
19	9	26.	38.5	50.5	. .	. .	. .	. .	. .	. .	23 2.19	18.17	1.01	IV.	1	40.781	50 4.45	11.78	11.54	22 43.01	46 37.77
20	10	. .	. .	. .	31.5	. .	. .	. .	. .	. .	25 31.49	18.18	1.00	IV.	3	34.775	38 55.72	12.09	10.68	25 12.31	35 28.49
21	10	. .	9.	21.	. .	. .	. .	. .	. .	. .	29 32.82	18.21	0.99	III.	6	42.212	14 15.67	12.58	8.81	29 13.62	10 47.06
22	10	. .	. .	. .	. .	13.	27.	. .	. .	. .	30 2.13	18.21	1.00	V.	3	46.555	32 10.39	12.64	10.16	29 42.92	28 43.19
23	10	. .	. .	. .	. .	. .	19.	. .	. .	. .	30 55.18	18.21	1.00	VII.	5	36.865	26 1.03	12.75	9.70	30 35.97	22 33.48
24	10	. .	. .	17.	. .	. .	. .	. .	. .	. .	33 28.87	18.23	1.01	III,	3	36.008	38 13.27	13.08	10.64	33 9.63	34 46.99
25	.	. .	. .	. .	. .	. .	19.	. .	. .	. .	33 7.16	18.23	1.01	VI.	1	40.020	50 30.52	13.14	11.58	33 47.92	47 5.24
26	10	52.	4.	. .	. .	. .	. .	. .	. .	. .	2 38 27.83	−18.26	−1.00	III.	3	47.405	31 41.15	−13.72	−10.13	2 38 8.57	24 28 15.00

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	*m*	*n*	*c*	Zenith Point.	Mic. Co.
1847.	h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
Zone 114	1847. h. m. Oct. 28, 2 34	′ ″	. .	. .	. .	″ . .	″ . .	in. 30.676	° 39.	° 29.3

REMARKS.

(113) 51. Micrometer reading assumed as $43^r.142$ instead of $42^r.142$.

(113) 53. Micrometer reading assumed as $43^r.421$ instead of $48^r.421$.

(114) 11. Micrometer reading assumed as $41^r.205$ instead of $42^r.205$.

(114) 12. Micrometer reading assumed as $35^r.925$ instead of $45^r.925$.

(114) 25. Transit over T. V assumed to have been recorded over T. VI.

ZONE 115. NOVEMBER 20. MS. D₀=– ° ′ ″.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
1	8.9	38.5	50.5	2.3	14.2	. .	. .	. .	. .	. .	0 1 14.24	−34.12	−1.00	V.	3	40.782	34 54.60	− 9.59	− 8.35	0 0 39.12	22 40 22.54
2	8	20.5	31.5	43.	. .	. .	. .	. .	. .	. .	3 55.49	34.15	1.00	IV.	3	31.336	40 54.04	9.56	8.78	3 20.34	46 22.38
3	9	. .	. .	13.5	25.	36.5	. .	. .	. .	. .	4 24.99	34.16	1.00	V.	2	33.094	48 37.94	9.56	9.36	3 49.83	54 6.86
4	10	. .	. .	. .	17.8	. .	. .	. .	. .	. .	7 17.82	34.19	1.00	VI.	5	48.833	19 9.40	9.53	7.23	6 42.63	24 36.16
5	10	. .	. .	24.	. .	. .	. .	. .	. .	. .	9 35.89	34.21	1.00	VI.	5	31.498	29 5.83	9.51	7.94	9 0.68	34 33.28
6	8	. .	. .	. .	1.8	13.5	. .	. .	. .	. .	11 1.71	34.23	1.00	VI.	3	42.242	34 18.06	9.51	8.31	10 26.48	39 45.88
7	8	. .	. .	. .	34.	46.	58.5	. .	. .	. .	12 34.25	34.24	1.00	VII.	3	44.089	33 0.61	9.49	8.22	11 59.01	38 28.31
8	8	8.5	21.2	32.5	. .	. .	. .	. .	. .	. .	18 44.52	34.31	1.00	IV.	5	43.105	22 26.59	9.49	7.46	18 9.21	27 53.54
9	8.9	. .	. .	18.2	30.5	42.3	. .	. .	. .	. .	19 30.35	34.32	1.00	VI.	5	39.002	24 47.65	9.50	7.62	18 55.03	30 14.77
10	10	. .	50.5	. .	14.	. .	. .	. .	. .	. .	24 14.11	34.37	0.99	VI.	6	50.735	9 22.35	9.52	6.55	23 38.75	14 48.42
11	10	. .	. .	. .	. .	27.5	. .	. .	. .	. .	24 15.71	34.37	0.99	VI.	7	47.425	5 25.78	9.52	6.27	23 40.35	10 51.57
12	10	. .	58.5	9.5	. .	. .	. .	. .	. .	. .	28 21.84	34.42	1.00	V.	3	40.812	35 27.98	9.57	8.39	27 46.42	40 55.94
13	9	54.	6.2	17.2	. .	. .	. .	. .	. .	. .	28 29.63	34.42	1.00	IV.	4	41.931	28 53.56	9.57	7.92	27 54.21	34 21.05
14	10	. .	. .	. .	. .	. .	41.5	. .	. .	. .	29 17.81	34.93	0.99	VII.	7	42.700	8 8.20	9.58	6.46	28 42.39	13 34.24
15	10	. .	. .	35.	. .	. .	. .	. .	. .	. .	32 46.92	34.46	1.00	V.	5	49.351	18 51.67	9.63	7.21	32 11.46	24 18.51
16	10	23.	35.	46.8	. .	. .	. .	. .	. .	. .	35 58.73	34.50	1.00	IV.	5	41.17	23 33.16	9.69	7.54	35 23.23	29 0.39
17	10	. .	. .	. .	. .	. .	31.5	. .	. .	. .	36 15.70	34.50	1.00	VII.	4	46.552	26 14.32	9.69	7.73	35 40.20	31 41.74
18	4	. .	. .	54.5	6.	18.	. .	. .	. .	. .	39 6.16	34.54	1.00	VII.	1	50.392	44 33.52	9.74	9.05	38 30.62	50 2.31
19	5	. .	47.	59.	11.5	. .	. .	. .	. .	. .	41 11.05	34.56	1.00	IV.	4	44.948	27 9.77	9.78	7.79	40 35.49	32 37.34
20	8.9	31.5	43.5	55.3	. .	. .	. .	. .	. .	. .	43 7.27	34.58	1.01	IX.	1	41.011	49 56.43	9.83	9.44	42 31.68	55 25.70
21	8.9	. .	28.3	40.5	52.3	. .	. .	. .	. .	. .	45 52.26	34.61	0.99	V.	7	40.890	9 45.11	9.91	6.55	45 16.68	15 11.57
22	10	16.	28.	40.	52.	. .	. .	. .	. .	. .	0 47 51.82	−34.63	−0.99	V.	7	36.206	11 51.86	− 9.96	− 6.71	0 47 16.20	22 17 18.53

ZONE 116. DECEMBER 7. MS. D₀=– ° ′ ″.

1	10	. .	50.	2.	14.	25.5	. .	. .	. .	. .	23 40 13.82	−45.17	−1.00	VII.	3	48.852	30 51.13	− 2.91	− 6.06	23 39 27.65	22 36 20.10
2	8	50.	2.5	14.	26.	38.	. .	. .	. .	. .	42 26.01	45.20	1.00	VI.	5	45.119	21 17.19	2.82	5.37	41 39.81	26 45.38
3	9	21.8	34.	45.5	57.5	9.2	. .	. .	. .	. .	45 57.50	45.24	1.00	VII.	5	43.853	13 18.99	2.70	4.80	45 11.26	18 42.49
4	8	37.	49.2	1.	12.5	. .	. .	. .	. .	. .	48 12.74	45.27	1.00	VI.	7	44.082	7 20.80	2.59	4.38	47 26.47	12 47.77
5	9	56.5	8.	20.	. .	. .	. .	. .	. .	. .	50 31.97	45.29	1.00	V.	5	41.432	23 24.11	2.50	5.53	49 45.68	28 52.14
6	10	. .	. .	. .	. .	. .	. .	47.	. .	. .	51 11.28	45.30	1.00	VII	2	.343	44 28.32	2.48	7.05	50 24.98	49 57.85
7	10	13.	25.	. .	. .	. .	. .	. .	. .	. .	55 48.81	45.36	1.00	III.	2	51.393	38 8.35	2.31	6.59	55 2.45	43 37.25
8	10	. .	43.	55.5	. .	. .	. .	. .	. .	. .	23 60 7.09	45.41	1.00	IV.	3	42.702	34 22.98	2.21	6.31	23 59 20.68	39 51.50
9	9	49.5	1.5	13.2	. .	. .	. .	. .	. .	. .	0 1 25.23	45.42	1.00	IV.	3	41.652	34 59.17	2.17	6.36	0 0 38.81	40 27.70
10	8	8.	20.	32.	44.	. .	. .	. .	. .	. .	48 43.87	45.97	1.00	V.	2	49.447	39 15.31	2.05	6.67	47 56.90	44 44.03
11	8	. .	14.	25.	. .	. .	. .	. .	. .	. .	55 37.32	46.05	1.00	III.	5	48.143	19 33.22	2.21	5.25	54 50.27	25 0.68
12	8	. .	. .	. .	. .	. .	. .	27.	. .	. .	55 51.23	46.05	1.00	III.	5	48.143	19 33.22	2.21	5.25	55 4.18	25 0.68
13	9	43.	55.3	6.5	. .	. .	. .	. .	. .	. .	59 18.76	46.08	1.00	IV.	3	52.788	28 35.98	2.30	5.90	58 31.68	34 4.18
14	10	. .	. .	. .	. .	. .	. .	0.	. .	. .	0 59 24.24	46.08	1.00	VII.	4	52.151	23 1.69	2.30	5.50	0 58 37.16	28 29.49
15	10	. .	. .	. .	. .	. .	56.5	. .	. .	. .	1 1 32.68	46.11	1.00	VII.	3	48.060	19 35.86	2.36	5.24	1 0 45.57	25 3.46
16	8	17.5	29.5	41.5	. .	. .	. .	. .	. .	. .	8 53.31	46.19	1.00	IV.	4	47.222	25 51.52	2.62	5.70	8 6.12	31 19.84
17	9	43.	55.3	7.	19.2	. .	. .	. .	. .	. .	10 18.98	46.21	1.00	V.	3	48.802	30 53.07	2.67	6.06	9 31.77	36 21.80
18	11	. .	. .	8.	. .	. .	. .	. .	. .	. .	13 19.95	46.24	1.00	IV.	7	41.146	9 1.92	2.79	4.50	12 32.71	14 29.21
19	10	3.	15.5	27.	. .	. .	. .	. .	. .	. .	15 38.92	46.27	1.00	IV.	6	43.132	13 44.05	2.89	4.76	14 51.65	19 11.77
20	10	. .	. .	. .	. .	29.5	41.3	. .	. .	. .	16 17.66	46.28	1.00	VII.	7	43.115	7 19.52	2.92	4.38	15 30.38	12 46.82
21	10	. .	. .	. .	. .	. .	13.	. .	. .	. .	17 49.20	46.29	1.00	VII.	4	45.758	26 41.64	2.98	5.76	17 1.91	32 10.38
22	8	. .	. .	. .	35.5	47.	59.	. .	. .	. .	21 35.25	46.33	1.00	VII.	2	42.080	43 28.56	3.15	6.98	20 47.92	48 58.69
23	8	. .	. .	. .	. .	23.	35.	47.	. .	. .	1 23 11.22	−46.35	−0.99	VII.	5	49.339	18 51.85	− 3.25	− 5.20	1 22 23.88	22 24 20.30

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1847.	h.	s.	s.	s.	s.	s.	° ′ ″	r.
Nov. 20,	3	− 42.44	g 0.060	. .	+ 0.397	+ 0.038	0 0 1.87	40.133
Dec. 7,	5	− 52.64	g 0.030	. .	+ 0.397	+ 0.038	0 0 1.74	40.120

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1847. h. m.	° ′ ″				″	″	in.	°	°
Zone 115	Nov. 20, 0 1	*298 35	7.9	7.7	9.9	6.20	6.38	30.392	44.	35.2
	0 47	. .	. .	. .	. .	. .	. .	30.340	43.	33.
Zone 116	Dec. 7, 23 39	298 35 0.0	5.9	1.5	7.8	3.61	3.80	30.508	42.	35.5
	1 36	. .	. .	. .	. .	. .	. .	30.525	42.	32.
	1 37	. .	. .	. .	. .	. .	. .	30.528	41.	31.3
	2 28	. .	. .	. .	. .	. .	. .	30.526	40.6	31.
	3 8	. .	. .	. .	. .	. .	. .	30.520	39.	29.9

REMARKS.

(115) 1. Micrometer reading assumed as 41ʳ.782 instead of 42ʳ.782.
(115) 7. Micrometer reading assumed as 45ʳ.089 instead of 40ʳ.089.
(115) 17. Transit over T. VI assumed as 39ˢ.5 instead of 31ˢ.5.
(115) 21. Micrometer reading assumed as 39ʳ.890 instead of 40ʳ.890.
(116) 3. Hor. thread assumed as 6 instead of 5,
(116) 15. Hor. thread assumed as 5 instead of 3.
(116) 20. Micrometer reading assumed as 44ʳ.115 instead of 43ʳ.115.

* The microscope A would seem not to have been read.

Zone 116. December 7. Ms. $D_0 = -$ ° ′ ″—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
24	11	. .	29.5	. .	. .	. .	. .	. .	. .	. .	1 29 53.20	−46.42	−0.99	III.	5	50.488	18 12.54	− 3.58	− 5.15	1 29 5.79	22 23 41.27
25	11	. .	. .	. .	. .	36.	48.	. .	. .	. .	36 24.21	46.49	0.99	VII.	5	49.726	18 38.54	3.94	5.19	35 36.73	24 7.67
26	10	. .	. .	. .	. .	. .	. .	29.5	. .	. .	36 53.73	46.50	0.99	VII.	5	52.432	17 5.43	3.97	5.07	36 6.24	22 34.47
27	9	. .	. .	. .	. .	19.	30.5	. .	. .	. .	39 6.88	46.52	1.00	VII.	2	49.943	38 58.03	4.11	6.65	38 19.36	44 28.79
28	10	. .	. .	. .	46.	. .	. .	. .	. .	. .	41 46.04	46.55	1.01	VI.	1	35.588	53 3.01	4.27	7.69	40 58.48	58 34.97
29	9	. .	. .	. .	. .	. .	. .	45.	. .	. .	42 9.20	46.55	1.01	VII.	1	36.219	52 41.15	4.29	7.67	41 21.64	58 13.11
30	9	47.5	59.5	10.3	22.7	. .	. .	. .	. .	. .	45 22.88	46.59	1.01	V.	1	41.157	49 17.08	4.50	7.41	44 35.28	54 48.99
31	10	36.5	48.5	0.	. .	. .	. .	. .	. .	. .	49 12.16	46.63	1.00	IV.	2	45.320	41 37.33	4.76	6.83	48 24.53	47 8.92
32	10	. .	. .	. .	. .	53.	. .	17.	. .	. .	49 41.20	46.63	1.00	VII.	4	43.232	28 8.55	4.80	5.87	48 53.57	33 39.22
33	9	. .	. .	22.	33.8	. .	. .	. .	. .	. .	51 33.82	46.65	1.00	V.	3	46.050	32 27.76	4.93	6.18	50 46.17	22 37 58.87
34	10	. .	. .	. .	. .	1.	13.	. .	. .	. .	52 49.10	46.66	1.01	VII.	1	33.052	54 30.12	5.02	7.81	52 1.43	23 0 2.95
35	10	. .	. .	. .	. .	. .	40.	52.	. .	. .	54 16.20	46.68	1.00	VII.	2	43.310	42 46.23	5.12	6.93	53 28.52	22 48 18.28
36	8	47.	59.3	10.5	22.	. .	. .	. .	. .	. .	56 22.57	46.70	1.00	V.	2	50.088	38 53.26	5.28	6.64	55 34.87	44 25.18
37	9	. .	. .	. .	. .	. .	. .	25.	. .	. .	56 49.27	46.70	1.00	VII.	3	45.990	32 29.61	5.31	6.18	56 1.57	38 1.10
38	10	. .	. .	. .	. .	. .	. .	35.	. .	. .	1 57 59.29	46.72	1.00	VII.	2	49.026	39 29.58	5.40	6.69	57 11.57	45 1.67
39	10	. .	. .	. .	46.	. .	10.5	. .	. .	. .	2 0 46.35	46.74	1.00	VII.	5	42.283	22 54.63	5.61	5.49	1 58 58.61	28 25.73
40	10	. .	. .	. .	. .	. .	. .	30.	. .	. .	5 54.20	46.80	0.99	VII.	6	49.099	10 18.50	6.02	4.57	2 5 6.41	15 49.09
41	10	19.	31.	43.	. .	. .	. .	. .	. .	. .	10 54.82	46.84	1.00	IV.	4	43.892	28 13.61	6.44	5.87	10 6.98	33 45.92
42	10	. .	. .	. .	. .	. .	54.	6.	. .	. .	11 30.13	46.85	1.01	VII.	1	38.720	45 24.15	6.49	7.12	10 42.27	50 57.76
43	9	42.5	54.	6.5	18.2	. .	. .	. .	. .	. .	14 18.17	46.88	1.01	V.	2	42.779	43 4.72	6.73	6.95	13 30.28	48 38.40
44	9	34.	46.	57.5	9.5	. .	. .	. .	. .	. .	16 9.61	46.89	1.00	V.	4	43.630	27 55.07	6.90	5.85	15 21.72	33 27.82
45	10	. .	. .	21.	33.	. .	. .	. .	. .	. .	17 32.95	46.91	1.00	V.	5	40.454	23 57.77	7.02	5.56	16 45.04	29 30.35
46	9	. .	55.	6.5	18.5	30.	. .	. .	. .	. .	19 18.06	46.92	1.00	VI.	5	41.079	23 36.18	7.19	5.54	18 30.14	29 8.91
47	10	. .	. .	. .	. .	. .	. .	34.	. .	. .	19 58.28	46.93	1.00	VII.	3	39.572	36 10.43	7.25	6.44	19 10.35	41 44.12
48	10	. .	33.	44.5	. .	. .	. .	. .	. .	. .	22 56.54	46.96	0.99	IV.	7	41.108	9 3.23	7.53	4.48	22 8.59	14 35.24
49	11	. .	9.	21.	. .	. .	. .	. .	. .	. .	25 32.84	46.98	1.01	IV.	2	49.021	38 55.59	7.79	6.66	24 44.85	44 30.14
50	8	. .	10.	22.	33.5	. .	. .	. .	. .	. .	2 28 33.71	47.01	1.00	III.	4	40.780	29 33.13	8.10	5.97	2 27 45.70	35 7.20
51	10	. .	. .	. .	. .	. .	36.	. .	. .	. .	3 8 12.12	47.35	1.00	VII.	3	36.755	37 47.34	12.85	6.57	3 7 23.77	43 26.76
52	9	. .	33.	45.	57.	. .	. .	. .	. .	. .	10 56.88	47.37	1.00	III.	4	36.752	31 51.71	13.23	6.13	10 8.51	37 31.07
53	10	49.	1.5	. .	. .	. .	. .	. .	. .	. .	12 25.00	47.39	1.00	III.	5	41.525	23 20.92	13.43	5.52	11 36.61	28 59.87
54	3	2.5	15.	27.	39.	51.	. .	. .	. .	. .	14 38.80	47.41	0.99	V.	6	44.970	12 40.78	13.73	4.74	12 50.40	18 19.25
55	9	35.	47.	. .	11.	. .	. .	. .	. .	. .	16 10.89	47.42	1.00	II.	3	45.572	32 44.13	13.95	6.21	15 22.47	38 24.29
56	11	. .	. .	11.	. .	. .	. .	. .	. .	. .	18 32.95	47.43	0.99	IV.	7	46.160	6 9.41	14.28	4.26	17 44.53	11 47.95
57	10	. .	. .	. .	7.	19.	. .	. .	. .	. .	29 7.06	47.51	1.00	VI.	3	40.079	35 53.12	15.85	6.43	28 18.55	41 35.40
58	9	. .	. .	52.5	4.5	. .	. .	. .	. .	. .	31 4.42	47.53	1.02	V.	1	35.201	53 16.41	16.15	7.74	30 15.87	59 0.30
59	9	. .	. .	. .	. .	42.5	54.	. .	. .	. .	33 30.38	47.54	1.01	VII.	3	33.170	39 50.69	16.52	6.72	32 41.83	45 33.93
60	10	. .	. .	4.	16.	28.	. .	. .	. .	. .	34 15.99	47.55	1.00	IV.	4	33.418	33 46.46	16.63	6.28	33 27.44	39 29.37
61	10	. .	. .	14.5	26.5	. .	. .	. .	. .	. .	36 26.42	47.56	1.01	V.	1	41.178	49 50.76	16.99	7.46	35 37.85	55 35.21
62	10	. .	. .	. .	. .	45.	56.5	. .	. .	. .	37 32.87	47.57	1.01	VI.	2	48.388	39 51.66	17.16	6.72	36 44.29	45 35.54
63	10	. .	. .	. .	. .	. .	. .	56.	. .	. .	38 20.24	47.58	1.00	VII.	4	49.220	24 42.53	17.28	5.62	37 31.66	30 25.43
64	10	. .	40.	52.	. .	. .	. .	. .	. .	. .	46 3.85	47.62	1.01	III.	1	42.830	48 19.52	18.50	7.32	45 15.22	54 5.34
65	11	. .	. .	. .	. .	. .	. .	33.	. .	. .	45 57.28	47.62	1.00	VII.	3	42.960	34 13.86	18.49	6.30	45 8.66	39 58.65
66	8	. .	. .	. .	. .	. .	31.	43.	. .	. .	47 7.20	47.63	1.00	VII.	3	37.375	38 0.42	18.68	6.57	46 18.57	43 45.67
67	10	. .	. .	. .	. .	. .	. .	2.	. .	. .	48 26.22	47.64	1.01	VII.	1	41.099	44 2.30	18.90	7.03	47 37.57	49 48.23
68	10	. .	. .	. .	. .	. .	25.	37.	. .	. .	50 1.24	47.65	0.99	VII.	6	43.128	13 9.54	19.15	4.78	49 12.60	18 53.47
69	11	. .	. .	56.5	9.	20.	. .	. .	. .	. .	52 8.49	47.66	1.01	VI.	1	42.936	48 50.20	19.49	7.41	51 19.82	54 37.10
70	10	. .	8.	. .	31.	. .	. .	. .	. .	. .	53 31.40	47.67	1.00	IV.	3	39.495	36 13.33	19.74	6.45	52 42.73	41 59.52
71	10	. .	. .	51.	3.	. .	. .	. .	. .	. .	57 2.98	47.69	0.99	IV.	5	50.252	18 20.69	20.33	5.14	56 14.30	24 6.16
72	9	57.5	9.5	21.	. .	. .	. .	. .	. .	. .	3 59 33.14	47.71	1.00	IV.	4	47.740	25 33.70	20.75	5.67	58 44.43	31 20.12
73	10	. .	. .	. .	22.5	34.	46.	. .	. .	. .	4 0 22.26	−47.71	−1.00	VII.	4	46.010	29 59.41	−20.89	− 6.00	3 59 33.55	22 35 46.30

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	*m*	*n*	*c*	Zenith Point.	Mic. Co.
1847. h. m.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1847. h. m.	° ′ ″				″	″	in.	°	°

REMARKS.

(116) 30. Micrometer reading assumed as $42^r.157$ instead of $41^r.157$.

(116) 36. Declination differs 3′ from Arg. Z. 317, 65.

(116) 39. Right ascension assumed as $1^h\ 59^m$ instead of $2^h\ 0^m$.

(116) 42. Hor. thread assumed as 2 instead of 1.

(116) 49. Micrometer reading assumed as $50^r.021$ instead of $49^r.021$.

(116) 54. Minutes assumed as 13 instead of 14.

(116) 56. Transit over T. III assumed as 21^s instead of 11^s.

(116) 64. Micrometer reading assumed as $43^r.830$ instead of $42^r.830$.

(116) 66. Micrometer reading assumed as $36^r.375$ instead of $37^r.375$.

(116) 67. Hor. thread assumed as 2 instead of 1.

(116) 68. Micrometer reading assumed as $44^r.128$ instead of $43^r.128$.

ZONE 117. JANUARY 19. MS. $D_0 = -22° 4' 10''$.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
1	7.8	6.2	18.3	30.2	41.5	53.7	5.	. .	. .	. .	2 30 41.78	+ 3.39	. .	VII.	4	38.892	30 37.91	−17.34	−10.05	2 30 45.17	22 35 15.3
2	10	33.	45.	57.	8.8	. .	. .	. .	. .	. .	31 8.82	3.39	. .	V.	2	43.882	42 21.31	17.38	10.93	31 12.21	46 59.6
3	8.9	27.	39.2	51.5	3.	. .	. .	. .	. .	. .	34 3.04	3.36	. .	V.	4	39.972	29 26.49	17.61	9.96	34 6.40	34 4.1
4	10	. .	. .	. .	38.	50.	. .	. .	. .	. .	36 38.06	3.33	. .	VII.	3	42.478	34 26.58	17.81	10.34	36 41.39	39 4.7
5	8	35.	47.5	59.2	11.	. .	. .	. .	. .	. .	38 11.05	3.32	. .	V.	2	42.275	43 16.67	17.94	10.99	38 14.37	47 55.6
6	9	. .	. .	21.	. .	. .	. .	. .	. .	. .	39 32.91	3.31	. .	IV.	5	44.152	13 7.75	18.04	8.76	39 36.22	17 44.6
7	7.8	. .	. .	. .	. .	3.5	16.2	. .	. .	. .	39 52.05	3.30	. .	VII.	5	46.562	11 44.48	18.07	8.67	39 55.35	16 21.2
8	10	54.5	. .	. .	. .	. .	. .	. .	. .	. .	42 30.13	3.28	. .	II.	6	45.645	12 16.21	18.30	8.71	42 33.41	16 53.2
9	9	. .	. .	. .	52.	. .	15.	27.8	. .	. .	42 51.74	3.27	. .	VII.	6	43.195	13 40.47	18.32	8.80	42 55.01	18 17.6
10	9	. .	. .	37.	. .	. .	. .	. .	. .	. .	49 48.80	3.20	. .	IV.	1	39.272	50 49.38	18.93	11.57	49 52.00	55 29.9
11	9	. .	. .	47.5	59.2	11.	. .	. .	. .	. .	50 59.23	3.19	. .	VI.	2	38.582	45 23.79	19.04	11.15	51 2.42	50 4.0
12	10	. .	. .	47.5	0.0	. .	. .	. .	. .	. .	55 59.68	3.14	. .	V.	3	36.590	37 49.62	19.52	10.58	57 2.82	42 29.7
13	10	. .	. .	58.	. .	. .	. .	. .	. .	. .	57 9.90	3.13	. .	V.	5	. .	24	19.	9.	57 13.03	25
14	10	. .	. .	28.5	40.5	. .	. .	. .	. .	. .	2 58 40.42	3.12	. .	V.	2	46.828	40 39.83	19.77	10.80	2 58 43.54	45 20.4
15	9	. .	59.5	10.5	23.	. .	. .	. .	. .	. .	3 2 28.89	3.09	. .	V.	5	47.172	20 4.98	20.14	9.28	3 2 25.98	24 44.4
16	9	. .	. .	20.	32.5	. .	. .	. .	. .	. .	3 32.24	3.07	+0.01	V.	6	47.172	11 23.69	20.26	8.64	3 35.32	16 2.6
17	9	. .	. .	. .	. .	. .	. .	22.	. .	. .	3 3 46.22	+ 3.06	+0.01	VII.	6	41.672	14 32.92	−20.28	− 8.87	3 3 49.29	22 19 12.1

ZONE 118. JANUARY 19. MS. $D_0 = -22° 2' 50''$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	9	. .	. .	. .	12.	24.	. .	. .	. .	. .	6 6 12.05	+ 1.70	. .	V.	4	42.632	28 29.31	− 6.95	− 9.90	6 6 13.75	22 31 36.2
2	9	. .	. .	. .	. .	. .	5.	17.	. .	. .	6 41.25	1.70	+0.02	VII.	6	51.582	8 51.55	7.07	8.40	6 42.97	11 57.0
3	10	3.	14.5	27.	. .	. .	. .	. .	. .	. .	8 38.66	1.69	−0.01	IV.	2	50.481	38 34.03	7.56	10.65	8 40.34	41 42.2
4	8	. .	. .	31.	43.	. .	. .	. .	. .	. .	10 42.92	1.69	−0.01	V.	2	54.89	36 2.11	8.09	10.47	10 44.60	39 10.7
5	10	. .	42.	54.	. .	. .	. .	. .	. .	. .	13 5.80	1.68	+0.01	IV.	6	42.335	14 10.34	8.72	8.81	13 7.49	17 17.9
6	10	. .	. .	. .	. .	. .	50.	2.	. .	. .	13 26.21	1.68	. .	VII.	3	43.683	33 45.07	8.78	10.26	13 27.89	36 54.1
7	9	. .	. .	. .	47.	59.	. .	. .	. .	. .	14 47.13	1.67	+0.02	VII.	6	43.612	13 26.10	9.14	8.76	14 48.82	16 34.0
8	9.10	. .	. .	. .	7.	19.8	31.	43.	. .	. .	16 7.34	1.67	. .	VII.	4	42.479	28 34.36	9.47	9.90	16 9.01	31 43.7
9	9.10	15.	27.	39.	51.	. .	. .	. .	. .	. .	18 50.85	1.66	. .	V.	4	46.642	26 11.17	10.16	9.72	18 52.51	29 21.0
10	10	. .	. .	6.	17.5	. .	. .	. .	. .	. .	20 17.68	1.66	. .	V.	3	47.975	31 17.44	10.54	10.07	20 19.34	34 28.0
11	8.9	. .	53.5	5.	17.	. .	. .	. .	. .	. .	24 17.05	1.64	+0.02	V.	6	49.625	9 59.19	11.56	8.50	24 18.71	13 9.2
12	8.9	14.	26.	38.	50.	. .	. .	. .	. .	. .	26 49.85	1.64	. .	V.	4	45.652	26 45.27	12.22	9.76	26 51.49	29 57.2
13	7.8	45.	57.	8.	21.	32.5	. .	. .	. .	. .	30 20.79	1.63	. .	VI.	4	46.713	26 8.65	13.12	9.71	30 22.42	29 21.5
14	9	. .	. .	44.5	56.3	7.5	. .	. .	. .	. .	31 56.10	1.62	+0.01	VI.	3	41.300	35 7.28	13.55	10.38	31 57.73	38 21.2
15	9	. .	9.5	21.5	33.0	. .	. .	. .	. .	. .	33 33.24	1.62	−0.01	V.	2	42.762	42 59.89	13.94	10.98	33 34.85	46 14.8
16	10	. .	. .	36.	. .	. .	. .	. .	. .	. .	35 47.93	1.62	+0.01	IV.	6	41.180	14 50.12	14.55	8.86	35 49.56	18 3.5
17	8	. .	. .	. .	. .	36.5	49.	0.5	. .	. .	36 24.89	1.61	0.01	VII.	6	40.332	15 19.08	14.71	8.89	36 26.51	18 32.7
18	10	. .	. .	. .	. .	. .	17.	. .	. .	. .	37 53.26	1.61	+0.01	VII.	6	39.498	15 47.82	15.07	8.91	37 54.88	19 1.8
19	9.10	6.	18.2	30.	. .	. .	. .	. .	. .	. .	40 41.88	1.60	. .	IV.	4	43.610	27 55.65	15.81	9.86	40 43.48	31 11.3
20	10	. .	. .	. .	. .	. .	21.	32.5	. .	. .	40 56.99	1.60	+0.01	VII.	6	40.068	15 28.19	15.88	8.90	40 58.60	18 43.0
21	10	. .	. .	. .	43.	55.	. .	. .	. .	. .	42 43.04	1.60	. .	VI.	4	41.579	29 5.50	16.33	9.94	42 44.64	32 21.8
22	10	. .	. .	. .	31.5	. .	55.5	. .	. .	. .	43 31.65	1.60	+0.01	VII.	6	40.970	14 57.11	16.56	8.86	43 33.26	18 12.5
23	10	. .	22.	34.	. .	. .	. .	. .	. .	. .	45 45.82	1.59	. .	IV.	4	43.618	27 55.38	17.13	9.86	45 47.41	31 12.4
24	10	. .	. .	. .	27.2	39.2	. .	. .	. .	. .	46 27.28	1.59	−0.02	V.	1	42.995	48 41.11	17.31	11.43	46 28.85	51 59.8
25	10	. .	. .	50.	2.	. .	. .	. .	. .	. .	48 1.92	1.59	0.02	V.	1	43.530	48 22.67	17.72	11.40	48 3.49	51 41.8
26	6.7	. .	2.5	14.5	26.	38.	. .	. .	. .	. .	49 26.21	1.59	−0.01	V.	2	45.050	41 41.07	18.10	10.92	49 27.79	45 0.1
27	9	. .	. .	. .	. .	. .	36.	47.5	. .	. .	50 11.98	1.59	. .	VII.	4	45.818	23 47.12	18.28	9.55	50 13.57	27 5.0
28	9	. .	. .	. .	. .	33.	45.	. .	. .	. .	6 52 21.22	+ 1.58	+0.01	VII.	5	52.410	17 4.33	−18.84	− 9.04	6 52 22.81	22 20 22.2

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848. h.	s.	s.	s.	s.	s.	° ′ ″	r.
Jan. 19, 3	− 19.78	. .	. .	− 0.119	+ 0.480	359 59 64.69	40.233

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848. h. m.	° ′ ″				″	″	in.	°	°
Zone 117	Jan. 19, 2 29	*41.9	47.4	49.2	51.7	. .	47.55	30.542	33.9	27.1
Zone 118	6	300 20 15.	13.5	16.5	15.5	. .	15.12			
	6 5	300 20 0.	3.2 0.2	4.7 4.2	5.2 4.3	2.78	2.72	30.532	33.	26.3
	6 10	. .	. .	. .	. .	. .	. .	. .	. .	32.4
	7	300 20 52.2	59.1	57.2	3.0	. .	. .	30.516 30.516	31. 31.	23.4 23.9
	8	. .	. .	. .	. .	. .	. .	. .	. .	32.4

REMARKS.

(117) 3. Micrometer reading assumed as 40ʳ.972 instead of 39ʳ.972.
(117) 6. Micrometer thread assumed as 6 instead of 5.
(117) 7. Micrometer thread assumed as 6 instead of 5.
(118) 27. Micrometer reading assumed as 4ᵗ 50ʳ.818 instead of 4ᵗ 45ʳ.818.

* The circle-reading recorded was 300° 20′, but the stars have been identified as of the declinations corresponding to the reading 298° 35′, which has been used in the reductions.

ZONE 118. JANUARY 19. Ms. $D_0=-22° 2' 50''$—Continued.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
29	9	. .	. .	54.	. .	. .	. .	. .	. .	. .	6 54 5.90	+ 1.58	+0.01	IV.	4	52.410	22 52.52	−19.31	− 9.47	6 54 7.49	22 26 11.3
30	10	. .	. .	58.	9.5	. .	. .	. .	. .	. .	55 9.70	1.58	+0.01	V.	4	51.080	23 38.30	19.58	9.53	55 11.29	26 57.4
31	10	. .	21.	33.	45.2	. .	. .	. .	. .	. .	56 44.95	1.58	. .	V.	3	45.601	32 39.21	19.99	10.19	56 46.53	35 59.4
32	9	. .	. .	. .	. .	. .	. .	37.	. .	. .	6 57 1.23	1.57	+0.01	VII.	5	50.319	18 16.35	20.06	9.12	6 57 2.81	21 35.5
33	9	28.5	40.5	53.	. .	. .	. .	. .	. .	. .	7 0 4.50	1.57	−0.02	IV.	1	43.580	48 20.98	20.86	11.43	7 0 6.05	51 43.3
34	10	. .	. .	50.	2.5	. .	. .	. .	. .	. .	6 2.18	1.57	0.01	V.	2	45.461	41 26.92	22.42	10.90	6 3.74	44 50.2
35	8	. .	. .	14.	26.	. .	. .	. .	. .	. .	7 25.92	1.57	−0.01	V.	3	40.239	35 43.92	22.78	10.44	7 27.48	39 7.1
36	9	42.	54.	6.	. .	. .	. .	. .	. .	. .	10 17.83	1.56	. .	IV.	4	41.891	29 29.31	23.54	9.97	10 19.39	32 52.8
37	10	. .	. .	. .	. .	19.	31.	. .	. .	. .	11 7.14	1.56	. .	VII.	3	42.060	23 0.86	23.74	9.43	11 8.70	26 24.0
38	8	53.5	6.	17.5	29.5	. .	. .	. .	. .	. .	14 29.48	1.56	. .	V.	4	38.500	30 51.64	24.62	10.05	14 31.04	34 16.3
39	10	. .	46.2	58.	10.	. .	. .	. .	. .	. .	16 9.98	1.56	−0.02	V.	1	43.961	48 7.83	25.06	11.41	16 11.52	51 34.3
40	10	1.	13.	25.	. .	. .	. .	. .	. .	. .	17 36.82	1.56	. .	III.	3	43.172	34 2.89	25.44	10.29	17 38.38	37 28.6
41	8	. .	. .	. .	53.	5.	6.	. .	. .	. .	17 53.06	1.56	. .	VI.	3	43.314	33 57.91	25.51	10.29	17 54.62	37 23.7
42	9	39.	51.	3.2	. .	. .	. .	. .	. .	. .	20 14.90	1.56	−0.01	IV.	2	41.601	43 39.91	26.13	11.06	20 16.45	47 7.1
43	8	. .	. .	. .	. .	48.	59.5	. .	. .	. .	20 35.87	1.56	−0.01	VII.	2	46.420	40 53.66	26.21	10.85	20 37.42	44 20.7
44	8	. .	. .	. .	. .	. .	. .	53.	. .	. .	21 17.26	1.56	. .	VII.	F W	. .	. . .	26.41	. .	21 18.82	
45	10	. .	. .	. .	. .	. .	34.2	. .	. .	. .	23 10.28	1.56	−0.02	VII.	1	45.353	47 19.65	26.89	11.34	23 11.82	50 47.9
46	8	. .	. .	. .	. .	39.	51.	2.5	. .	. .	23 27.02	1.56	−0.01	VII.	2	48.980	39 25.47	26.95	10.72	23 28.57	42 53.1
47	10	. .	. .	. .	55.2	67.2	. .	. .	. .	. .	25 55.26	1.56	. .	VII.	4	44.308	27 31.35	27.60	9.83	25 56.82	30.58.8
48	10	44.	56.	8.	. .	. .	. .	. .	. .	. .	28 19.80	1.56	+0.01	IV.	5	40.515	23 54.32	28.23	9.54	28 21.37	27 22.1
49	10	. .	. .	. .	12.	24.	35.6	. .	. .	. .	29 11.97	1.56	. .	VII.	4	44.865	27 12.17	28.47	9.77	29 13.53	30 40.4
50	10	45.	57.	9.	21.	. .	. .	. .	. .	. .	31 20.82	1.56	+0.02	IV.	6	42.509	14 4.35	29.01	8.78	31 22.40	17 32.1
51	10	. .	. .	. .	. .	32.	. .	. .	. .	. .	32 20.15	1.56	. .	VII.	4	46.182	26 26.80	29.27	9.73	32 21.71	29 55.8
52	10	. .	1.	13.	25.	. .	. .	. .	. .	. .	36 24.89	1.56	+0.01	IV.	5	47.636	19 49.03	30.32	9.33	36 26.46	22 18.7
53	10	. .	. .	11.	23.	35.	. .	. .	. .	. .	39 23.01	1.56	. .	VI.	4	46.552	26 14.20	31.10	9.72	39 24.57	29 45.0
54	9	. .	. .	. .	22.	34.	45.5	57.5	. .	. .	40 21.87	1.56	−0.02	VII.	1	46.552	46 38.36	31.34	11.30	40 23.41	50 11.0
55	9	. .	29.5	41.5	53.5	. .	. .	. .	. .	. .	42 53.39	1.57	+0.02	IV.	7	42.035	8 26.54	32.04	8.35	42 54.98	11 56.9
56	9	. .	23.	35.	46.5	. .	. .	. .	. .	. .	44 46.72	1.57	−0.01	V.	3	40.410	35 38.03	32.45	10.43	44 48.28	39 10.9
57	10	5.	17.	. .	. .	. .	. .	. .	. .	. .	46 40.82	1.57	0.01	III.	2	45.178	41 36.67	32.96	10.88	46 42.38	45 10.5
58	8	. .	. .	. .	13.	24.5	36.5	. .	. .	. .	7 47 12.75	+ 1.57	−0.01	VII.	1	56.495	44 22.53	−33.13	−11.12	7 47 14.31	22 47 56.8
59	9	. .	. .	. .	. .	. .	8.8	21.	. .	. .	6 41 45.14	. .	. .	VII.	5	42.27	22 53.62				
60	9	19.	31.	43.	. .	. .	. .	. .	. .	. .	44 54.81	. .	. .	IV.	4	47.403	25 44.99				
61	9	. .	. .	. .	. .	. .	. .	14.	. .	. .	44 38.28	. .	. .	VII.	4	31.85	34 40.49				
62	10	36.5	48.5	. .	. .	. .	. .	. .	. .	. .	47 12.20	. .	. .	III.	5	48.952	19 3.66				
63	9	. .	. .	35.	47.	. .	. .	. .	. .	. .	49 46.97	. .	. .	VI.	5	46.840	20 16.33				
64	8.9	. .	. .	46.5	58.5	. .	. .	. .	. .	. .	50 58.44	. .	. .	V.	5	42.984	22 29.24				
65	.	. .	. .	55.	7.2	. .	. .	. .	. .	. .	53 7.06	. .	. .	V.	5	46.802	20 17.72				
66	7	34.5	46.5	. .	11.5	. .	. .	. .	. .	. .	55 10.36	. .	. .	V.	3	39.199	36 19.75				
67	10	. .	. .	. .	. .	. .	. .	29.	. .	. .	55 53.28	. .	. .	VII.	3	40.170	35 46.08				
68	8.9	. .	. .	35.	47.	. .	. .	. .	. .	. .	57 46.93	. .	. .	IV.	4	43.683	28 53.14				
69	9	. .	47.	59.	. .	. .	. .	. .	. .	. .	59 10.83	. .	. .	IV.	4	92.392					
70	9	. .	. .	. .	. .	. .	. .	26.5	. .	. .	59 50.75	. .	. .	VII.	5	42.19	22 56.38				
71	8	. .	. .	. .	. .	. .	20.8	32.	. .	. .	0 56.64	. .	. .	VII.	5	47.552	19 51.67				
72	8	. .	49.2	1.	. .	. .	. .	. .	. .	. .	3 12.94	. .	. .	III.	3	44.953	33 1.54				
73	9	. .	. .	26.	38.	50.	. .	. .	. .	. .	8 37.66	. .	. .	VI.	2	40.349	44 22.93				
74	8	. .	29.	41.	53.	. .	. .	. .	. .	. .	6 10 52.88	. .	. .	V.	4	40.930	29 27.93				

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848.	h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.	CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1848. h. m.	° ′ ″				″	″	in.	°	°

REMARKS.

(118) 36. Micrometer reading assumed as 4^t $40^r.891$ instead of 4^t $41^r.891$.

(118) 37. Micrometer reading assumed as 5^t $42^r.060$ instead of 3^t $43^r.060$.

(118) 58. Micrometer reading assumed as 1^t $50^r.495$ instead of 1^t $56^r.495$.

(118) 59–74. These stars have not been found identifiable; the date and right ascension are certainly wrong, and the declination is unknown; they have therefore been omitted.

Zone 119. March 24. Ms. $D_{\circ}=-22^\circ\ 3'\ 10''$.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
1	9	. .	30.5	42.3	. .	. .	. .	. .	. .	. .	9 17 54.19	−17.22	+0.02	III.	7	46.519	5 52.04	− 7.91	− 6.27	9 17 36.99	22 9 16.2
2	9	. .	. .	. .	. .	27.	39.2	50.	. .	. .	19 14.97	17.22	+0.02	VII.	7	45.100	6 40.71	8.14	6.33	18 57.77	10 5.2
3	8	43.8	55.8	7.8	18.8	30.9	. .	. .	. .	. .	23 19.54	17.23	−0.01	VI.	2	51.402	38 2.18	8.79	8.58	23 2.30	41 29.6
4	9	. .	. .	46.8	58.9	. .	. .	. .	. .	. .	24 58.77	17.23	−0.01	V.	1	45.227	47 24.21	9.06	9.28	24 41.53	50 52.6
5	9	. .	. .	. .	. .	. .	47.	59.	. .	. .	25 23.20	17.24	. .	VII.	2	54.052	36 30.76	9.11	8.47	25 5.96	39 58.3
6	10	. .	. .	. .	37.	49.	. .	. .	. .	. .	28 37.10	17.24	+0.01	VI.	5	48.592	19 15.98	9.64	7.23	28 19.87	22 42.8
7	10	. .	41.	53.	. .	. .	. .	. .	. .	. .	31 4.84	17.25	. .	IV.	4	39.303	30 24.01	10.02	8.03	30 47.59	33 52.1
8	8	. .	8.2	20.	31.8	. .	. .	. .	. .	. .	32 31.88	17.25	. .	V.	4	43.042	28 15.18	10.25	7.88	32 14.63	31 43.3
9	9	. .	35.	47.	58.9	. .	. .	. .	. .	. .	33 58.85	17.25	. .	V.	3	38.958	37 2.50	10.46	8.53	33 41.60	40 31.5
10	7.8	. .	. .	. .	. .	. .	7.5	19.6	. .	. .	34 43.69	17.25	−0.02	VII.	1	38.482	51 16.34	10.58	9.57	34 26.42	54 46.5
11	9	. .	. .	. .	. .	. .	. .	52.3	. .	. .	36 16.52	17 26	+0.01	VII.	6	43.349	13 35.16	10.81	6.83	35 59.27	17 2.8
12	10	. .	. .	. .	. .	33.	45.	. .	. .	. .	38 21.12	17.26	−0.01	VI.	2	40.302	44 24.54	11.16	9.05	38 3.85	47 54.8
13	10	. .	. .	. .	43.5	. .	. .	. .	. .	. .	42 43.49	17.26	. .	VI.	3	36.842	37 40.85	11.79	8.56	42 26.23	41 11.2
14	8	. .	. .	14.	26.	37.8	. .	. .	. .	. .	44 25.99	17.27	+0.01	VI.	6	40.800	15 37.66	12.08	6.95	44 8.73	19 6.7
15	9.10	. .	32.	44.	. .	. .	. .	. .	. .	. .	46 55.84	17.27	. .	VII.	3	38.713	36 36.26	12.43	8.48	46 38.57	40 7.2
16	9	. .	. .	. .	48.	60.	. .	. .	. .	. .	47 48.05	17.27	. .	VI.	4	35.799	32 59.05	12.58	8.22	47 30.78	36 29.8
17	10	. .	27.	39.	. .	. .	. .	. .	. .	. .	52 50.82	17.28	+0.01	IV.	5	46.800	20 17.82	13.31	7.30	52 33.55	23 48.4
18	9.10	. .	. .	18.5	. .	42.	. .	. .	. .	. .	54 30.26	17.28	. .	IV.	4	43.409	22 14.87	13.56	7.44	54 12.98	25 45.9
19	10	. .	. .	. .	33.	. .	. .	. .	. .	. .	9 59 33.96	17.28	. .	V.	F W	40.069	29 57.60	14.30	8.00	9 59 16.68	33 29.9
20	9	. .	34.5	46.5	. .	. .	. .	. .	. .	. .	10 0 58.32	17.28	+0.01	III.	5	45.342	21 8.01	14.50	7.35	10 0 41.05	24 39.9
21	10	. .	. .	. .	. .	. .	38.5	50.5	. .	. .	1 14.68	17.28	−0.01	VII.	1	48.700	45 24.35	14.54	9.16	0 57.39	48 58.0
22	9	. .	. .	. .	25.	37.	. .	. .	. .	. .	2 25.08	17.28	. .	IV.	1	47.903	46 26.52	14.71	8.80	2 7.80	50 0.0
23	10	42.	54.	. .	. .	. .	. .	. .	. .	. .	5 17.76	17.28	. .	III.	4	48.102	25 20.88	15.11	7.67	5 0.48	28 53.7
24	8	28.	40.	52.	. .	. .	. .	. .	. .	. .	12 3.83	17.29	. .	VI.	4	38.86	30 39.16	16.06	8.06	11 46.54	34 13.3
25	.	. .	. .	. .	. .	. .	42.	54.	. .	. .	12 18.25	17.29	+0.01	VI.	7	40.60	9 15.85	16.08	6.49	12 0.97	12 48.4
26	9	. .	43.	55.	7.	. .	. .	. .	. .	. .	28 6.88	17.29	+0.01	IV.	5	46.899	20 48.85	18.20	7.33	27 49.60	24 24.4
27	8.9	. .	. .	. .	. .	56.	7.5	19.5	. .	. .	30 44.86	17.29	. .	VII.	3	45.45	32 44.19	18.53	8.20	30 27.57	36 20.9
28	9	. .	. .	. .	. .	10.	22.	. .	. .	. .	35 58.12	17.28	−0.01	VII.	2	43.863	42 21.75	19.20	8.93	35 40.83	45 59.9
29	9	. .	50.	1.5	13.5	25.7	. .	. .	. .	. .	39 13.62	17.28	. .	IV.	3	41.209	35 10.53	19.61	8.39	38 56.34	38 48.5
30	10	. .	. .	. .	. .	18.8	30.8	. .	. .	. .	10 47 7.00	−17.28	+0.01	VII.	5	47.425	19 21.59	−20.55	− 7.23	10 46 49.73	22 22 59.4

Zone 120. March 29. Ms. $D_{\circ}=-22^\circ\ 41'\ 50''$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	10	. .	. .	. .	36.2	48.	. .	. .	. .	. .	9 13 36.15	−19.91	. .	VII.	5	39.450	24 30.75	− 6.90	− 4.60	9 13 16.24	23 6 32.3
2	9	. .	15.	26.5	. .	. .	. .	. .	. .	. .	14 26.70	19.91	−0.01	III.	2	37.655	45 55.81	7.06	6.19	14 6.78	27 59.1
3	9	. .	. .	. .	. .	41.	. .	. .	. .	. .	15 29.09	19.92	−0.01	V.	2	34.265	47 52.59	7.22	6.33	15 9.16	29 56.1
4	9	48.	0.	12.	23.8	. .	. .	. .	. .	. .	18 23.89	19.92	. .	IV.	4	41.808	28 57.72	7.78	4.93	18 3.97	11 0.3
5	8.9	39.2	51.	3.2	14.6	. .	. .	. .	. .	. .	20 14.97	19.93	−0.01	IV.	1	41.808	49 22.02	7.99	6.46	19 55.03	31 26.5
6	10	. .	7.5	19.	. .	. .	. .	. .	. .	. .	21 31.14	19.93	+0.01	III.	5	47.700	19 46.78	8.20	4.25	21 11.22	23 1 49.2
7	9	. .	. .	8.2	. .	. .	. .	. .	. .	. .	24 20.20	19.94	0.01	III.	7	40.656	9 14.01	8.65	3.48	24 0.27	22 51 16.1
8	9	. .	. .	. .	. .	. .	25.	37.	. .	. .	25 1.12	19.94	+0.01	VII.	7	41.328	8 50.63	8.77	3.46	24 41.19	22 50 52.9
9	9	. .	. .	. .	. .	43.	55.	7.	. .	. .	26 31.08	19.94	. .	VII.	4	46.00	26 33.06	9.00	4.74	26 11.14	23 8 36.8
10	8.9	8.5	20.5	32.3	45.	. .	. .	. .	. .	. .	28 44.52	19.95	. .	IV.	4	42.025	28 50.25	9.36	4.92	28 24.57	10 54.5
11	9.10	. .	. .	50.5	. .	14.5	. .	. .	. .	. .	30 2.48	19.95	−0.02	V.	1	38.035	51 31.96	9.56	6.60	29 42.51	33 38.1
12	9.10	. .	. .	. .	27.	39.	. .	. .	. .	. .	34 27.06	19.96	−0.01	V.	1	46.809	46 29.72	10.26	6.21	34 7.09	28 36.2
13	9.10	. .	. .	. .	. .	. .	5.	. .	. .	. .	34 41.06	19.96	. .	VII.	3	46.805	31 57.51	10.29	5.14	34 21.10	23 14 2.9
14	9	. .	. .	. .	. .	19.	. .	. .	. .	. .	38 7.14	19.96	+0.01	V.	6	47.312	11 18.85	10.91	3.64	37 47.19	22 53 23.3
15	10	. .	. .	. .	18.	30.	. .	. .	. .	. .	9 40 18.08	−19.97	+0.01	V.	5	49.830	18 33.42	−11.07	− 4.16	9 39 58.12	23 0 38.8

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848.	h.	s.	s.	s.	s.	s.	° ′ ″	r.
Mar. 24,	8	f 21.290	g 0.028	. .	− 0.135	+ 0.348	359 59 69.37	40.069
Mar. 29,	8	f 24.040	g 0.024	. .	− 0.135	+ 0.348	359 59 70.93	40.057

INSTRUMENT READINGS.

	Date.			CIRCLE.						Barom.	Attached Thermom.	External Thermom.
				A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848.	h.	m.	° ′ ″				″	″	in.	°	°
Zone 119	Mar. 24,	9	17	*300 53 8.	0.	8.9	4.4	5.19	5.32	30.282	48.	39.
			40	. .	. .	. .	. .	. .	. .	30.280	47.	38.
		10	50	. .	. .	. .	. .	. .	. .	30.280	46.5	36.2
Zone 120	Mar. 29,	9	13	*300 15 30.	31.5	39.5	30.7	32.92	32.92	30.238	58.2	50.3
		9	48	. .	. .	. .	. .	. .	. .	30.242	57.2	48.
		9	54	. .	. .	. .	. .	. .	. .	30.256	57.	47.3
		10	45	. .	. .	. .	. .	. .	. .	30.226	57.2	47.2

REMARKS.

(119) 9. Micrometer reading assumed as 37^{r}.958 instead of 38^{r}.958.

(119) 14. Micrometer reading assumed as 39^{r}.800 instead of 40^{r}.800.

(119) 16. Micrometer reading assumed as 34^{r}.799 instead of 35^{r}.799.

(119) 18. Micrometer thread assumed as 5^{t} instead of 4^{t}.

(119) 22. Micrometer reading assumed as 46^{r}.903 instead of 47^{r}.903.

(119) 26. Micrometer reading assumed as 45^{r}.899 instead of 46^{r}.899.

(119) 30. Micrometer reading assumed as 48^{r}.425 instead of 47^{r}.425.

(120) 2. Transits over T.'s III and IV assumed to have been recorded over T.'s II and III.

* The hand-book indicates that 2° 18′ is to be subtracted from the circle-readings of March 24 and 29. For what reason does not appear, but this correction is evidently required and has been applied.

ZONE 120. MARCH 29. Ms. $D_0=-22° 41' 50''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
16	10	49.5	2.	13.5	. .	. .	. .	. .	. .	. .	9 45 25.62	−19.98	−0.01	III.	1	42.000	49 15.38	−11.95	− 6.42	9 45 5.63	23 31 23.8
17	9.10	. .	35.	47.5	60.	. .	. .	. .	. .	. .	46 59.46	19.98	−0.01	IV.	2	44.103	42 13.73	12.19	5.91	46 39.47	23 24 21.8
18	9	. .	. .	16.	28.	. .	. .	. .	. .	. .	48 28.03	19.98	+0.02	IV.	7	47.500	5 18.28	12.41	3.18	48 8.07	22 47 23.9
19	8.9	. .	44.	56.	. .	. .	. .	. .	. .	. .	55 7.90	19.99	. .	III.	4	51.744	23 15.42	13.43	4.51	54 47.91	23 5 23.4
20	10	. .	. .	. .	. .	. .	. .	42.	. .	. .	55 6.04	19.99	+0.01	VII.	6	49.066	10 18.23	13.43	3.57	54 46.06	22 52 25.2
21	9	. .	. .	24.2	36.2	48.6	. .	. .	. .	. .	57 36.33	19.99	−0.01	V.	2	45.110	41 39.00	13.80	5.87	57 16.33	23 23 48.7
22	10	. .	. .	51.	3.	. .	. .	. .	. .	. .	9 59 2.95	19.99	0.01	IV.	2	49.072	39 22.56	13.99	5.69	9 58 42.95	21 32.2
23	10	39.5	. .	3.5	. .	. .	. .	. .	. .	. .	10 1 15.42	20.00	−0.01	III.	1	52.312	43 20.16	14.29	6.01	10 0 55.41	23 25 30.5
24	10	. .	. .	. .	27.5	39.5	. .	. .	. .	. .	2 27.62	20.00	+0.01	V.	6	53.443	7 47.67	14.46	3.38	2 7.63	22 49 55.5
25	10	. .	. .	23.	35.6	. .	. .	. .	. .	. .	5 34.76	20.00	. .	IV.	2	58.28	34 5.37	14.91	5.32	5 14.76	23 16 15.6
26	7	. .	. .	. .	27.8	39.8	51.5	. .	. .	. .	7 27.77	20.00	+0.01	VI.	4	53.40	22 18.30	15.16	4.43	7 7.78	4 27.9
27	8.9	. .	27.5	39.5	51.5	. .	. .	. .	. .	. .	10 51.43	20.00	. .	IV.	3	58.590	25 46.26	15.65	4.65	10 31.43	23 7 56.6
28	9	14.	26.	38.	. .	. .	. .	. .	. .	. .	13 49.84	20.00	+0.01	III.	6	47.690	11 5.84	16.04	3.61	13 29.85	22 53 15.5
29	8.9	. .	. .	34.5	45.5	. .	. .	. .	. .	. .	14 46.01	20.00	+0.01	IV.	6	40.980	14 57.01	16.17	3.88	14 26.02	22 57 7.1
30	9	. .	11.	23.	. .	. .	. .	. .	. .	. .	20 34.92	20.01	. .	III.	3	48.652	19 13.99	16.95	4.19	20 14.91	23 1 25.1
31	9	. .	. .	. .	. .	17.	29.	. .	. .	. .	21 5.10	20.01	. .	VI.	4	49.620	24 28.51	17.00	4.60	20 45.09	23 6 40.1
32	10	. .	. .	. .	. .	40.	. .	. .	. .	. .	22 28.14	20.01	+0.01	VII.	6	43.27	13 37.87	17.07	3.79	22 8.14	22 55 48.8
33	9.10	. .	. .	. .	38.	50.	. .	. .	. .	. .	23 38.05	20.01	. .	VI.	5	41.155	23 32.17	17.32	4.52	23 18.04	23 5 44.0
34	9	. .	. .	. .	. .	. .	. .	43.	. .	. .	24 7.08	20.01	. .	VII.	5	42.192	22 56.30	17 38	4.48	23 47.07	23 5 8.2
35	8.9	. .	. .	. .	37.	49.	. .	. .	. .	. .	25 37.10	20.01	+0.01	V.	6	43.21	7 55.70	17 57	3.37	25 17.10	22 50 6.6
36	8.9	37.	. .	51.5	2.5	. .	. .	. .	. .	. .	27 2.95	20.01	+0.01	IV.	6	28.462	22 8.22	17.77	3.99	26 42.95	23 4 20.0
37	9	43.	55.	. .	. .	. .	. .	. .	. .	. .	30 18.89	20.01	. .	II.	5	38.	25 20.84	18.18	4.66	29 58.88	23 7 33.7
38	.	. .	46.	57.8	. .	. .	. .	. .	. .	. .	33 9.77	20.01	+0.01	III.	7	42.18	8 21.51	18.52	3.40	32 49.77	22 50 33.4
39	8.9	. .	. .	48.5	. .	12.	24.	. .	. .	. .	36 0.31	20.01	+0.02	VI.	7	50.17	3 46.20	18.86	3.07	35 40.32	22 45 58.1
40	8	. .	. .	. .	. .	48.	60.2	. .	. .	. .	37 36.18	20.01	. .	VI.	3	50.266	29 58.45	19.15	4.99	37 16.17	23 12 12.6
41	9	. .	. .	15.	27.	39.	. .	. .	. .	. .	44 27.07	20.00	−0.01	V.	6	47.020	11 28.92	19.85	5.79	44 7.06	22 53 44.6
42	9	. .	. .	. .	. .	. .	. .	42.	. .	. .	45 6.08	20.00	−0.02	VII.	1	36.428	52 27.09	19.93	6.69	44 46.06	23 34 43.7
43	9	. .	. .	. .	. .	. .	30.	42.5	. .	. .	49 6.32	20.00	. .	VII.	4	34.620	32 30.87	20.39	5.19	48 46.32	14 46.5
44	9	. .	. .	41.	53.	5.	. .	. .	. .	. .	50 53.00	20.00	. .	V.	4	36.47	32 1.57	20.60	5.15	50 33.00	14 17.3
45	9	. .	. .	. .	. .	51.	2.	14.	. .	. .	51 38.40	20.00	−0.01	VII.	2	44.916	41 45.46	20.67	5.90	51 18.39	24 2.0
46	9	. .	34.2	46.	57.5	. .	. .	. .	. .	. .	55 57.83	20.00	. .	IV.	4	42.185	28 44.74	21.18	4.91	55 37.83	11 0.8
47	9	. .	34.5	46.5	57.5	. .	. .	. .	. .	. .	10 59 58.11	19.99	. .	IV.	3	34.770	38 17.89	21.64	5.61	10 59 38.12	20 35.1
48	9	. .	. .	47.	. .	11.	. .	. .	. .	. .	11 0 59.03	−19.99	. .	V.	6	21.710	20 50.75	−21.75	− 4.32	11 0 39.04	23 3 6.8

ZONE 121. MARCH 29. Ms. $D_0=-22° 41' 50''$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	9.10	19.	31.	43.	55.	. .	. .	. .	. .	. .	11 0 54.93	−19.90	. .	IV.	4	52.288	22 56.73	−26.50	− 4.48	11 50 35.03	23 5 17.7
2	10	. .	. .	50.	2.	. .	. .	. .	. .	. .	3 2.00	19.89	+0.01	IV.	6	34.510	18 39.88	26.67	4.16	52 42.12	1 0.7
3	10	33.5	. .	57.2	9.2	. .	. .	. .	. .	. .	55 9.26	19.89	. .	V.	3	48.080	31 13.82	26.88	5.10	54 49.37	13 35.8
4	10	7.	19.2	. .	. .	. .	. .	. .	. .	. .	57 43.04	19.88	. .	III.	3	42.300	34 32.92	27.00	5.35	57 23.16	16 55.3
5	10	. .	. .	41.	53.	. .	. .	. .	. .	. .	11 58 52.96	19.88	. .	V.	4	43.000	28 16.63	27.11	4.88	58 33.08	10 38.6
6	7.8	. .	51.	3.	14.8	. .	. .	. .	. .	. .	12 0 14.86	19.87	. .	IV.	4	47.76	25 32.69	27.21	5.67	11 59 54.99	23 7 55.6
7	10	. .	34.5	46.5	. .	. .	. .	. .	. .	. .	1 58.39	19.87	. .	III.	6	41.215	14 48.89	27.33	3.84	12 1 38.52	22 57 10.1
8	7.8	. .	. .	. .	. .	. .	4.	. .	. .	. .	3 40.23	19.86	+0.01	VI.	7	50.160	3 46.54	27.44	3.02	3 20.38	22 46 7.0
9	8.9	53.5	5.	17.	29.	. .	. .	. .	. .	. .	10 29.06	19.84	. .	IV.	4	42.560	28 31.82	27.92	4.90	10 9.22	23 10 54.6
10	10	. .	. .	. .	. .	. .	. .	15.	. .	. .	11 39.04	19.84	+0.01	VII.	7	38.30	10 34.92	27.98	3.53	11 19.21	22 52 56.4
11	10	. .	20.	. .	43.8	. .	. .	. .	. .	. .	13 43.81	19.83	+0.01	V.	7	42.76	8 1.53	28.12	3.33	13 23.99	22 50 23.0
12	9.10	. .	. .	. .	58.	. .	. .	34.	. .	. .	12 14 58.06	−19.83	. .	VII.	2	44.765	41 50.66	−28.21	− 5.94	12 14 38.23	23 24 14.8

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848. h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848. h. m.	° ′ ″				″	″	in.	°	°
Zone 121	Mar. 29, 12 42	. . .	. .	. .	. .	. .	. .	30.250	55.	45.3

REMARKS.

(120) 27. Micrometer reading assumed as 3^t $57^r.590$ instead of 3^t $58^r.590$.

(120) 30. Micrometer thread assumed as 5^t instead of 3^t.

(120) 35. Micrometer reading assumed as 6^t $53^r.21$ instead of 6^t $43^r.21$.

(120) 36. Transit over T. I assumed as at 27^s instead of 37^s.

(120) 43. Micrometer reading assumed as 4^t $35^r.620$ instead of 4^t $34^r.620$.

(120) 47. Micrometer reading assumed as 3^t $35^r.770$ instead of 3^t $34^r.770$.

(120) 48. Micrometer reading assumed as 6^t $30^r.710$ instead of 6^t $21^r.710$.

(121) 1. Minutes of transit assumed as 50 instead of 0.

(121) 2. Minutes of transit assumed as 53 instead of 3.

ZONE 121. MARCH 29. Ms. $D_0 = -22^\circ\ 41'\ 50''$—Continued.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
13	10	. .	. .	. .	. .	. .	2.	. .	. .	. .	12 16 37.99	−19.82	. .	VI.	2	44.092	42 13.99	−28.31	− 5.96	12 16 18.17	23 24 38.3
14	10	. .	. .	38.	50.	. .	. .	. .	. .	. .	18 49.95	19.82	. .	V.	2	41.99	43 26.48	28.45	6.05	18 30.13	23 25 51.0
15	8.9	10.5	22.8	56.3	. .	. .	. .	. .	. .	. .	22 46.40	19.80	+0.01	III.	7	40.705	9 12.31	28.68	3.41	22 26.61	22 51 34.4
16	9	29.	41.	53.	. .	. .	. .	. .	. .	. .	25 4.94	19.79	. .	III.	3	22.890	39 57.07	28.85	5.78	24 45.15	23 22 21.7
17	10	. .	58.	. .	. .	. .	. .	. .	. .	. .	29 21.93	19.77	. .	II.	3	38.050	36 59.24	29.06	5.55	29 2.16	19 23.9
18	10	. .	37.	49.	. .	. .	. .	. .	. .	. .	41 0.94	19.73	−0.01	III.	1	34.705	53 26.66	29.65	6.82	41 41.20	35 53.1
19	10	. .	. .	. .	. .	53.5	5.	. .	. .	. .	42 41.28	19.72	. .	VII.	2	40.18	41 36.36	29.72	5.90	42 21.56	24 2.0
20	9	38.	50.	2.	4.	. .	. .	. .	. .	. .	58 13.96	19.65	. .	IV.	2	44.062	42 15.14	30.25	5.96	57 54.31	24 41.4
21	8.9	. .	. .	. .	. .	19.2	. .	. .	. .	. .	12 59 7.29	19.65	−0.01	V.	1	35.480	52 59.98	30.28	6.79	12 58 47.63	35 27.0
22	10	49.5	1.	13.	25.	. .	. .	. .	. .	. .	13 1 25.07	19.64	. .	IV.	4	41.930	28 53.51	30.35	4.92	13 1 5.43	11 18.8
23	7.8	32.5	45.	. .	8.2	20.2	. .	. .	. .	. .	3 8.48	19.63	. .	V.	2	43.768	42 25.24	30.40	6.00	2 48.85	24 51.6
24	9	. .	. .	37.	48.5	0.	. .	. .	. .	. .	13 7 48.50	−19.61	. .	V.	4	44.502	27 24.89	−30.52	− 4.82	13 7 28.89	23 9 50.2
ZONE 122. MAY 3. Ms. $D_0 = -22^\circ\ 3'\ 10''$.																					
1	9	. .	38.	50.	. .	. .	. .	. .	. .	. .	11 20 1.84	+15.35	. .	V.	3	35.792	38 17.12	− 2.14	−10.57	11 20 17.19	22 41 39.8
2	9	. .	. .	. .	13.	25.3	37.	. .	. .	. .	25 13.18	15.35	. .	V.	3	52.00	33 34.38	2.59	10.36	25 28.53	36 57.3
3	9	. .	. .	. .	. .	. .	31.	43.	. .	. .	27 7.20	15.34	. .	VII.	2	46.162	41 2.58	2.76	10.74	27 22.54	44 26.1
4	9	3.	15.	27.	39.	. .	. .	. .	. .	. .	29 38.87	15.34	. .	IV.	5	46.720	20 20.58	2.97	9.32	29 54.21	23 42.9
5	10	26.	38.	. .	. .	. .	. .	. .	. .	. .	33 1.80	15.34	+0.01	III.	6	46.872	11 34.03	3.25	8.75	33 17.15	14 56.0
6	10	. .	. .	. .	22.	34.	. .	. .	. .	. .	36 22.05	15.34	0.01	VII.	7	43.208	7 45.91	3.52	8.48	36 37.40	11 7.9
7	9	. .	15.2	. .	39.	51.	. .	. .	. .	. .	38 39.02	15.33	0.01	V.	6	47.877	10 59.41	3.70	8.83	38 54.36	14 21.9
8	8.9	3.	15.	27.	. .	50.	. .	. .	. .	. .	40 38.66	15.33	0.01	VI.	6	46.982	12 4.61	3.86	8.67	40 54.00	15 27.1
9	9	. .	. .	54.	5.	17.	. .	. .	. .	. .	42 5.33	15.33	+0.01	V.	7	41.160	8 56.65	3.96	8.57	42 20.67	12 19.2
10	9	. .	32.	43.8	. .	. .	. .	. .	. .	. .	46 55.58	15.33	−0.01	III.	2	38.825	45 15.51	4.35	11.04	47 10.90	48 40.9
11	9.10	. .	. .	. .	39.	51.	2.5	. .	. .	. .	47 38.94	15.33	. .	VII.	3	34.058	39 16.65	4.39	10.62	47 54.27	42 41.7
12	10	. .	. .	26.2	. .	. .	. .	. .	. .	. .	49 38.10	15.33	. .	IV.	5	49.388	18 48.68	4.55	9.25	49 53.43	22 12.5
13	9.10	. .	. .	. .	7.2	19.2	. .	. .	. .	. .	51 7.28	15.32	. .	VI.	3	48.150	31 11.34	4.66	10.06	51 22.60	34 36.1
14	10	50.	5.	. .	. .	. .	. .	. .	. .	. .	53 25.73	15.32	+0.01	III.	6	43.432	13 32.53	4.82	8.89	53 41.06	16 56.2
15	10	35.	47.	59.	. .	. .	. .	. .	. .	. .	58 10.78	15.32	−0.01	IV.	2	43.812	42 23.75	5.15	10.83	58 26.09	45 49.7
16	8.9	. .	. .	. .	4.5	17.	28.5	. .	. .	. .	11 59 4.82	15.32	−0.01	VII.	1	36.300	52 31.53	5.23	11.54	11 59 20.13	55 58.3
17	8.9	30.	42.	53.8	. .	. .	. .	. .	. .	. .	12 3 5.77	15.32	. .	I.	2	43.520	42 33.59	5.49	10.87	12 3 21.09	46 0.0
18	8.9	9.5	22.	33.5	45.5	. .	. .	. .	. .	. .	7 45.58	15.32	. .	IV.	4	44.100	27 38.77	5.82	9.84	8 0.90	31 4.4
19	10	. .	. .	. .	. .	. .	. .	11.5	. .	. .	16 35.78	15.32	. .	VII.	2	45.125	41 38.30	6.35	10.80	16 51.10	45 5.4
20	10	24.	36.	. .	. .	. .	. .	. .	. .	. .	19 59.82	15.32	. .	III.	5	46.605	20 24.52	6.55	9.34	20 15.14	23 50.4
21	7.8	36.	48.0	0.	11.	. .	. .	. .	. .	. .	22 11.62	15.32	−0.01	I.	1	43.328	48 29.45	6.67	11.29	22 26.93	51 57.4
22	9	. .	. .	. .	40.	. .	. .	. .	. .	. .	25 39.99	15.32	. .	IV.	3	37.111	37 31.70	6.87	10.51	25 55.31	40 59.1
23	2	. .	. .	. .	. .	. .	39.	51.	. .	. .	27 15.21	15.32	. .	VII.	4	39.195	30 27.52	6.89	10.02	26 30.53	33 54.4
24	10	. .	47.	. .	. .	. .	. .	. .	. .	. .	29 10.81	15.32	−0.01	IV.	1	45.509	47 14.53	7.05	11.21	29 26.12	50 42.8
25	9	. .	21.	33.	. .	. .	. .	. .	. .	. .	31 44.84	15.32	. .	II.	2	47.300	40 23.49	7.18	10.71	32 0.16	43 51.4
26	10	. .	. .	. .	. .	. .	. .	27.	. .	. .	31 51.28	15.32	. .	VII.	3	41.432	35 2.63	7.18	10.34	32 6.60	38 30.2
27	10	. .	47.	59.	. .	. .	. .	. .	. .	. .	35 10.84	15.32	. .	III.	3	41.102	35 14.20	7.35	10.35	35 26.16	38 41.9
28	10	52.	4.	. .	28.	. .	. .	. .	. .	. .	36 27.86	15.32	. .	IV.	5	43.315	22 17.87	7.41	9.47	36 43.18	25 44.8
29	9	13.	25.	37.	49.	. .	. .	. .	. .	. .	40 48.86	15.33	. .	I.	5	44.175	21 48.00	7.63	9.44	41 4.19	25 15.1
30	8.9	. .	56.	8.2	20.	. .	. .	. .	. .	. .	44 19.94	15.33	. .	III.	6	40.699	15 41.12	7.77	8.97	44 35.27	19 7.9
31	10	. .	. .	. .	. .	3.	15.	. .	. .	. .	44 51.17	15.33	. .	VI.	6	35.552	17 29.44	7.80	9.12	45 6.50	20 56.4
32	8	19.	31.	43.	55.	. .	. .	. .	. .	. .	49 54.84	15.33	+0.01	I.	7	37.550	11 0.81	8.02	8.69	50 10.18	14 27.5
33	9.10	. .	. .	. .	. .	30.	42.	. .	. .	. .	12 50 18.18	+15.33	. .	VII.	3	37.865	35 56.60	− 8.03	−10.43	12 50 33.51	22 39 25.1

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848. h.	s.	s.	s.	s.	s.	° ′ ″	r.
May 3,	. .	. .	. .	− 0.019	+ 0.233	0 0 10.93	40.022

INSTRUMENT READINGS.

	Date.	CIRCLE.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1848. h. m.	° ′ ″				″	″	in.	°	°
Zone 122	May 3, 11 20	301 2 2.5	1.9	7.5	7.8	4.72	4.92	29.880	63.4	56.2
	12 7	2.6	57.2	2.4	4.6	. .	. .	29.880	63.4	56.2
	12 30	. .	. .	. .	. .	. .	. .	29.866	62.5	54.8
	13 14	. .	. .	. .	. .	. .	. .	29.870	62.	52.
	13 15	. .	. .	. .	. .	. .	. .	29.866	62.	53.4
	15 16	*301 14	. .	. .	. .	. .	. .	29.864	59.8	50.2

REMARKS.

(121) 15. Transit at 46^s.3 assumed to have been over T. IV instead of T. III.

(121) 16. Micrometer reading assumed as 32^r.890 instead of 22^r.890.

(121) 18. Minutes of transit assumed as 42 instead of 41.

(121) 19. Micrometer reading assumed as 45^r.18 instead of 40^r.18.

(122) 2. Micrometer reading assumed as 3^t 44^r.00 instead of 3^t 52^r.00.

(122) 8. Micrometer reading assumed as 45^r.982 instead of 46^r.982.

(122) 23. Minutes of transit assumed as 26 instead of 27.

(122) 30. Micrometer reading assumed as 39^r.699 instead of 40^r.699.

(122) 31. Micrometer reading assumed as 36^r.552 instead of 35^r.552.

(122) 33. Micrometer reading assumed as 39^r.865 instead of 37^r.865.

* This circle-reading being found entirely erroneous, the zone has been identified, and the declination deduced, from stars observed with the Mural, as in the case of transit zones.

ZONE 122. MAY 3. Ms. $D_0 = -22° 3' 10''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
34	10	. .	. .	36.	48.	. .	. .	. .	. .	. .	12 59 47.97	+15.34	. .	IV.	2	42.785	42 24.68	− 8.38	−10.95	13 0 3.31	22 45 54.0
35	9.10	. .	. .	. .	. .	44.	. .	. .	. .	. .	13 0 32.14	15.34	. .	VI.	6	41.672	14 33.07	8.39	8.92	0 47.48	18 0.4
36	10	. .	. .	. .	. .	. .	. .	25.	. .	. .	1 49.21	15.35	. .	VII.	3	44.705	33 9.88	8.42	10.22	2 4.56	36 38.5
37	9.10	. .	. .	39.	51.	. .	. .	. .	. .	. .	4 50.92	15.35	. .	IV.	7	48.892	4 30.32	8.52	8.19	5 6.27	7 57.0
38	10	. .	28.	40.	. .	. .	. .	. .	. .	. .	7 51.85	15.35	. .	III.	2	45.079	41 40.08	8.61	10.82	8 7.20	45 9.5
39	10	. .	. .	53.	5.	. .	. .	. .	. .	. .	9 4.90	15.35	. .	IV.	6	40.59	15 10.45	8.65	8.96	9 20.25	18 38.1
40	3.4	. .	7.	19.	31.	43.	. .	. .	. .	. .	10 30.96	15.36	. .	IV.	6	33.61	19 10.89	8.69	9.24	10 46.32	22 38.8
41	8.9	. .	. .	. .	20.	32.5	. .	. .	. .	. .	12 20.32	15.36	. .	V.	1	32.196	54 53.12	8.74	11.79	12 35.68	58 23.6
42	10	. .	. .	17.	. .	. .	. .	. .	. .	. .	14 28.83	15.36	. .	IV.	1	42.105	49 11.80	8.79	11.36	14 44.19	52 42.0
43	10	. .	41.	. .	. .	. .	. .	. .	. .	. .	16 4.86	15.36	. .	II.	2	40.37	44 22.22	8.83	11.01	16 20.22	47 52.1
44	10	. .	. .	. .	. .	51.	. .	. .	. .	. .	16 38.14	15.36	. .	V.	4	39.300	30 24.09	8.84	10.02	16 53.50	33 53.0
45	10	. .	. .	. .	50.5	. .	. .	. .	. .	. .	17 50.51	15.37	. .	IV.	5	39.300	24 1.72	8.87	9.57	18 5.88	27 30.2
46	10	. .	. .	. .	. .	. .	33.5	. .	. .	. .	18 9.60	15.37	. .	VI.	5	41.371	23 24.75	8.87	9.54	18 24.97	26 53.2
47	9	5.	17.	29.	. .	. .	. .	. .	. .	. .	28 40.83	15.38	. .	I.	1	45.335	47 20.30	9.08	11.23	28 56.21	50 50.6
48	10	. .	. .	16.	27.	. .	. .	. .	. .	. .	29 27.42	15.38	. .	IV.	3	40.810	23 44.16	9.09	9.98	29 42.80	27 13.2
49	9.10	. .	35.5	47.5	59.5	. .	. .	. .	. .	. .	32 59.39	15.39	. .	II.	3	36.581	37 49.96	9.14	10.55	33 14.78	41 19.6
50	10	. .	. .	. .	. .	. .	53.	. .	. .	. .	33 29.16	15.39	. .	VI.	6	36.782	17 56.06	9.14	9.12	33 44.55	21 24.3
51	10	. .	. .	. .	38.	. .	. .	. .	. .	. .	37 37.97	15.40	. .	IV.	3	33.060	39 51.25	9.20	10.70	37 53.37	43 21.2
52	10	54.2	7.	18.5	. .	. .	. .	. .	. .	. .	45 30.38	15.42	. .	I.	2	43.300	42 41.16	9.27	10.89	44 45.80	46 11.3
53	10	. .	. .	14.6	26.2	. .	. .	. .	. .	. .	45 26.35	15.42	. .	IV.	2	40.935	44 37.30	9.27	11.01	45 41.77	48 7.6
54	10	. .	45.	57.	. .	. .	. .	. .	. .	. .	47 8.82	15.42	. .	IV.	4	36.845	32 23.13	9.28	10.17	47 24.24	35 52.6
55	10	. .	. .	. .	24.	36.	. .	. .	. .	. .	48 24.06	15.42	. .	V.	6	44.74	12 47.47	9.29	8.79	48 39.48	16 15.6
56	8.9	. .	. .	. .	. .	. .	15.	27.	. .	. .	48 51.23	15.42	. .	VII.	7	33.82	13 9.29	9.29	8.82	49 6.65	16 37.4
57	10	. .	. .	. .	. .	. .	. .	41.	. .	. .	50 5.24	15.43	. .	VII.	5	35.691	26 40.25	9.30	9.76	50 20.67	30 9.3
58	10	15.	. .	. .	. .	. .	. .	. .	. .	. .	52 39.28	15.43	. .	I.	4	33.351	33 48.82	9.30	10.27	52 54.71	37 18.4
59	9.10	. .	. .	. .	17.	29.	. .	. .	. .	. .	53 17.08	15.43	. .	VI.	4	31.082	35 7.10	9.30	10.36	53 32.51	38 36.8
60	10	10.	22.	. .	. .	. .	. .	. .	. .	. .	56 45.72	15.44	. .	II.	3	42.05	34 41.47	9.30	10.33	57 1.16	38 11.1
61	10	. .	. .	. .	58.	. .	22.	. .	. .	. .	56 58.12	15.44	. .	VI.	3	44.552	21 35.22	9.30	9.39	57 13.56	25 3.9
62	10	. .	45.	56.8	. .	. .	. .	. .	. .	. .	13 59 8.71	15.45	. .	I.	4	38.848	31 13.88	9.30	10.09	13 59 24.16	34 43.3
63	10	. .	. .	. .	58.	10.	. .	. .	. .	. .	14 1 58.09	15.45	. .	V.	7	38.77	10 18.98	9.29	8.60	14 2 13.54	13 46.9
64	10	2.	14.	26.	. .	. .	. .	. .	. .	. .	5 37.84	15.46	. .	III.	3	42.71	22 4.24	9.27	9.45	5 53.30	25 33.0
65	9.10	47.5	59.5	11.2	23.	. .	. .	. .	. .	. .	10 23.18	15.47	. .	IV.	6	46.30	11 53.75	9.24	8.71	10 38.65	15 21.7
66	10	. .	33.	. .	. .	. .	. .	. .	. .	. .	12 56.87	15.48	. .	V.	6	39.100	16 1.76	9.21	9.01	13 12.35	19 30.0
67	9.10	2.	14.	. .	. .	. .	. .	. .	. .	. .	19 37.82	15.50	. .	I.	6	38.314	16 28.62	9.13	9.04	19 53.32	19 56.8
68	9	. .	. .	. .	. .	56.	7.	19.	. .	. .	14 19 43.51	+15.50	. .	VII.	6	41.982	14 22.27	− 9.12	− 8.88	14 19 59.01	22 17 50.3

ZONE 123. MAY 3. MAJ. $D_0 = -22° 3' 10''$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	10	. .	. .	45.5	. .	9.	. .	. .	. .	. .	14 48 57.27	+15.59	. .	V.	1	39.430	50 43.92	− 8.43	−11.50	14 49 12.86	22 54 13.8
2	10	. .	. .	. .	32.	44.	. .	. .	. .	. .	50 32.07	15.60	. .	V.	3	37.548	37 16.63	8.38	10.53	50 47.67	40 45.5
4	10	. .	41.5	53.	. .	17.	. .	. .	. .	. .	52 5.10	15.60	. .	V.	4	37.605	31 22.48	8.33	10.10	52 20.70	34 50.9
4	10	. .	31.	43.	. .	. .	. .	. .	. .	. .	53 54.82	15.61	. .	IV.	4	44.116	27 38.22	8.26	9.84	54 10.43	31 6.3
5	9.10	. .	57.2	9.	21.	. .	. .	. .	. .	. .	56 20.92	15.62	. .	I.	3	43.84	33 39.68	8.17	10.27	56 36.54	37 8.1
6	10	. .	. .	. .	51.	3.	. .	. .	. .	. .	56 51.09	15.62	. .	VII.	3	48.225	31 8.63	8.15	10.08	14 57 6.71	34 36.9
7	9.10	20.	32.	. .	55.5	. .	. .	. .	. .	. .	14 59 55.64	15.63	. .	IV.	4	47.440	25 43.71	8.03	9.69	15 0 11.27	29 11.4
8	10	. .	46.	58.5	. .	. .	. .	. .	. .	. .	15 6 10.10	15.65	. .	I.	5	51.108	17 49.21	7.79	9.11	6 25.75	21 16.1
9	10	47.	59.	. .	. .	. .	. .	. .	. .	. .	15 13 22.83	+15.68	. .	I.	5	43.89	22 32.27	− 7.47	− 9.46	15 13 38.51	22 25 59.2

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848.	h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.			CIRCLE.						Barom.	Attached Thermom.	External Thermom.
				A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848.	h.	m.	° ′ ″				″	″	in.	°	°

REMARKS.

(122) 34. Micrometer reading assumed as 41^{r}.785 instead of 42^{r}.785.
(122) 41. Time of transit over T. V assumed as 32^{s}.5 instead of 22^{s}.5.
(122) 45. Micrometer reading assumed as 40^{r}.300 instead of 39^{r}.300.
(122) 48. Micrometer reading assumed as 50^{r}.810 instead of 40^{r}.810.
(122) 50. Micrometer reading assumed as 35^{r}.782 instead of 36^{r}.782.
(122) 52. Min. of tr'sit ass'd as 44 instead of 45.
(122) 53. Micrometer reading assumed as 39^{r}.935 instead of 40^{r}.935.
(122) 54. Micrometer reading assumed as 35^{r}.845 instead of 36^{r}.845.
(122) 58. Transit over T. VII assumed to have been recorded over T. I.
(122) 61. Micrometer reading assumed as 5^{t} 44^{r}.550 instead of 3^{t} 44^{r}.850.
(122) 62. Micrometer reading assumed as 37^{r}.848 instead of 38^{r}.848.
(122) 64. Micrometer reading assumed as 5^{t} 43^{r}.71 instead of 3^{t} 42^{t}.71.
(123) 9. Micrometer reading assumed as 5^{t} 42^{r}.89 instead of 5^{t} 43^{r}.89.

ZONE 123. MAY 3. Ms. $D_0 = -22° 3' 10''$—Continued.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a^1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
10	9.10	. .	. .	. .	43.5	55.3	. .	. .	. .	. .	15 13 43.48	+15.68	. .	IV.	6	40.815	17 54.93	− 7.46	− 9.12	15 13 59.16	22 21 21.5
11	10	15.5	28.	. .	. .	. .	. .	. .	. .	. .	15 51.58	15.69	+0.01	I.	1	37.892	51 36.69	7.36	11.59	16 7.28	55 5.6
12	10	. .	. .	. .	22.	. .	. .	. .	. .	. .	15 16 22.01	+15.69	+0.01	IV.	1	41.801	49 22.26	− 7.33	−11.43	15 16 37.71	22 52 51.0

ZONE 124. MAY 27. MAJ. $D_0 = -25° 11' 10'$.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a^1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	8	. .	10.2	22.4	34.2	46.2	. .	. .	. .	. .	13 15 34.36	+23.60	. .	IV.	5	39.523	24 28.50	− 9.81	− 9.53	13 15 57.96	25 35 57.8
2	5	51.3	3.8	15.6	27.5	40.4	. .	. .	. .	. .	17 27.95	23.60	. .	.	3	36.458	37 54.20	9.86	10.66	17 51.55	49 24.7
3	.	. .	. .	1.	. .	. .	. .	. .	27.2	. .	18 13.14	23.60	−0.01	VII.	7	34.522	12 44.76	9.87	8.57	18 36.73	24 13.2
4	5	. .	. .	10.2	22.0	34.5	. .	. .	. .	. .	19 22.23	23.60	. .	VI.	5	37.097	25 51.95	9.90	9.65	19 45.83	37 21.5
5	8	32.0	45.	57.0	9.2	21.4	. .	. .	. .	. .	21 9.15	23.60	. .	VI.	3	39.768	36 0.07	9.93	10.49	21 32.75	47 30.5
6	9	. .	. .	. .	. .	3.4	16.	. .	. .	. .	22 51.38	23.60	. .	.	3	29.905	41 39.90	9.98	10.98	23 14.98	53 10.9
7	5	. .	48.	60.	. .	25.	. .	. .	. .	. .	23 12.30	23.60	. .	.	3	37.350	37 23.46	9.99	10.61	23 35.90	48 54.1
8	6	. .	42.	54.	7.	17.8	30.	43.	. .	. .	28 6.17	23.60	. .	VI.	4	36.152	32 12.45	10.10	10.18	28 29.77	43 42.7
9	7	6.1	18.0	30.	42.2	54.4	. .	. .	. .	. .	32 42.36	23.60	. .	VI.	3	42.042	34 41.73	10.19	10.39	33 5.96	46 12.3
10	.	5.2	17.5	29.5	. .	. .	. .	. .	. .	. .	35 41.82	23.60	. .	.	.	. .	. . . .	10.24	. .	36 5.42	
11	4	. .	27.2	39.4	52.4	3.3	. .	. .	. .	. .	36 51.43	23.60	−0.01	IV.	7	39.050	10 9.36	10 26	8.34	37 15.02	21 38.0
12	7	. .	. .	7.5	19.5	31.7	. .	. .	. .	. .	39 19.56	23.60	. .	IV.	5	43.938	21 56.41	10.31	9.32	39 43.16	33 26.0
13	7	. .	. .	. .	39.5	51.2	4.2	. .	. .	. .	40 39.43	23.60	. .	IV.	5	39.522	24 28.53	10.33	9.54	41 3.03	35 58.4
14	9	. .	. .	. .	. .	. .	. .	16.4	. .	. .	40 39.77	23.60	−0.01	V.	6	37.665	16 50.95	10.33	8.91	41 3.36	28 20.2
15	8	. .	27.2	39.6	51.4	4.0	. .	. .	. .	. .	44 51.64	23.60	+0.01	V.	2	36.827	46 24.33	10.39	11.39	45 15.25	57 56.1
16	6	. .	. .	17.3	29 2	41.4	. .	. .	. .	. .	45 29.32	23.60	. .	F. W.	.	. .	. . . .	10.40	. .	45 52.92	
17	4	. .	. .	. .	8.	20.2	32.2	. .	. .	. .	49 7.96	23.60	−0.01	IV.	7	49.065	4 24.38	10.36	7.87	49 31.55	15 52.6
18	9	. .	. .	. .	. .	. .	17.6	30.2	. .	. .	49 53.38	23.60	+0.01	VII.	1	48.813	45 20.46	10.45	11.30	50 16.99	56 52.2
19	6	. .	20.2	32.2	44.0	56.4	. .	. .	. .	. .	51 44.30	23.60	. .	IV.	6	31.465	20 24.78	10.48	9.20	52 7.90	25 31 54.5
20	6	. .	. .	32.3	44.4	56.3	. .	. .	. .	. .	53 44.36	23.60	+0.01	.	1	30.630	55 47.07	10.50	12.19	54 7.97	26 7 19.8
21	8	. .	. .	. .	. .	. .	44.2	56.4	. .	. .	55 19.80	23.60	. .	.	6	33.982	18 58.07	10.51	9.07	55 43.40	25 30 27.6
22	8	. .	. .	. .	. .	7.2	19.2	. .	. .	. .	56 54.96	23.60	+0.01	.	2	34.52	47 43.83	10.53	11.49	57 18.57	59 15.8
23	8	. .	. .	. .	. .	34.	. .	. .	. .	. .	57 21.88	23.60	. .	.	2	47.832	40 5.27	10.53	10.85	57 45.48	51 36.6
24	3	. .	. .	. .	. .	36.2	. .	. .	. .	. .	57 24.08	23.60	+0.01	.	1	47.705	45 52.88	10.53	11.35	57 47.69	57 24.8
25	7	. .	. .	. .	. .	. .	. .	. .	. .	24.2	13 59 29.72	23.60	. .	.	4	45.832	26 39.10	10.55	9.72	13 59 53.32	38 9.4
26	7	. .	. .	. .	. .	. .	. .	32.8	. .	. .	14 0 56.10	23.60	. .	VII.	5	46.45	20 29.62	10.56	9.19	14 1 19.70	31 59.4
27	7	. .	. .	. .	24.6	37.1	. .	. .	. .	. .	2 24.79	23.61	. .	IV.	5	45.964	20 46.61	10.57	9.22	2 48.40	32 16.4
28	7	. .	. .	. .	. .	. .	. .	32.4	. .	. .	2 55.71	23.61	. .	VII.	5	47.418	19 56.28	10.58	9.15	3 19.32	31 26.0
29	6	. .	. .	. .	. .	28.0	40.2	52.	. .	. .	4 15.61	23.61	. .	V.	2	43.082	42 48.87	10.58	11.10	4 39.22	54 20.6
30	8	. .	. .	. .	41.	53.6	5.8	18.	. .	. .	5 41.27	23.61	. .	VII.	4	38.972	30 35.15	10.59	10.04	6 4.88	25 42 5.8
31	9	. .	. .	28.3	39.5	52.3	. .	. .	. .	. .	7 40.12	23.61	+0.01	IV.	1	41.272	49 40.48	10.60	10 69	8 3.74	26 1 11.8
32	9	. .	. .	11.8	23.8	36.	. .	. .	. .	. .	9 23.86	23.61	. .	IV.	5	33.308	28 2.58	10.62	9.83	9 47.47	25 39 33.0
33	9	. .	. .	. .	. .	. .	. .	34.5	. .	. .	9 57.85	23.61	. .	VII.	4	32.393	34 21.79	10.62	10.37	10 21.46	25 45 52.8
34	.	. .	. .	. .	. .	. .	. .	17.5	. .	. .	13 40.87	23.61	+0.01	.	1	32.898	54 28.69	10.63	12.11	14 4.49	26 6 1.4
35	7	. .	. .	29.5	41.8	54.5	. .	. .	. .	. .	14 41.92	23.61	. .	12.	4	40.872	29 29.00	10.63	9.96	15 5.53	25 40 59.6
36	.	. .	. .	32.4	. .	. .	. .	. .	. .	. .	16 44.53	23.61	+0.01	IV.	1	32.752	54 33.97	10.63	11.84	17 8.15	26 6 6.4
37	9	. .	. .	. .	. .	. .	19.5	31.3	. .	. .	16 54.84	23.61	. .	VII.	4	40.587	29 39.52	10.63	9.97	17 18.45	25 41 10.1
38	9	. .	. .	. .	. .	. .	. .	27.5	. .	. .	17 50.88	23.61	. .	VII.	4	35.105	32 48.37	10.64	10.24	18 14.49	44 19.2
39	9	. .	. .	. .	. .	. .	35.6	47.4	. .	. .	19 10.95	23.62	+0.01	12.	2	42.497	43 8.20	10.64	11.13	19 34.58	54 40.0
40	5	. .	. .	. .	29.2	41.2	54.	. .	. .	. .	20 29.25	23.62	−0.01	VI.	7	41.060	9 0.01	10.64	8.23	20 52.86	20 28.9
41	7	. .	. .	. .	. .	. .	. .	47.2	60.0	. .	21 35.27	23.62	. .	VII.	3	37.542	37 16.59	10.64	10.61	21 58.89	48 47.8
42	7	. .	. .	. .	. .	. .	. .	1.8	. .	. .	14 22 25.20	+23.62	+0.01	VII.	2	42.35	43 13.85	−10.63	−11.13	14 22 48.83	25 54 45.6

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848.	h.	s.	s.	s.	s.	s.	° ′ ″	r.
May 27,	18	+18.682	*l* 0.008	. .	− 0.410	+ 0.535	359 59 59.30	40.013

REMARKS.

(123) 10. Micrometer reading assumed as $35^{r}.815$ instead of $40^{r}.815$.

(124) 25. Transit over T. 11 assumed to have been recorded over T. 12.

INSTRUMENT READINGS.

	Date.		CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean	Barom.	Attached Thermom.	External Thermom.
	1848.	h. m.	° ′ ″				″	″	in.	°	°
Zone 124	May 27,	13 15	298 6 11.4	6.3	15.8	16.4	12.52	12.48			
		13 20	. .	. .	. .	. .	. .	. .	30.202	75.1	72.0
		14 0	. .	. .	. .	. .	. .	. .	30.2	75.0	70.2
		14 40	. .	. .	. .	. .	. .	. .	30.196	73.4	67.
		15 20	. .	. .	. .	. .	. .	. .	30.2	71.9	65.9
			. .	. .	. .	. .	. .	. .	. .	. .	58.
		16	. .	. .	. .	. .	. .	. .	30.198	71.9	64.7

ZONE 124. MAY 27. MAJ. $D_0 = -25°\ 11'\ 10''$—Continued.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
43	7	. .	9.	20.8	33.	. .	. .	. .	. .	. .	14 24 33.12	+23.62	−0.01	IV.	6	36.560	17 29.27	−10.63	− 8.95	14 24 56.73	25 28 58.8
44	7	. .	. .	. .	. .	. .	16.	28.	. .	. .	25 51.46	23.62	0.01	.	7	35.428	12 14.12	10.62	8.50	26 15.07	23 43.2
45	7	. .	. .	. .	. .	. .	. .	. .	27.2	. .	26 32.69	23.62	−0.01	11.	7	43.428	7 37.91	10.62	8.16	26 56.30	25 19 6.7
46	5	. .	. .	21.3	33.0	46.0	. .	. .	. .	. .	30 33.43	23.63	+0.01	IV.	1	35.77	52 50.02	10.61	11.97	30 57.07	26 4 22.6
47	6	. .	. .	. .	31.2	. .	. .	. .	. .	. .	31 19.33	23.63	. .	IV.	5	38.69	24 57.18	10.60	9.57	31 42.96	25 36 27.4
48	8	. .	. .	. .	. .	48.5	. .	. .	. .	. .	31 24.68	23.63	. .	12.	5	39.418	24 31.27	10.60	9.54	31 48.31	36 1.4
49	5	. .	. .	. .	. .	2.0	. .	. .	. .	. .	31 49.84	23.63	. .	VII.	3	40.657	35 29.29	10.60	10.47	32 13.47	47 0.4
50	4	. .	. .	31.	. .	55.4	. .	. .	. .	. .	34 43.20	23.63	−0.01	VI.	7	37.857	10 50.34	10.56	8.38	35 6.82	25 22 19.3
51	5	. .	. .	. .	57.5	. .	22.3	35.	. .	. .	39 57.91	23.63	+0.01	V.	1	41.75	49 23.98	10.51	11.67	40 21.55	26 0 56.2
52	9	. .	. .	. .	. .	. .	. .	7.5	. .	. .	40 30.87	23.64	−0.01	VII.	6	42.425	14 6.98	10.50	8.66	40 54.50	25 25 36.1
53	9	. .	. .	. .	. .	. .	29.2	41.2	. .	. .	42 4.68	23.64	−0.01	VII.	6	41.232	14 48.07	10.48	8.72	42 28.31	25 26 17.3
54	8	. .	. .	. .	. .	. .	27.	39.	. .	. .	43 2.48	23.64	+0.01	VII.	1	43.085	48 37.78	10.46	11.60	43 26.13	26 0 9.8
55	9	. .	28.5	40.7	52.4	. .	. .	. .	. .	. .	45 52.70	23.64	. .	IV.	5	33.529	27 54.97	10.42	9.82	46 16.34	25 39 25.2
56	5	9.8	22.	34.2	46.5	58.7	10.6	. .	. .	. .	47 46.41	23.64	. .	V.	4	41.69	29 1.75	10.39	9.92	48 10.05	40 32.1
57	8	. .	10.2	22.1	34.0	46.	. .	. .	. .	. .	51 34.17	23.65	. .	VI.	5	39.357	24 33.64	10.33	9.54	51 57.82	36 3.5
58	8	. .	2.3	14.3	. .	. .	. .	. .	. .	. .	56 26.56	23.66	. .	III.	3	39.84	35 57.66	10.23	10.50	56 50.22	47 28.4
59	8	. .	. .	. .	. .	43.8	56.	. .	. .	. .	56 31.65	23.66	. .	VI.	4	43.43	28 1.74	10.22	9.83	56 55.31	39 31.8
60	7	. .	. .	. .	. .	31.0	. .	44.	. .	. .	57 6.98	23.66	. .	VII.	5	47.63	19 48.97	10.20	9.13	57 30.64	31 18.3
61	9	. .	. .	. .	. .	. .	. .	52.	. .	. .	57 15.35	23.66	−0.01	12.	6	41.352	14 43.34	10.20	8.71	14 57 39.00	26 12.2
62	4	. .	. .	. .	. .	54.5	. .	. .	. .	. .	14 59 42.39	23.66	+0.01	VII.	2	41.598	43 39.76	10.15	11.17	15 0 6.06	55 11.1
63	4	. .	. .	51.2	3.0	15.2	. .	. .	. .	. .	15 1 3.12	23.66	. .	IV.	3	43.319	33 57.85	10.11	10.34	1 26.78	45 28.3
64	10	. .	. .	55.	67.	. .	. .	. .	. .	. .	3 7.06	23.67	. .	IV.	5	43.21	22 21.49	10.05	9.35	3 30.73	33 50.9
65	5	. .	. .	. .	. .	49.2	1.8	. .	. .	. .	4 37.15	23.67	. .	.	4	46.498	26 16.17	10.01	9.68	5 0.82	37 45.9
66	.	. .	. .	. .	40.	. .	. .	16.	. .	. .	39.67	23.67	. .	.	.	. .	. .	. .	. .	(5) 3.34	
67	9	. .	. .	. .	59.5	. .	. .	. .	. .	. .	7 59.53	23.67	−0.01	IV.	7	39.230	10 3.16	9.91	8.29	8 23.19	21 31.4
68	.	. .	. .	. .	. .	. .	. .	48.5	. .	. .	7 11.83	23.67	−0.01	.	7	35.783	12 1.63	9.93	8.47	7 35.49	23 30.0
69	8	. .	. .	. .	. .	. .	. .	0.2	. .	. .	8 23.54	23.67	. .	12.	4	40.172	29 53.23	9.90	9.99	8 47.21	42 23.1
70	9	. .	. .	. .	. .	. .	29.2	. .	. .	. .	10 4.68	23.68	. .	VII.	5	44.23	21 46.09	9.85	9.29	10 28.36	33 15.2
71	9	. .	. .	. .	. .	. .	. .	51.3	. .	. .	10 14.65	23.68	. .	.	5	39.265	24 37.10	9.84	9.53	10 38.33	36 6.5
72	4	. .	. .	. .	. .	. .	. .	60.5	. .	. .	11 23.86	23.68	−0.01	VII.	6	41.109	14 52.31	9.80	8.72	11 47.53	26 20.8
73	9	. .	30.2	. .	55.	. .	. .	. .	. .	. .	13 54.84	23.68	−0.01	IV.	6	37.083	17 11.26	9.71	8.91	14 18.51	28 39.9
74	8	. .	49.5	1.4	14.	26.0	. .	. .	. .	. .	15 13.83	23.69	. .	IV.	4	42.012	28 50.70	9.66	9.90	15 37.52	25 40 20.3
75	7	. .	. .	. .	. .	. .	. .	25.4	. .	. .	15 48.77	23.69	+0.01	VI.	1	39.221	50 51.03	9.64	11.81	16 12.47	26 2 22.5
76	9	. .	. .	. .	. .	. .	46.4	59.2	. .	. .	19 22.25	23.69	+0.01	.	2	34.288	47 51.72	9.52	11.56	19 45.95	25 59 22.8
77	8	. .	. .	. .	47.5	59.8	. .	. .	. .	. .	23 47.57	23.70	−0.01	.	7	36.510	11 36.85	9.33	8.43	24 11.26	23 4.6
78	9	23.2	36.	48.	. .	. .	. .	. .	. .	. .	26 0.16	23.71	+0.01	IV.	1	45.62	47 10.70	9.24	11.50	26 23.88	58 41.4
79	7	. .	. .	. .	. .	. .	41.9	54.	. .	. .	26 17.41	23.71	. .	VI.	3	39.253	36 17.81	9.23	10.54	26 41.12	47 47.6
80	6	. .	. .	. .	43.2	. .	. .	. .	. .	. .	27 43.18	23.71	−0.01	.	1	44.178	48 0.39	9.17	11.57	28 6.88	59 31.1
81	6	. .	. .	. .	. .	. .	30.2	42.2	. .	. .	28 5.66	23.71	. .	VII.	3	41.008	35 17.20	9.15	10.45	28 29.37	46 46.8
82	8	. .	. .	. .	. .	32.0	44.3	56.4	. .	. .	29 19.82	23.71	. .	.	3	38.619	36 39.75	9.10	10.57	29 43.53	48 9.4
83	9	. .	. .	13.5	25.2	37.3	. .	. .	. .	. .	32 25.33	23.72	. .	.	4	42.893	28 20.35	8.96	9.86	32 49.05	39 49.2
84	9	. .	. .	. .	51.4	3.9	. .	. .	. .	. .	33 51.56	23.72	+0.01	.	1	43.975	48 7.38	8.89	11.58	34 15.29	59 37.8
85	9	. .	. .	. .	. .	. .	21.5	. .	. .	. .	34 57.06	23.72	−0.01	VII or IV	6	34.817	18 29.05	8.84	9.02	35 20.77	29 56.9
86	9	. .	. .	. .	. .	. .	25.5	37.3	. .	. .	36 0.87	23.73	+0.01	.	3	36.618	37 48.43	8.79	10.67	36 24.61	49 17.9
87	7	. .	. .	. .	36.	. .	61.	. .	. .	. .	37 36.26	23.73	+0.01	.	3	33.929	39 21.31	8.71	10.81	38 0.00	50 50.8
88	4	. .	. .	. .	. .	. .	55.3	7.2	. .	. .	38 30.72	23.73	−0.01	.	6	32.672	19 43.20	8.67	9.12	38 54.44	25 31 11.0
89	8	. .	. .	. .	. .	4.	16.5	. .	. .	. .	39 51.96	23.73	+0.01	VI.	1	34.938	53 18.56	8.61	12.03	40 15.70	26 4 49.2
90	5	. .	. .	. .	9.	20.6	32.7	. .	. .	. .	41 8.56	23.74	. .	V.	3	35.918	38 12.77	8.54	10.71	41 32.30	25 49 42.0
91	4	. .	. .	. .	. .	. .	61.	73.4	. .	. .	15 42 36.68	+23.74	. .	VII.	4	42.49	28 33.97	− 8.46	− 9.88	15 43 0.42	25 40 2.3

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848.	h.	s.	s.	s.	s.	s.	° ′ ″	s.

INSTRUMENT READINGS.

	Date.		CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1848.	h. m.	° ′ ″				″	″	in.	°	°

REMARKS.

(124) 46. Transit over T. III assumed as at 21ˢ.3 instead of 31ˢ.3.

(124) 47. Transit over T. V assumed to have been recorded over T. IV.

(124) 48. Transit over T. VI assumed to have been recorded over T. V.

(124) 60. Transit at 31ˢ assumed to have been over T. VI instead of T. V.

ZONE 124. MAY 27. MAJ. $D_0 = -25^\circ\ 11'\ 10''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
92	8	. .	. .	. .	. .	. .	. .	59.2	. .	. .	15 43 22.57	+23.74	. .	.	5	37.93	25 23.36	− 8.43	− 9.60	15 43 46.31	25 36 51.4
93	4	. .	. .	. .	2.3	15.	27.2	. .	. .	. .	46 2.63	23.75	. .	.	3	36.78	37 43.10	8.29	10.66	46 26.38	49 12.0
94	6	. .	. .	. .	. .	. .	. .	15.	. .	. .	46 38.37	23.75	−0.01	.	6	35.558	18 3.79	8.27	8.98	47 2.11	29 31.0
95	6	. .	. .	. .	. .	. .	. .	23.5	. .	. .	46 46.87	23.75	−0.01	.	7	38.855	10 16.07	8.25	8.31	47 10.61	21 42.6
96	2	. .	59.2	11.2	23.2	35.6	47.4	59.8	. .	. .	49 23.29	23.75	. .	.	4	41.338	29 13.91	8.12	9.93	49 47.04	40 42.0
97	8	. .	. .	. .	. .	54.2	6.9	19.2	. .	. .	50 42.38	23.76	. .	.	3	44.43	33 19.58	8.05	10.28	51 6.14	44 47.9
98	8	. .	35.4	. .	59.5	12.5	. .	. .	. .	. .	52 59.86	23.76	. .	.	4	36.538	31 59.26	7.93	10.17	53 23.62	43 27.4
99	8	. .	51.	. .	15.	. .	. .	. .	. .	. .	53 15.16	23.76	. .	.	3	35.528	38 26.24	7.92	10.72	53 38.92	49 54.9
100	4	. .	. .	. .	. .	. .	. .	. .	48.8	. .	53 54.14	23.76	−0.01	.	6	40.46	15 14.93	7.88	8.75	54 17.89	26 41.6
101	9	. .	. .	. .	. .	. .	59.	11.5	. .	. .	55 34.75	23.77	+0.01	VII.	3	33.857	39 23.53	7.78	10.82	55 58.53	50 52.1
102	8	. .	. .	. .	. .	59.5	. .	. .	. .	. .	57 47.38	23.77	−0.01	.	6	41.328	14 45.03	7.65	8.70	58 11.14	26 11.4
103	4	. .	. .	. .	. .	48.0	. .	. .	. .	. .	15 58 35.88	23.77	+0.01	IV.	2	41.298	43 50.35	7.62	11.20	15 58 59.66	25 55 19.2
104	7	. .	50.	1.7	14.5	. .	. .	. .	. .	. .	16 0 14.28	+23.78	+0.01	IV.	1	39.212	52 0.34	− 7.53	−11.90	16 0 38.07	26 3 29.8

ZONE 125. MAY 30. MAJ. $D_0 = -25^\circ\ 12'\ 40''$.

1	9	. .	. .	3.8	16.2	. .	. .	. .	. .	. .	16 12 16.07	+23.46	. .	IV.	6	28.688	22 0.44	−14.23	− 9.32	16 12 39.53	25 35 4.0
2	9	. .	25.2	37.4	48.8	. .	. .	. .	. .	. .	13 49.35	23.46	−0.01	IV.	2	34.564	47 42.31	14.15	11.51	14 12.80	26 0 48.0
3	9	. .	. .	1.4	13.9	. .	. .	. .	. .	. .	14 13.72	23.46	−0.01	VI.	2	44.840	41 48.22	14.13	11.01	14 37.17	25 54 53.4
4	8	. .	. .	. .	. .	. .	. .	30.5	. .	. .	14 53.87	23.46	+0.01	VII.	7	42.512	8 9.84	14.09	8.15	15 17.34	21 12.1
5	7	. .	9.6	21.5	33.3	45.9	. .	. .	. .	. .	17 33.68	23.47	−0.01	IV.	2	45.012	41 42.41	13.94	11.00	17 57.14	54 47.4
6	9	. .	. .	. .	. .	57.4	. .	. .	. .	. .	18 45.24	23.47	. .	V.	2	47.734	40 8.61	13.88	10.86	19 8.71	25 53 13.4
7	1	. .	. .	. .	49.	1.2	. .	. .	. .	. .	19 49.02	23.48	−0.01	VI.	1	36.242	52 33.61	13.83	11.94	20 12.49	26 5 39.4
8	8	. .	56.2	8.4	20.5	. .	. .	. .	. .	. .	22 20.56	23.48	. .	IV.	5	33.50	27 55.97	13.66	9.82	22 44.04	25 40 59.4
9	9	. .	. .	. .	. .	. .	. .	15.	. .	. .	25 38.39	23.49	+0.01	VII.	7	33.372	13 24.69	13.45	8.60	26 1.89	26 26.7
10	6	. .	6.2	18.9	. .	. .	. .	. .	. .	. .	30 30.83	23.50	. .	IV.	4	35.572	32 32.54	13.14	10.21	30 54.33	25 45 35.9
11	6	. .	. .	. .	. .	48.4	1.2	. .	. .	. .	30 36.50	23.50	−0.01	VI.	2	33.658	48 13.42	13.13	11.56	30 59.99	26 1 18.1
12	7	. .	. .	31.2	44.	. .	. .	. .	. .	. .	34 43.67	23.51	−0.01	IV.	2	36.995	46 18.58	12.85	11.40	35 7.17	25 59 22.8
13	8	. .	. .	. .	. .	. .	28.5	. .	. .	. .	36 4.07	23.52	+0.01	VII.	7	35.978	11 54.92	12.75	8.45	36 27.60	24 56.1
14	8	28.1	41.	53.4	. .	. .	. .	. .	. .	. .	41 5.25	23.53	. .	IV.	3	39.550	36 7.69	12.41	10.51	41 28.78	49 10.6
15	8	. .	. .	. .	. .	. .	37.1	49.2	. .	. .	41 12.63	23.53	. .	VII.	4	40.282	29 50.03	12.40	9.99	41 36.16	42 52.4
16	5	. .	. .	. .	40.2	52.4	. .	. .	. .	. .	42 40.20	23.53	+0.01	VI.	7	43.774	7 26.52	12.30	8.09	43 3.74	20 26.9
17	8	. .	. .	. .	61.5	. .	. .	. .	. .	. .	43 1.46	23.54	+0.01	IV.	6	41.10	14 52.88	12.28	8.73	43 25.01	27 53.9
18	6	. .	. .	. .	. .	. .	9.2	21.2	. .	. .	44 44.68	23.54	. .	VII.	5	44.54	21 35.41	12.16	9.28	45 8.22	34 36.8
19	7	. .	. .	. .	. .	. .	20.	32.	. .	. .	44 55.48	23.54	. .	11.	5	46.13	20 40.33	12.14	9.21	45 19.02	33 41.7
20	8	. .	. .	. .	31.3	44.0	. .	. .	. .	. .	46 31.55	23.54	. .	IV.	3	45.873	32 29.87	12.03	10.21	46 55.09	45 32.1
21	7	. .	14.2	. .	38.0	. .	. .	. .	. .	. .	48 38.26	23.55	. .	IV.	3	39.47	36 10.44	11.88	10.52	49 1.81	49 12.8
22	8	. .	. .	39.5	51.4	3.8	. .	. .	. .	. .	49 51.58	23.55	+0.01	IV.	6	41.020	14 55.63	11.80	8.73	50 15.14	27 56.2
23	10	. .	. .	60.3	12.	24.8	. .	. .	. .	. .	51 12.38	23.56	. .	IV.	5	46.836	20 16.59	11.69	9.18	51 36.94	33 17.5
24	9	. .	. .	. .	. .	. .	11.	23.0	. .	. .	51 46.49	23.56	+0.01	VII.	6	51.110	9 7.80	11.64	8.24	52 10.06	22 7.7
25	5	. .	. .	11.2	23.	. .	. .	. .	. .	. .	54 23.20	23.57	+0.01	IV.	6	39.592	15 44.83	11.45	8.80	54 46.78	28 45.1
26	5	. .	. .	. .	6.2	18.	. .	. .	. .	. .	55 6.04	23.57	+0.01	VI.	7	34.830	12 34.61	11.39	8.52	55 29.62	25 34.5
27	7	. .	. .	. .	0.3	12.6	25.	. .	. .	. .	56 0.46	23.57	. .	VI.	5	41.752	23 11.59	11.32	9.42	56 24.03	36 12.3
28	8	. .	. .	. .	. .	21.	. .	. .	. .	. .	16 57 8.88	23.57	+0.01	V.	7	44.455	7 3.14	11.24	8.07	16 57 32.46	25 20 2.4
29	9	. .	. .	. .	. .	. .	16.2	28.3	. .	. .	17 0 51.62	23.58	−0.01	VII.	1	40.99	49 49.94	10.95	11.73	17 1 15.19	26 2 52.6
30	9	. .	. .	. .	. .	4.5	16.4	. .	. .	. .	1 52.10	23.59	. .	VI.	3	41.338	35 5.98	10.88	10.44	2 15.69	25 48 7.3
31	7	. .	. .	. .	. .	. .	. .	59.5	. .	. .	2 22.81	23.59	+0.01	VII.	6	38.22	16 31.82	10.83	8.85	2 46.41	29 31.5
32	8	. .	. .	. .	. .	. .	. .	18.5	. .	. .	17 2 41.81	+23.59	+0.01	12.	6	40.935	14 57.71	−10.81	− 8.71	17 3 5.41	25 27 57.2

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848.	h.	s.	s.	s.	s.	s.	° ′ ″	r.
May 30,	15	+18.381	g 0.005	. .	− 0.410	+ 0.535	359 59 58.91	40.010

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848. h. m.	° ′ ″				″	″	in.	°	°
Zone 125	May 30, 16 6	. .	. .	. .	. .	. .	. .	29.760	72.5	69.2
	16 12	298 4 31.2 30.0	26.3 26.8	35.4 34.2	36.2 34.8	31.86	31.86			
	16 20	. .	. .	. .	. .	. .	. .	29.764	. .	67.8
	17	. .	. .	. .	. .	. .	. .	29.772	72.	66.5
	17 20	. .	. .	. .	. .	. .	. .	29.770	71.8	65.5
	17 46	. .	. .	. .	. .	. .	. .	29.788	71.5	64.2

REMARKS.

(124) 104. Micrometer reading assumed as $37^r.212$ instead of $39^r.212$.

ZONE 125. MAY 30. MAJ. $D_0 = -25° 12' 40''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	' ''	''	''	h. m. s.	° ' ''
33	8	. .	42.4	54.2	6.4	. .	. .	. .	. .	. .	17 5 6.55	+23.60	. .	IV.	4	37.50	31 26.12	−10.62	−10.13	17 5 30.15	25 44 26.9
34	8	. .	55.0	7.5	19.2	. .	. .	. .	. .	. .	6 19.45	23.60	−0.01	IV.	2	39.922	44 37.75	10.53	11.27	6 43.04	57 39.6
35	9	48.5	0.3	12.7	23.8	. .	. .	. .	. .	. .	8 24.66	23.61	+0.01	IV.	6	35.505	18 5.61	10.37	8.99	8 48.28	31 5.0
36	9	. .	45.5	57.4	9.5	. .	. .	. .	. .	. .	10 9.67	23.61	. .	IV.	3	34.54	39 0.26	10.22	10.78	10 33.28	25 52 1.3
37	7	. .	17.0	29.2	40.8	. .	. .	. .	. .	. .	12 41.21	23.62	−0.01	IV.	1	39.698	50 34.71	10.02	11.80	13 4.82	26 3 36.5
38	9	. .	. .	. .	. .	19.2	32.0	. .	. .	. .	13 7.26	23.62	+0.01	VI.	7	36.928	11 22.35	9.99	8.40	13 30.89	25 24 20.7
39	8	. .	. .	. .	. .	. .	. .	. .	7.5	. .	13 18.67	23.62	. .	12.	5	42.23	22 54.40	9.97	9.38	13 42.29	25 35 53.8
40	8	. .	. .	24.	36.2	48.8	. .	. .	. .	. .	15 36.33	23.63	−0.01	IV.	1	45.758	47 5.95	9.79	11.49	15 59.95	26 0 7.2
41	6	. .	50.5	2.3	14.3	27.	. .	. .	. .	. .	17 14.64	23.63	. .	IV.	3	40.955	35 19.29	9.66	10.46	17 38.27	25 48 19.4
42	6	. .	. .	47.3	. .	12.2	24.	. .	. .	. .	18 59.66	23.64	+0.01	.	7	39.725	9 46.11	9.51	8.27	19 23.31	22 43.9
43	8	. .	30.2	42.3	. .	6.3	. .	. .	. .	. .	30 54.40	23.68	+0.01	IV.	6	33.442	19 16.67	8.53	9.08	31 18.09	32 14.3
44	8	. .	. .	. .	. .	32.0	. .	. .	. .	. .	32 19.84	23.68	. .	V.	4	34.162	33 21.07	8.41	10.29	32 43.52	46 19.8
45	8	. .	55.2	7.2	19.2	. .	. .	. .	. .	. .	39 19.37	23.70	. .	.	4	42.380	28 38.02	7.82	9.88	39 43.07	41 35.7
46	8	. .	. .	. .	. .	. .	19.5	. .	. .	. .	39 55.08	23.70	. .	.	2	43.264	28 7.57	7.77	9.84	40 18.78	41 5.2
47	6	37.2	49.2	1.5	13.4	26.2	38.2	50.2	. .	. .	42 13.70	23.71	. .	IV.	4	38.90	30 37.89	7.57	10.06	42 37.41	43 35.5
48	8	. .	. .	. .	. .	50.6	2.8	. .	. .	. .	43 38.42	23.71	−0.01	.	2	39.602	44 48.77	7.45	11.29	44 2.12	57 47.5
49	8	. .	. .	. .	. .	. .	60.1	12.4	. .	. .	44 35.74	23.72	−0.01	.	2	43.52	42 33.81	− 7.34	−11.09	44 59.45	25 55 32.2
50	.	57.8	10.	22.5	34.2	46.4	. .	. .	. .	. .	17 46 34.38	+23.72	. .	.	.	. . .	. .	. .	. .	17 46 58.10	

ZONE 126. MAY 31. MAJ. $D_0 = -24° 33' 50'$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	9	. .	. .	64.2	15.9	. .	. .	. .	. .	. .	13 21 16.09	+23.08	. .	IV.	2	43.177	42 45.63	− 2.17	−11.03	13 21 39.17	25 16 48.8
2	6	. .	3.2	16.	27.5	40.2	. .	. .	. .	. .	22 27.80	23.08	. .	.	6	34.274	18 48.01	2.20	9.09	22 50.88	24 52 49.3
3	7	. .	. .	. .	. .	25.2	. .	. .	. .	. .	23 13.10	23.07	. .	IV.	2	36.998	46 18.48	2.23	11.33	23 36.17	25 20 22.0
4	8	. .	. .	. .	. .	. .	. .	6.4	. .	. .	23 29.99	23.07	. .	VII or V	3	32.865	39 57.72	2.23	10.81	23 53.06	14 0.8
5	8	. .	. .	. .	. .	. .	. .	3.2	. .	. .	24 26.79	23.07	. .	VII.	7	36.214	11 46.80	2.26	8.54	24 49.86	24 45 47.6
6	.	. .	. .	. .	. .	. .	. .	11.5	. .	. .	28 35.08	23.07	. .	.	.	. . .	. . .	2.39	. .	28 58.15	
7	10	. .	. .	. .	. .	. .	. .	45.0	. .	. .	30 8.58	23.07	. .	12.	4	38.982	30 34.24	2.43	10.03	30 31.65	25 4 36.7
8	9	. .	. .	. .	. .	. .	. .	33.2	. .	. .	30 56.78	23.07	. .	.	3	33.658	39 30.40	2.45	10.77	31 19.85	13 33.6
9	9	. .	. .	. .	26.4	. .	. .	. .	. .	. .	33 26.37	23.07	. .	IV.	3	35.648	38 22.10	2.52	10.68	33 49.44	12 25.3
10	9	. .	7.6	19.8	31.7	44.4	. .	. .	. .	. .	34 31.84	23.07	. .	IV.	4	35.592	32 31.85	2.54	10.20	34 54.91	25 6 34.6
11	5	. .	38.5	50.2	2.4	14.1	26.3	. .	. .	. .	36 2.29	23.07	. .	IV.	7	38.37	10 32.78	2.58	8.43	36 25.36	24 44 33.8
12	10	. .	. .	. .	. .	8.4	20.3	. .	. .	. .	36 56.15	23.07	. .	IV.	5	45.429	21 5.04	2.60	9.28	37 19.22	24 55 6.9
13	9	. .	. .	. .	. .	. .	. .	. .	41.2	. .	41 48.99	23.07	. .	12.	2	39.260	44 59.74	2.71	11.32	42 11.16	25 19 3.8
14	8	. .	. .	. .	. .	31.3	43.4	. .	. .	. .	43 7.07	23.06	. .	VII or V.	2	45.431	41 27.73	2.74	10.94	43 30.13	15 31.4
15	9	. .	18.4	30.2	42.1	. .	. .	. .	. .	. .	45 42.35	23.06	. .	IV.	4	42.336	28 39.54	2.78	9.88	46 5.41	25 2 42.2
16	6	. .	. .	. .	29.2	41.0	. .	. .	. .	. .	46 29.05	23.06	. .	V.	7	47.86	5 5.86	2.80	7.99	46 52.11	24 39 6.6
17	8	. .	. .	. .	. .	25.	37.	. .	. .	. .	47 12.83	23.06	. .	VI.	5	39.835	24 17.64	2.81	9.54	47 35.89	58 20.0
18	8	. .	. .	. .	. .	35.	46.5	. .	. .	. .	47 10.41	23.06	. .	12.	6	43.407	13 32.59	2.81	8.67	47 33.47	24 47 34.1
19	6	. .	. .	56.3	8.4	20.9	33.2	. .	. .	. .	49 8.65	23.06	. .	.	2	45.000	41 42.82	2.84	10.94	49 31.71	25 15 46.6
20	8	. .	. .	. .	29.8	42.8	. .	. .	. .	. .	50 30.26	23.06	. .	VI.	6	41.32	14 45.19	2.87	8.77	50 53.32	24 48 46.8
21	8	. .	. .	. .	. .	26.4	38.5	. .	. .	. .	51 14.28	23.06	. .	.	6	41.060	14 54.26	2.88	8.79	51 37.34	48 55.9
22	9	. .	. .	. .	. .	. .	. .	. .	27.5	. .	51 33.42	23.06	. .	.	6	40.309	15 19.57	2.88	8.83	51 56.48	49 21.3
23	9	. .	. .	6.3	18.4	. .	. .	. .	. .	. .	13 55 18.42	+23.06	. .	.	6	43.688	13 23.74	− 2.93	− 8.66	13 55 41.48	24 47 25.3

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	*m*	*n*	*c*	Zenith Point.	Mic. Co.
1848. h.	s.	s.	s.	s.	s.	° ' ''	r.
May 31, 15	+18.162	*g* 0.008	. .	− 0.410	+ 0.535	359 59 59.54	40.014

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848. h. m.	° ' ''				''	''	in.	°	°
Zone 126	May 31, 13 20	298 43 {38.4 37.1}	34.2 34.7	44.2 43.5	43.5 43.0	. .	39.82	29.980	66.4	60.5
	13 40	. .	. .	. .	. .	. .	. .	29.998	66.0	59.0

REMARKS.

(126) 14. Transits over T.'s VI and VII assumed to have been recorded over T.'s V and VI.

(126) 18. Transits over T.'s VI and VII assumed to have been recorded over T.'s V and VI.

ZONE 127. JUNE 12. Ms. $D_0 = -22° 3' 0''$.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.				′ ″	″	″	h. m. s.	° ′ ″
1	9	. .	. .	29.5	41.3	53.	. .	. .	. .	. .	17 4 41.26	+22.19	. .	VI.	5	46.18	20 39.07	−19.08	− 1.33	17 5 3.45	22 23 59.5
2	9.10	. .	. .	17.5	. .	. .	. .	. .	. .	. .	9 29.32	22.20	. .	VI.	4	41.255	29 16.66	18.66	1.95	9 51.52	32 37.3
3	9.10	29.	41.	54.	. .	. .	. .	. .	. .	. .	12 5.16	22.20	+0.01	IV.	2	43.060	42 49.66	18.44	2.91	12 27.37	46 11.0
4	9	. .	. .	. .	. .	. .	47.	59.	. .	. .	12 23.17	22.20	. .	VII.	3	46.170	32 19.40	18.41	2.16	12 45.37	35 40.0
5	9	. .	. .	. .	. .	58.5	. .	22.	. .	. .	13 46.45	22.20	+0.01	VII.	1	43.402	48 26.86	18.29	3.33	14 8.66	51 48.5
6	10	. .	. .	. .	. .	. .	. .	33.	. .	. .	14 57.27	22.21	. .	VII.	3	39.405	36 12.40	18.19	1.61	15 19.48	39 32.2
7	10	. .	. .	. .	39.	51.	3.	. .	. .	. .	20 39.08	22.21	+0.01	VII.	1	47.955	46 24.48	17.71	3.17	21 1.30	49 45.4
8	10	. .	. .	. .	. .	. .	53.	5.	. .	. .	22 29.20	22.21	0.01	VII.	1	41.280	49 39.96	17.54	3.42	22 51.42	53 0.9
9	8.9	. .	. .	23.	35.	. .	59.	. .	. .	. .	24 34.99	22.21	+0.01	VII.	1	37.635	51 45.52	17.35	3.59	24 57.21	55 6.5
10	9	. .	. .	. .	36.	. .	0.	12.5	. .	. .	26 36.30	22.22	. .	VII.	5	42.720	22 38.12	17.18	1.48	26 58.52	25 56.8
11	9	. .	14.2	26.2	38.	50.2	1.5	. .	. .	. .	28 38.01	22.22	. .	VII.	5	36.992	25 55.43	16.99	1.71	29 0.23	29 14.1
12	9.10	. .	. .	16.2	27.5	40.2	. .	. .	. .	. .	30 27.96	22.23	+0.01	VI.	1	32.146	54 54.75	16.84	3.80	30 50.20	58 15.4
13	10	. .	. .	. .	. .	27.	. .	. .	. .	. .	33 15.14	22.23	−0.01	VII.	6	42.820	13 53.38	16.58	0.87	33 37.36	17 10.8
14	8.9	. .	. .	47.	59.	11.2	23.	. .	. .	. .	34 59.08	22.23	−0.01	VI.	7	49.810	3 58.60	16.43	0.16	35 21.30	7 15.2
15	9	. .	. .	. .	34.5	46.3	58.2	. .	. .	. .	36? 34.42	22.23	. .	F. W.	.	40.039	29 58.66	16.28	2.00	36 56.65	33 16.9
16	8	. .	56.2	8.5	19.7	32.	43.7	. .	. .	. .	38 20.01	22.24	. .	VII.	5	44.290	21 44.03	16.13	1.42	38 42.25	25 1.6
17	9	3.5	15.5	28.	39.5	51.5	3.2	. .	. .	. .	41 39.49	22.24	+0.01	VII.	1	42.516	48 57.39	15.82	3.37	42 1.74	52 16.6
18	9	. .	. .	. .	. .	4.	15.5	. .	. .	. .	42 51.91	22.24	. .	VII.	5	43.	34 10.	15.72	2.27	43 14.15	37 (25)
19	9	. .	8.5	20.2	32.	44.	. .	. .	. .	. .	45 32.12	22.25	+0.01	VII.	1	44.380	53 37 64	15.43	3.74	45 54.38	56 56.8
20	9	. .	. .	. .	44.5	56.2	8.2	. .	. .	. .	46 44.41	22.25	. .	VII.	5	42.760	22 36.74	15.37	1.48	47 6.66	25 53.6
21	8.9	55.5	7.2	19.2	. .	. .	. .	. .	. .	. .	49 31.10	22.25	. .	V.	4	46.850	26 38.46	15.12	1.76	49 53.35	29 55.3
22	9	. .	. .	. .	0.	12.	24.	35.	. .	. .	49 59.90	22.26	. .	VII.	4	51.683	23 51.76	15.07	1.52	50 22.16	27 8.4
23	8.9	51.6	3.4	15.5	27.	39.	. .	. .	. .	. .	52 27.21	22.26	. .	VI.	2	53.905	36 35.97	14.84	2.47	52 49.47	39 53.3
24	9	. .	. .	. .	. .	47.	59.	. .	. .	. .	53 35.19	22.26	. .	VI.	2	48.77	39 32.85	14.73	2.59	53 57.45	42 50.2
25	8.9	. .	. .	. .	. .	. .	52.	4.	. .	. .	54 28.23	22.26	+0.01	VII.	1	51.938	43 32.82	14.64	2.96	54 50.50	46 50.4
26	9	. .	. .	. .	. .	. .	. .	20.	. .	. .	17 58 44.23	22.27	−0.01	VII.	7	44.088	14 8.93	14.25	0.87	17 59 6.49	17 24.0
27	9	43.	55.5	7.	19.2	. .	. .	. .	. .	. .	18 1 19.06	22.27	−0.01	V.	6	44.843	12 43.91	14.00	0.76	18 1 41.32	15 58.7
28	9.10	16.2	28.5	. .	. .	. .	. .	. .	. .	. .	3 52.10	22.28	+0.01	III.	1	42.720	48 50.58	13.75	3.39	4 14.39	52 7.7
29	10	. .	. .	. .	. .	. .	21.	34.	. .	. .	3 57.63	22.28	+0.01	VII.	2	45.060	41 40.51	13.74	2.86	4 19.92	44 57.1
30	9	8.	21.2	33	. .	. .	. .	. .	. .	. .	7 44.57	22.29	−0.01	IV.	6	50.956	9 47.83	13.38	0.50	8 6.85	13 1.7
31	9	. .	. .	. .	31.	43.5	. .	. .	. .	. .	8 31.33	22.29	. .	VI.	5	47.882	20 14.89	13.31	1.25	8 53.62	23 29.4
32	8.9	3.5	15.5	. .	. .	. .	. .	. .	. .	. .	12 39.34	22.29	. .	III.	5	49.668	18 39.01	12.90	1.18	13 1.63	21 53.1
33	9	. .	. .	. .	. .	. .	8.	20.	. .	. .	12 44.17	22.29	−0.01	VII.	6	40.810	15 2.62	12.89	0.92	13 6.45	18 16.4
34	10	32.	45.	. .	. .	. .	. .	. .	. .	. .	17 8.33	22.30	−0.01	III.	6	43.970	13 13.99	12.46	0.79	17 30.62	16 27.2
35	10	. .	35.	. .	. .	. .	. .	. .	. .	. .	18 58.85	22.31	. .	III.	4	45.326	26 56.51	12.27	1.78	19 21.16	30 10.6
36	10	. .	. .	35.	. .	. .	. .	. .	. .	. .	20 46.85	22.31	+0.01	V.	2	42.055	43 24.35	12.09	2.98	21 9.17	46 39.4
37	10	30.	42.5	54.5	. .	. .	. .	. .	. .	. .	23 6.16	22.32	. .	IV.	5	46.315	20 34.53	11.85	1.31	23 28.48	23 47.7
38	10	48.	0.	12.5	. .	. .	. .	. .	. .	. .	24 24.00	22.32	. .	V.	4	41.290	29 15.53	11.71	1.95	24 46.32	32 29.2
39	10	. .	. .	. .	. .	. .	39.	. .	. .	. .	25 15.12	22.32	. .	VII.	3	57.905	25 35.16	11.62	1.68	25 37.44	28 48.5
40	10	51.3	. .	15.5	. .	. .	. .	. .	. .	. .	28 27.24	22.33	. .	IV.	4	39.32	30 23.43	11.29	2.04	28 49.57	33 36.8
41	10	39.	51.	. .	. .	. .	. .	. .	. .	. .	33 14.80	22.34	−0.01	III.	6	40.030	15 29.71	10.79	0.95	33 37.15	18 41.4
42	10	. .	. .	44.	. .	. .	19.2	31.	. .	. .	33 55.50	22.34	. .	F. W.	.	40.039	29 58.66	10.72	2.00	34 17.84	33 11.4
43	8.9	20.	32.	44.	56.	. .	. .	. .	. .	. .	36 55.87	22.34	. .	IV.	4	41.672	29 36.85	10.40	1.93	37 18.21	32 49.2
44	10	. .	. .	. .	. .	45.	57.	. .	. .	. .	37 33.15	22.34	. .	VII.	5	41.672	23 48.66	10.32	1.51	37 55.49	27 0.5
45	10	. .	. .	. .	. .	. .	. .	27.5	. .	. .	38 51.76	22.35	. .	VII.	4	38.082	31 5.82	10.20	2.09	39 14.11	34 18.1
46	10	. .	. .	. .	. .	. .	40.	. .	. .	. .	41 16.18	22.35	. .	VII.	5	42.105	22 59.31	9.93	1.49	41 38.53	26 10.7
47	10	. .	. .	2.5	. .	26.	38.	. .	. .	. .	44 14.24	22.36	. .	VI.	4	47.690	25 34.99	9.61	1.68	44 36.60	28 46.4
48	8.9	. .	. .	. .	. .	. .	8.6	20.5	. .	. .	44 44.77	22.36	+0.01	VII.	1	36.645	52 19.62	9.56	3.66	45 7.14	55 32.8
49	8	. .	. .	. .	. .	. .	. .	16.	. .	. .	18 45 40.25	+22.36	+0.01	VII.	2	33.99	48 1.84	− 9.44	− 3.34	18 46 2.62	22 51 14.6

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848. h.	s.	s.	s.	s.	s.	° ′ ″	r.
June 12, 15	+17.300	g 0.018	. .	− 0.410	+ 0.535	0 0 0.90	40.039

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848. h. m.	° ′ ″				″	″	in.	°	°
Zone 127	June 12, 17 4	*301 14 0.	58.	3.4	5.2	1.53	1.65	30.074	73.	60.8
	17 30	. .	. .	. .	. .	. .	. .	30.078	67.8	60.
	17 54	. .	. .	. .	. .	. .	. .	30.072	67.	58.2

* 2° 39′ is written under the circle-reading in the hand-book, without any reason for its being set there or any algebraic sign being given. If meant to be subtracted the zone would be 298° 35′, &c., and this corresponds to the true declination of the zone, as indicated by a collation with Argelander's zones. B. A. G.

REMARKS.

(127) 7. Micrometer reading assumed as $46^r.955$ instead of $47^r.955$.

(127) 9. Transit over T. III assumed to have been at 23^s instead of 33^s.

(127) 18. Micrometer reading assumed as 3^t 43^r instead of 5^t 43^r.

(127) 19. Micrometer reading assumed as 1^t $34^r.380$ instead of 1^t $44^r.380$.

(127) 21. Micrometer reading assumed as $45^r.850$ instead of $46^r.850$.

(127) 22. Micrometer reading assumed as $50^r.683$ instead of $51^r.683$.

(127) 26. Micrometer reading assumed as 7^t $32^r.088$ instead of 7^t $44^r.088$.

(127) 30. Micrometer reading assumed as $49^r.956$ instead of $50^r.956$.

(127) 31. Micrometer reading assumed as $46^r.882$ instead of $47^r.882$.

(127) 38. Declination 10′ discordant from Arg. 307, 100.

(127) 43. Micrometer reading assumed as $40^r.672$ instead of $41^r.672$.

(127) 44. Micrometer reading assumed as $40^r.672$ instead of $41^r.672$.

ZONE 127. JUNE 12. Ms. D₀ = −22° 3′ 0″—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
50	.	24.5	36.5	48.	0.2	. .	. .	. .	. .	. .	18 49 0.14	+22.37	. .	.	2	47.250	40 25.32	− 9.19	− 2.77	18 49 22.51	22 43 37.3
51	10	59.5	11.5	23.2	. .	. .	. .	. .	. .	. .	18 57 35.18	22.39	. .	IV.	2	47.465	40 17.92	8.13	2.76	18 57 57.57	43 28.8
52	10	32.	44.5	56.2	. .	. .	. .	. .	. .	. .	19 0 8.07	22.39	. .	IV.	3	34.970	33 27.72	7.86	2.67	19 0 30.46	36 38.2
53	10	. .	21.5	33.	45.	. .	. .	. .	. .	. .	2 45.08	22.40	−0.01	V.	7	44.430	7 4.00	7.56	0.31	3 7.47	10 11.9
54	9	11.6	24.	36.2	. .	. .	. .	. .	. .	. .	4 47.77	22.40	0.01	IV.	6	40.240	15 22.50	7.33	0.92	5 10.16	18 30.8
55	10	. .	. .	. .	. .	. .	36.	48.	. .	. .	5 12.14	22.41	0.01	VII.	6	37.960	16 40.79	7.29	1.01	5 34.54	19 49.1
56	10	5.5	17.3	29.	. .	. .	. .	. .	. .	. .	7 41.11	22.41	−0.01	IV.	7	39.530	9 18.37	7.01	0.52	8 3.51	12 25.9
57	9	. .	52.	4.	16.	. .	. .	. .	. .	. .	12 15.91	+22.42	. .	V.	3	42.025	34 42.40	6.50	2.36	12 38.33	37 51.3
58	9	. .	. .	. .	. .	. .	. .	. .	. .	. .	19	. . .	−0.01	V.	5	51.850	17 58.28	− 6.38	− 1.06	19 (13)	22 21 5.7
ZONE 128. JUNE 16. Ms. D₀ = −23° 55′ 50″.																					
1	9	. .	. .	51.5	4.2	. .	. .	. .	. .	. .	15 46 3.78	+20.99	. .	V.	5	31.850	28 52.77	−10.80	− 2.92	15 46 24.77	24 24 56.5
2	8.9	. .	. .	. .	15.	27.3	39.	. .	. .	. .	49 15.05	20.99	. .	VII.	4	21.440	40 39.10	10.69	3.82	49 36.04	36 43.6
3	9	58.5	. .	22.5	34.2	46.2	. .	. .	. .	. .	52 34.58	20.99	. .	VI.	4	47.412	25 44.57	10.59	2.68	51 55.57	21 47.8
4	9	. .	. .	55.	7.2	. .	. .	. .	. .	. .	53 7.14	20.99	. .	IV.	6	44.880	12 42.67	10.57	1.70	53 28.13	8 44.9
5	9	. .	. .	. .	54.	5.5	. .	. .	. .	. .	53 53.76	20.99	. .	V.	5	50.030	18 26.53	10.54	2.14	54 14.75	14 29.2
6	8.9	. .	. .	. .	. .	46.	58.2	10.5	. .	. .	54 34.11	20.99	. .	VII.	4	53.250	22 23.33	10.52	2.44	54 55.10	18 26.3
7	9	27.5	40.	52.5	. .	16.2	. .	. .	. .	. .	57 4.21	20.99	. .	III.	3	40.66	35 29.42	10.44	3.42	57 25.20	31 33.3
8	8.9	. .	7.2	19.2	31.5	. .	. .	. .	. .	. .	58 31.35	20.99	. .	IV.	7	43.250	7 10.23	10.40	1.29	58 52.34	3 11.9
9	9	. .	. .	. .	. .	. .	22.	34.4	. .	. .	15 58 58.02	20.99	. .	VII.	1	45.690	47 8.06	10.38	4.31	15 59 19.01	43 12.8
10	9	. .	. .	20.	32.3	44.	. .	. .	. .	. .	16 0 32.09	20.99	. .	V.	4	51.070	23 38.65	10.33	2.53	16 0 53.08	19 41.5
11	9	. .	. .	. .	. .	28.5	. .	. .	. .	. .	1 16.47	20.99	. .	VI.	2	55.772	35 31.67	10.31	3.43	1 37.46	31 35.4
12	9	. .	. .	. .	. .	. .	32.	. .	. .	. .	2 7.72	21.00	. .	VI.	4	47.750	25 32.93	10.27	2.67	2 28.72	21 35.9
13	8.9	. .	. .	. .	24.	35.5	48.	. .	. .	. .	4 23.74	21.00	−0.01	IV.	7	46.460	5 54.11	10.19	1.20	4 44.73	1 55.5
14	10	. .	. .	. .	45.5	58.	10.5	. .	. .	. .	5 45.91	21.00	. .	V.	6	38.64	16 17.59	10.13	1.99	6 6.91	12 19.7
15	10	. .	. .	. .	55.5	. .	. .	. .	. .	. .	6 55.53	21.00	. .	V.	2	39.490	44 52.61	10.10	4.16	7 16.53	40 56.9
16	10	. .	. .	. .	. .	. .	. .	37.	. .	. .	7 0.72	21.00	. .	VII.	2	47.315	40 22.85	10.09	3.80	7 21.72	36 26.7
17	9.10	. .	. .	21.	33.5	. .	. .	. .	. .	. .	12 33.25	21.00	. .	IV.	2	45.330	41 31.45	9.88	3.90	12 54.25	37 35.2
18	9	. .	. .	. .	. .	. .	37.	. .	. .	. .	13 12.75	21.00	−0.01	VII.	7	47.882	5 4.89	9.25	1.15	13 33.74	1 5.3
19	9	. .	. .	. .	. .	7.	20.	32.5	. .	. .	14? 55.66	21.00	. .	VII.	1	51.862	44 9.91	9.78	4.05	15? 16.66	40 13.7
20	8.9	. .	36.5	48.5	0.5	. .	. .	. .	. .	. .	19 0.57	21.01	. .	IV.	4	42.740	28 25.62	9.62	2.93	19 21.58	24 28.2
21	9	. .	. .	. .	35.	47.	59.	. .	. .	. .	19 34.91	21.01	. .	VI.	6	40.042	15 29.22	9.60	1.91	19 55.92	11 30.7
22	8.9	. .	. .	. .	. .	57.5	9.5	. .	. .	. .	20 45.37	21.01	+0.01	VI.	1	39.532	50 40.32	9.55	4.60	21 6.39	46 44.5
23	9.10	. .	. .	24.5	. .	. .	. .	. .	. .	. .	23 30.52	21.01	+0.01	III.	1	36.19	52 1.07	9.43	4.70	23 57.54	48 5.2
24	9	. .	21.5	33.5	45.	. .	. .	. .	. .	. .	24 45.39	21.01	. .	IV.	2	39.93	44 37.47	9.37	4.14	25 6.40	40 41.0
25	10	. .	. .	15.	27.5	. .	. .	. .	. .	. .	26 27.26	21.01	+0.01	V.	1	31.991	55 0.17	9.31	4.90	26 48.28	51 4.4
26	10	36.2	48.5	. .	. .	. .	. .	. .	. .	. .	30 12.58	21.02	+0.01	III.	1	46.932	46 25.49	9.14	4.26	30 33.61	42 28.9
27	10	. .	37.	49.5	. .	. .	. .	. .	. .	. .	32 1.34	21.02	−0.01	III.	6	49.02	10 20.04	9.06	1.53	32 22.35	6 20.6
28	8.9	. .	. .	. .	. .	22.5	34.5	46.5	. .	. .	32 10.35	21.02	. .	VII.	6	42.192	14 15.04	9.05	1.83	32 31.37	10 15.9
29	10	. .	30.	. .	. .	. .	. .	. .	. .	. .	37 54.12	21.02	. .	II.	4	40.378	29 46.89	8.78	2.99	38 15.14	25 48.7
30	9	. .	. .	. .	. .	58.5	10.5	22.5	. .	. .	38 46.36	21.02	. .	V.	3	48.90	19 5.45	8.73	2.15	39 7.38	15 6.3
31	9	. .	. .	. .	16.	. .	40.5	. .	. .	. .	40 16.15	21.02	. .	IV.	4	46.347	26 21.37	8.66	2.73	40 37.17	22 22.8
32	9	. .	. .	. .	. .	. .	. .	36.5	. .	. .	41 0.26	21.02	. .	VII.	5	49.97	19 2.85	8.63	2.10	41 21.28	15 3.6
33	9	. .	. .	. .	. .	. .	. .	50.	. .	. .	42 13.76	21.03	. .	VII.	2	51.128	38 11.51	8.57	3.63	42 34.79	34 13.7
34	9	. .	. .	. .	. .	39.2	51.2	3.5	. .	. .	44 27.16	21.03	+0.01	VII.	1	35.632	52 54.54	8.46	4.76	44 48.20	48 57.8
35	9	. .	. .	. .	. .	. .	53.	5.5	. .	. .	45 29.05	21.03	. .	VII.	6	33.232	19 23.68	8.40	2.21	45 50.08	15 24.3
36	9.10	30.5	43.	55.	. .	. .	. .	. .	. .	. .	16 48 6.98	+21.03	. .	III.	5	44.445	21 38.92	− 8.27	− 2.39	16 48 28.01	24 17 39.6

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848. h.	s.	s.	s.	s.	s.	° ′ ″	r.
June 16, 19	+16.091	l 0.008	. .	− 0.410	+ 0.535	0 0 2.12	40.081

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848. h. m.	° ′ ″				″	″	in.	°	°
Zone 127	June 12, 18	. .	. .	. .	. .	. .	. .	30.066	66.8	58.5
	18 40	. .	. .	. .	. .	. .	. .	30.060	66.2	57.2
	19 12	. .	. .	. .	. .	. .	. .	30.062	66.2	56.8
Zone 128	June 16, 15 46	*300 15 30.	27.8	34.	33.5	31.38	31.32	30.008	83.5	79.2
	15 12	. .	. .	. .	. .	. .	. .	30.004	83.	78.8
	15 54	. .	. .	. .	. .	. .	. .	30.006	81.8	77.9

REMARKS.

(127) 52. Micrometer reading assumed as 4ᵗ 33ʳ.970 instead of 3ᵗ 34ʳ.970.

(127) 56. Micrometer reading assumed as 40ʳ.530 instead of 39ʳ.530.

(127) 58. Micrometer reading assumed as 50ʳ.850 instead of 51ʳ.850.

(128) 3. Minutes of transit assumed as 51 instead of 52.

(128) 8. Micrometer reading assumed as 44ʳ.250 instead of 43ʳ.250.

(128) 19. Micrometer reading assumed as 50ʳ.862 instead of 51ʳ.862.

(128) 23. Micrometer reading assumed as 37ʳ.19 instead of 36ʳ.19.

(128) 30. Hor. thread assumed as 5 instead of 3.

(128) 32. Micrometer reading assumed as 48ʳ.97 instead of 49ʳ.97.

* This circle-reading being manifestly erroneous, the declination was deduced from the mural zones, and the corresponding degrees and minutes, 296° 42′, adopted; while the microscope-readings have been retained as given above.

ZONE 128. JUNE 16. MS. D₀ = −23° 55′ 50″—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
37	10	. .	. .	. .	32.5	45.	. .	. .	. .	. .	16 48 32.75	+21.03	−0.01	IV.	6	43.372	13 34.62	− 8.25	− 1.78	16 48 53.77	24 9 34.6
38	10	. .	. .	. .	. .	. .	57.5	9.5	. .	. .	49 33.30	21.03	−0.01	VII.	6	44.500	12 55.53	8.19	1.73	49 54.32	8 55.4
39	8.9	. .	. .	. .	. .	. .	. .	14.	. .	. .	50 37.74	21.03	+0.01	VII.	1	41.972	49 16.14	8.14	4.48	50 58.78	45 18.8
40	9	. .	. .	34.5	46.6	58.5	. .	. .	. .	. .	52 46.56	21.04	. .	III.	5	46.95	20 12.64	8.02	4.27	53 7.60	16 14.9
41	.	. .	. .	50.	1.5	. .	. .	. .	. .	. .	54 1.80	21.04	−0.01	.	7	47.652	5 13.04	7.95	1.15	54 22.83	1 12.1
42	9	. .	. .	. .	28.	40.5	. .	. .	. .	. .	54 28.26	21.04	0.01	VII.	6	52.235	8 29.09	7.93	1.39	54 49.29	4 28.4
43	9	. .	. .	. .	. .	. .	. .	35.5	. .	. .	54 59.24	21.04	−0.01	VII.	7	47.50	5 18.05	7.90	1.16	55 20.27	1 17.1
44	9	. .	. .	. .	. .	13.	26.2	37.5	. .	. .	56 1.44	21.04	. .	VII.	4	48.960	24 51.12	7.84	2.62	56 22.48	20 51.6
45	9.10	. .	. .	. .	22.7	34.6	46.5	. .	. .	. .	16 57 22.56	+21.04	. .	VI.	4	48.60	25 3.65	− 7.75	− 2.64	16 57 43.60	24 21 4.0

ZONE 129. JUNE 26. MS. D₀ = −23° 17′ 50″.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0	Mean South Declination, 1850.0.
1	9	0.	12.4	24.2	36.3	. .	. .	. .	. .	. .	16 34 36.32	+23.78	. .	V.	4	48.715	24 59.76	−29.02	− 9.64	16 35 0.10	23 43 28.4
2	9	42.5	54.5	6.3	18.3	. .	. .	. .	. .	. .	38 18.42	23.78	. .	IV.	4	51.610	23 20.07	28.80	9.52	38 42.20	41 48.4
3	10	. .	. .	. .	43.	. .	. .	. .	. .	. .	40 43.02	23.78	. .	IV.	4	57.702	20 24.66	28.64	9.26	41 6.80	38 52.6
4	10	. .	. .	. .	. .	. .	34.	46.5	. .	. .	41 10.20	23.78	. .	VII.	4	55.908	20 51.76	28.61	9.33	41 33.98	39 19.7
5	10	. .	. .	. .	. .	57.5	10.	. .	. .	. .	42 45.75	23.78	. .	VII.	4	46.772	26 6.46	28.50	9.72	43 9.53	44 34.7
6	10	43.	55.2	7.5	19.2	. .	. .	. .	. .	. .	46 19.25	23.78	. .	V.	4	43.240	28 8.36	28.26	9.87	46 43.03	46 36.5
7	9	. .	. .	. .	. .	. .	41.5	. .	. .	. .	49 17.47	23.77	. .	VII.	4	46.10	26 29.61	28.06	9.75	49 41.24	44 57.4
8	10	. .	. .	. .	. .	34.	46.5	. .	. .	. .	52 22.28	23.77	. .	VII.	4	52.505	22 48.98	27.84	9.48	52 46.05	23 41 16.3
9	9	. .	. .	. .	. .	. .	23.5	. .	. .	. .	53 59.38	23.77	. .	VI.	2	43.45	42 36.10	27.72	10.93	54 23.15	24 1 4.8
10	9	. .	. .	. .	. .	8.	20.2	32.2	. .	. .	54 56.08	23.77	. .	VII.	2	43.105	42 47.84	27.66	10.94	55 19.85	24 1 16.4
11	9.10	. .	40.	52.5	. .	. .	. .	. .	. .	. .	57 4.24	23.77	. .	III.	5	41.740	23 12.09	27.50	9.51	57 28.01	23 41 39.1
12	9.10	. .	. .	. .	. .	54.	. .	. .	. .	. .	58 42.09	23.77	−0.01	V.	7	40.12	9 32.47	27.38	8.53	59 5.85	27 58.4
13	9.10	. .	. .	. .	. .	. .	51.	3.6	. .	. .	16 59 27.24	23.77	. .	VII.	4	41.540	29 6.68	27.33	9.94	16 59 51.01	47 34.0
14	9.10	. .	. .	. .	. .	. .	57.1	. .	. .	. .	17 0 33.05	23.77	. .	VI.	4	39.002	30 34.28	27.24	10.05	17 0 56.82	49 1.6
15	10	21.	33.5	. .	. .	. .	. .	. .	. .	. .	3 57.27	23.77	. .	III.	5	42.802	22 35.51	26.99	9.45	4 21.04	41 2.0
16	10	. .	. .	. .	. .	. .	39.	. .	. .	. .	4 14.93	23.77	. .	VII.	3	44.325	33 22.93	26.97	10.27	4 38.70	51 50.2
17	9.10	. .	. .	. .	. .	. .	39.8	52.	. .	. .	5 15.84	23.77	. .	VII.	3	42.850	34 13.74	26.89	10.32	5 39.61	23 52 41.0
18	.	. .	. .	. .	. .	51.	. .	. .	. .	. .	6 39.03	23.77	+0.01	VII.	1	41.50	49 32.36	26.78	11.46	7 2.81	24 8 0.6
19	8.9	. .	. .	. .	. .	41.	52.5	. .	. .	. .	8 28.69	23.77	+0.01	V.	1	43.354	48 28.73	26.64	11.39	8 52.47	24 6 56.8
20	9	. .	. .	. .	. .	. .	. .	10.5	. .	. .	8 34.44	23.77	. .	VII.	3	40.655	35 29.35	26.64	10.41	8 58.21	23 53 56.4
21	9.10	33.5	45.8	57.8	9.5	. .	. .	. .	. .	. .	11 9.70	23.77	+0.01	IV.	1	43.752	48 15.05	26.43	11.37	11 33.48	24 6 42.8
22	9	. .	13.	25.	. .	. .	. .	. .	. .	. .	12 36.96	23.77	−0.01	III.	7	45.210	6 37.14	26.32	8.29	13 0.72	23 25 1.8
23	9	56.	. .	20.	32.5	. .	. .	. .	. .	. .	14 32.20	23.77	. .	IV.	5	41.528	23 19.43	26.17	9.51	14 55.97	41 45.1
24	10	. .	. .	. .	. .	31.5	44.	56.5	. .	. .	15 19.97	23.77	. .	VII.	4	42.753	28 24.90	26.10	9.89	15 43.74	23 46 50.9
25	7.8	. .	. .	. .	. .	. .	. .	25.	. .	. .	16 48.94	23.77	+0.01	VII.	2	41.899	43 29.37	25.99	11.01	17 12.72	24 1 56.4
26	9	. .	3.	15.5	26.5	. .	. .	. .	. .	. .	19 27.02	23.77	+0.01	IV.	1	43.780	53 58.56	25.77	11.77	19 50.80	24 12 26.1
27	9	. .	. .	6.	18.2	. .	. .	. .	. .	. .	21 18.10	23.77	. .	IV.	4	49.193	24 43.34	25.62	9.62	21 41.87	23 43 8.6
28	9	. .	. .	. .	52.8	4.5	16.5	. .	. .	. .	21 52.58	23.77	. .	VI.	3	46.530	32 7.12	25.57	10.16	22 16.35	50 32.8
29	9	19.	31.5	43.5	55.2	. .	. .	. .	. .	. .	23 55.34	23.77	. .	IV.	3	33.972	38 45.38	25.40	10.66	24 19.11	57 11.4
30	9.10	. .	37.5	49.5	. .	. .	. .	. .	. .	. .	26 1.46	23.78	−0.01	III.	7	35.12	12 24.70	25.23	8.72	26 25.23	30 48.6
31	10	. .	40.5	. .	. .	. .	. .	. .	. .	. .	29 4.59	23.78	. .	II.	3	35.452	38 28.73	24.97	10.63	29 28.37	56 54.3
32	9	42.	54.2	6.	17.5	. .	. .	. .	. .	. .	31 17.87	23.78	. .	IV.	4	46.102	26 29.81	24.78	9.75	31 41.65	44 54.3
33	9	. .	. .	33.5	46.	57.5	. .	. .	. .	. .	34 45.69	23.78	. .	IV.	5	51.056	17 51.22	24.47	9.10	35 9.47	23 36 14.8
34	9.10	15.5	28.	39.5	. .	. .	. .	. .	. .	. .	36 51.72	23.78	+0.01	III.	1	47.615	46 1.96	24.29	11.16	37 15.51	24 4 27.4
35	10	. .	. .	. .	. .	. .	58.	. .	. .	. .	38 34.06	23.78	−0.01	VI.	6	46.25	11 55.36	24.13	8.68	38 57.83	23 30 18.2
36	9	. .	. .	. .	. .	29.8	. .	. .	. .	. .	17 39 17.88	+23.78	−0.01	V.	6	40.746	15 5.05	−24.07	− 8.90	17 39 41.65	24 33 28.0

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848.	h.	s.	s.	s.	s.	s.	° ′ ″	r.
June 26,	19	+18.866	g 0.009	. .	− 0.410	+ 0.535	0 0 1.40	40.073

INSTRUMENT READINGS.

	Date.			CIRCLE.						Barom.	Attached Thermom.	External Thermom.
				A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848.	h.	m.	° ′ ″				″	″	in.	°	°
Zone 129	June 26,	16	24	*300 53 0.	54.	4.5	4.8	0.58	0.72	30.118	78.8	74.
				. .	. .	. .	. .	. .	. .	30.120	77.5	70.0
		17	40	. .	. .	. .	. .	. .	. .	30.119	77.2	70.3
		18	0	. .	. .	. .	. .	. .	. .	30.116	76.8	69.
		18	30	. .	. .	. .	. .	. .	. .	30.116	76.2	68.8
		18	25	. .	. .	. .	. .	. .	. .	30.116	75.8	68.
		19	24	. .	. .	. .	. .	. .	. .	30.112	75.2	68.
		19	24	. .	. .	. .	. .	. .	. .	30.110	75.	67.9

REMARKS.

(129) 3. Micrometer reading assumed as 56ʳ.702 instead of 57ʳ.702.

(129) 26. Micrometer reading assumed as 33ʳ.780 instead of 43ʳ.780.

(129) 29. Transit over T. IV assumed as at 55ˢ.2 instead of 53ˢ.2, and micrometer reading as 34ʳ.972 instead of 33ʳ.972.

(129) 32. Transit over T. II assumed as at 54ˢ.2 instead of 50ˢ.2.

* 3° 33′ is written in the hand-book below the circle-reading, and an increase of the declination by 3° 33′ is evidently required, as on June 16; and the reading 297° 20′ has been adopted instead of 300° 53′, retaining, however, the microscope-readings as given.

ZONE 129. JUNE 26. MS. $D_0 = -23° 17' 50''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
37	9	. .	. .	. .	. .	. .	48.	0.2	. .	. .	17 40 23.96	+23.78	+0.01	VII.	1	39.510	50 40.91	−23.97	−11.56	17 40 47.75	24 9 6.4
38	9	. .	43.	56.	7.8	. .	. .	. .	. .	. .	42 7.59	23.78	−0.01	IV.	6	38.390	16 26.23	23.82	9.01	42 31.36	23 34 49.1
39	9.10	. .	. .	. .	20.2	32.5	44.6	. .	. .	. .	43 20.40	23.78	+0.01	IV.	1	37.312	51 56.89	23.71	11.65	43 44.19	24 10 22.2
40	10	. .	. .	16.5	. .	. .	. .	. .	. .	. .	45 28.40	23.78	0.01	III.	1	38.319	51 22.17	23.51	11.61	45 52.19	9 47.3
41	10	. .	. .	. .	. .	. .	. .	37.5	. .	. .	46 1.44	23.78	+0.01	VII.	2	42.630	43 4.20	23.46	10.98	46 25.23	24 1 28.6
42	10	. .	. .	. .	. .	. .	58.	10.	. .	. .	47 33.93	23.78	. .	VI.	3	39.945	35 53.96	23.32	10.45	47 57.71	23 54 17.7
43	9.10	. .	. .	. .	. .	58.	9.5	. .	. .	. .	48 45.78	23.78	. .	VI.	5	42.435	22 48.07	23.21	9.47	49 9.56	41 10.8
44	8.9	. .	51.	3.	15.	27.	. .	. .	. .	. .	50 15.00	23.78	. .	V.	4	47.072	25 56.36	23.07	9.71	50 38.78	44 19.1
45	9	. .	. .	26.5	38.5	50.6	. .	. .	. .	. .	51 38.59	23.78	−0.01	V.	6	42.616	14 0.64	22.95	8.83	52 2.36	23 32 22.4
46	10	. .	16.5	29.	. .	. .	. .	. .	. .	. .	54 40.77	23.78	+0.01	III.	1	36.535	52 23.63	22.67	11.68	55 4.56	24 10 48.0
47	10	. .	. .	. .	. .	. .	11.5	. .	. .	. .	54 47.34	23.78	+0.01	VI.	1	38.755	51 7.06	22.66	11.59	55 11.13	24 9 31.3
48	10	. .	. .	. .	. .	. .	. .	39.	. .	. .	56 2.90	23.78	. .	VII.	5	41.255	23 28.56	22.54	9.52	56 26.68	23 41 50.6
49	9.10	. .	. .	. .	. .	. .	24.6	36.5	. .	. .	57 0.48	23.78	. .	VII.	2	50.00	38 50.32	22.45	10.69	57 24.26	23 57 13.5
50	9.10	7.8	. .	. .	44.	. .	. .	. .	. .	. .	17 58 43.97	23.78	. .	IV.	2	44.56	41 57.98	22.29	10.90	17 59 7.75	24 0 21.2
51	9.10	. .	. .	. .	. .	. .	46.	. .	. .	. .	18 0 21.88	23.78	. .	VI.	4	21.385	40 41.11	22.14	10.83	18 0 45.66	23 59 4.1
52	8.9	. .	. .	59.	10.5	23.	. .	. .	. .	. .	3 10.85	23.79	. .	V.	5	38.575	25 1.12	21.87	9.63	3 34.64	43 22.6
53	9	. .	37.	49.	. .	. .	. .	. .	. .	. .	7 1.01	23.79	. .	III.	3	46.700	32 1.35	21.51	10.16	7 24.80	23 50 23.0
54	10	. .	. .	. .	. .	. .	. .	46.	. .	. .	7 9.94	23.79	+0.01	VII.	2	40.672	44 46.09	21.49	11.10	7 33.74	24 3 8.7
55	10	. .	. .	. .	. .	. .	. .	22.5	. .	. .	8 46.38	23.79	−0.01	VII.	6	44.50	12 55.49	21.33	8.73	9 10.16	23 31 15.6
56	10	. .	. .	12.	24.5	. .	. .	. .	. .	. .	10 24.34	23.79	0.01	IV.	7	50.162	3 46.58	21.18	8.06	10 48.12	22 5.8
57	10	. .	. .	. .	. .	. .	. .	41.	. .	. .	11 4.85	23.79	0.01	VII.	7	48.390	4 47.35	21.11	8.14	11 28.63	23 6.6
58	10	. .	47.	. .	. .	. .	. .	. .	. .	. .	14 10.85	23.79	0.01	IV.	7	46.002	6 9.88	20.81	8.23	14 34.63	24 28.9
59	10	58.5	. .	22.5	. .	. .	. .	. .	. .	. .	16 34.50	23.79	0.01	III.	6	50.448	9 30.84	20.57	8.48	16 58.28	27 49.9
60	10	. .	. .	58.	11.	22.5	. .	. .	. .	. .	17 10.56	23.79	−0.01	V.	7	35.001	12 28.80	20.51	8.70	17 34.34	30 48.0
61	10	. .	. .	. .	. .	57.5	. .	. .	. .	. .	18 45.56	23.80	. .	VI.	5	46.910	20 13.91	20.36	9.22	19 9.36	38 33.5
62	10	. .	. .	. .	. .	10.	23.	. .	. .	. .	20 58.48	23.80	. .	VI.	3	44 882	33 3.89	20.14	10.25	21 22.28	23 51 24.3
63	10	. .	. .	. .	. .	. .	13.6	26.	. .	. .	21 49.68	23.80	+0.01	VI.	1	46.755	46 31.49	20.06	11.25	22 13.49	24 4 52.8
64	10	. .	24.5	. .	48.	. .	. .	. .	. .	. .	23 48.23	23.80	. .	IV.	5	48.472	19 20.22	19.86	9.20	24 12.03	23 37 39.3
65	10	16.	28.	. .	. .	. .	. .	. .	. .	. .	26 51.90	23.80	−0.01	II.	6	49.232	10 12.64	19.55	8.55	27 15.69	28 30.7
66	10	. .	. .	. .	. .	. .	. .	51.	. .	. .	27 14.94	23.80	. .	VII.	3	42.45	34 27.52	19.52	10.35	27 38.74	52 47.4
67	8.9	. .	. .	48.	0.5	11.5	. .	. .	. .	. .	29 0.04	23.81	. .	V.	5	48.550	19 17.51	19.34	9.19	29 23.85	37 36.0
68	9	43.	55.5	7.5	. .	31.	. .	. .	. .	. .	32 19.29	23.81	. .	V.	3	37.420	37 21.02	19.01	10.57	32 43.10	23 55 40.6
69	9	. .	. .	. .	24.	37.	49.	. .	. .	. .	33 24.64	23.81	+0.01	VI.	2	34.910	48 4.72	18.90	11.38	33 48.46	24 6 25.0
70	10	. .	. .	. .	29.	41.	53.5	. .	. .	. .	35 29.15	23.81	. .	VI.	4	42.530	28 32.73	18.68	9.90	35 52.96	23 46 51.3
71	10	. .	. .	8.	. .	. .	. .	. .	. .	. .	37 20.00	23.81	. .	III.	4	43.132	28 12.08	18.50	9.87	37 43.81	46 30.4
72	10	. .	. .	14.	. .	. .	. .	. .	. .	. .	38 26.06	23.81	−0.01	IV.	7	46.470	6 28.21	18.39	8.21	38 49.86	24 44.8
73	10	50.	2.5	. .	. .	. .	. .	. .	. .	. .	41 26.32	23.82	. .	III.	4	42.870	27 46.66	18.09	9.83	41 50.14	46 4.6
74	10	5.	17.	29.	. .	. .	. .	. .	. .	. .	43 40.97	23.82	−0.01	IV.	6	42.28	14 12.24	17.86	8.82	44 4.78	32 28.9
75	9	. .	. .	. .	. .	3.	15.	. .	. .	. .	49 1.08	23.83	0.01	VI.	7	40.260	9 27.56	17.23	8.47	49 24.90	27 43.3
76	10	. .	. .	. .	. .	34.	. .	. .	. .	. .	51 22.08	23.83	0.01	V.	7	37.385	11 6.68	17.08	8.61	51 45.90	29 22.4
77	9	. .	. .	. .	. .	. .	. .	31.	. .	. .	51 54.86	23.83	−0.01	VII.	7	43.510	7 35.45	17.03	8.34	52 18.68	25 50.8
78	9.10	. .	. .	. .	. .	. .	. .	44.	. .	. .	53 7.92	23.83	. .	VII.	4	41.828	28 56.76	16.91	9.93	53 31.75	23 47 13.6
79	10	. .	. .	. .	. .	. .	. .	52.	. .	. .	54 15.88	23.83	+0.01	VII.	1	40.100	50 20.59	16.79	11.57	54 39.72	24 8 39.0
80	10	. .	40.8	52.8	4.5	. .	. .	. .	. .	. .	57 4.43	23.83	−0.01	IV.	7	38.96	10 12.45	16.49	8.54	57 28.25	23 28 27.5
81	9	41.	53.5	5.	17.	. .	. .	. .	. .	. .	18 59 17.10	23.84	0.01	IV.	7	44.860	6 49.22	16.27	8.28	18 59 40.93	25 3.8
82	9.10	. .	. .	. .	. .	19.	31.	. .	. .	. .	19 0 7.10	23.84	−0.01	V.	7	44.542	7 0.14	16.19	8.25	19 0 30.93	25 14.6
83	9.10	58.5	. .	23.	35.	. .	. .	. .	. .	. .	2 34.86	23.84	+0.01	IV.	2	46.970	40 34.97	15.93	10.84	2 58.71	58 51.7
84	9.10	. .	. .	24.5	36.5	49.	. .	. .	. .	. .	3 36.66	23.84	. .	V.	2	49.575	39 5.21	15.83	10.73	4 0.50	57 21.8
85	10	. .	. .	. .	24.	. .	48.	. .	. .	. .	19 7 24.08	+23.85	−0.01	VI.	6	48.750	10 29.23	−15.44	− 8.54	19 7 47.92	23 28 43.2

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848. h.	s.	s.	s.	s.	s.	° ′ ″	s.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848. h. m.	° ′ ″				″	″	in.	°	°
Zone 129	June 26, 20 6	. . . .	. .	. .	. .	. .	. .	30.112	75.	67.0

REMARKS.

(129) 54. Micrometer reading assumed as $39^r.672$ instead of $40^r.672$.

(129) 69. Micrometer reading assumed as $33^r.910$ instead of $34^r.910$.

(129) 72. Micrometer reading assumed as $45^r.470$ instead of $46^r.470$.

(129) 73. Micrometer reading assumed as $43^r.870$ instead of $42^r.870$.

(129) 75. Transits over T.'s V and VI assumed as 13^s and 25^s instead of 3^s and 15^s, and minutes as 50 instead of 49.

ZONE 129. JUNE 26. Ms. $D_{\circ}=-23°\ 17'\ 50''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
86	10	13.	26.	38.	. .	. .	. .	. .	. .	. .	19 9 49.72	+23.85	. .	III.	4	37.952	31 10.52	−15.20	−10.10	19 10 13.57	23 49 25.8
87	10	. .	. .	. .	46.	. .	. .	. .	. .	. .	10 46.01	23.85	. .	IV.	5	44.865	21 24.48	15.10	9.32	11 9.86	39 38.9
88	10	. .	. .	. .	. .	. .	. .	12.5	. .	. .	11 36.44	23.85	. .	VII.	3	41.182	35 11.19	15.02	10.41	12 0.29	53 26.6
89	10	. .	. .	. .	. .	. .	. .	48.	. .	. .	13 11.93	23.85	. .	VII.	4	34.492	33 9.46	14.85	10.27	13 35.78	51 24.6
90	.	. .	. .	. .	. .	58.	10.	. .	. .	. .	14 46.02	23.85	. .	VII.	5	38.872	24 50.64	14.69	9.62	15 9.87	43 5.0
91	10	. .	. .	. .	. .	. .	5.5	18.	. .	. .	15 41.70	23.86	−0.01	VII.	5	46.71	20 20.65	14.60	9.25	16 5.55	38 34.5
92	10	. .	29.	41.	52.5	5.	. .	. .	. .	. .	17 52.89	23.86	−0.01	VI.	5	46.822	20 16.94	14.37	9.24	18 16.74	38 30.6
93	10	. .	. .	20.	32.5	. .	. .	. .	. .	. .	22 32.23	23.87	. .	V.	4	31.008	35 9.72	13.90	10.41	22 56.10	53 24.0
94	10	. .	15.	. .	. .	. .	. .	. .	. .	. .	24 38.93	23.87	−0.01	II.	6	34.425	18 8.24	13.68	9.13	25 2.79	36 21.0
95	10	. .	. .	. .	. .	. .	. .	28.	. .	. .	24 51.89	23.87	0.01	VII.	5	46.450	20 29.61	13.65	9.26	25 15.75	38 42.5
96	10	. .	. .	. .	. .	. .	38.	50.	. .	. .	26 13.95	23.87	0.01	VII.	5	48.100	19 32.77	13.52	9.23	26 37.81	37 45.5
97	10	. .	. .	. .	. .	. .	47.	59.	. .	. .	27 22.97	23.87	−0.01	VII.	6	45.815	12 10.20	13.40	8.66	27 46.83	30 22.3
98	9	. .	1.	. .	. .	. .	. .	. .	. .	. .	30 24.99	23.88	. .	II.	4	44.132	27 37.54	13.09	9.74	30 48.87	45 50.4
99	9	. .	. .	. .	. .	54.	6.5	. .	. .	. .	30 42.25	23.88	. .	VI.	4	44.759	27 15.94	13.06	9.71	31 6.13	45 28.7
100	9.10	. .	. .	. .	. .	. .	. .	34.	. .	. .	30 57.90	23.88	. .	VII.	5	44.778	21 27.21	13.03	9.36	31 21.78	39 39.6
101	10	. .	. .	. .	. .	. .	. .	52.	. .	. .	32 15.96	23.88	+0.01	VII.	2	47.120	40 29.53	12.90	10.83	32 39.85	58 43.3
102	10	. .	. .	46.	58.	. .	. .	. .	. .	. .	33 57.98	23.88	+0.01	IV.	2	48.555	39 40.37	12.72	10.77	34 21.87	57 53.9
103	10	. .	. .	. .	. .	. .	. .	51.	. .	. .	34 14.95	23.88	. .	VII.	2	52.045	37 39.88	12.69	10.62	34 38.83	55 53.2
104	9.10	. .	. .	. .	. .	. .	. .	53.	. .	. .	35 16.89	23.88	−0.01	VII.	5	49.662	18 38.97	12.59	9.13	35 40.76	36 50.7
105	10	11.5	24.	36.	. .	. .	. .	. .	. .	. .	37 47.87	23.89	. .	III.	4	43.33	28 5.26	12.33	9.87	38 11.76	23 46 17.5
106	9.10	56.	8.	20.	. .	. .	. .	. .	. .	. .	40 32.06	23.89	+0.01	III.	1	45.952	46 59.24	12.06	11.30	40 55.96	24 5 12.6
107	10	. .	. .	. .	59.	. .	. .	. .	. .	. .	39 59.00	23.89	+0.01	V.	2	47.062	40 31.77	12.11	10.83	40 22.90	23 58 44.7
108	10	. .	. .	. .	. .	. .	7.	19.	. .	. .	41 42.94	23.89	. .	VII.	4	47.44	24 0.10	11.95	9.52	42 6.83	42 11.6
109	10	. .	. .	. .	. .	21.	33.	. .	. .	. .	44 9.00	23.90	. .	VI.	4	43.150	28 11.38	11.68	9.87	44 32.90	23 46 22.9
110	10	. .	46.5	. .	. .	. .	. .	. .	. .	. .	46 10.61	23.90	+0.01	II.	1	44.598	47 45.80	11.48	11.38	46 34.52	24 5 58.7
111	10	. .	56.	7.5	19.5	31.2	. .	. .	. .	. .	47 19.57	23.90	−0.01	V.	7	40.90	9 5.60	11.36	8.42	47 43.46	23 27 15.4
112	9	. .	37.5	49.5	1.5	. .	. .	. .	. .	. .	49 1.50	23.91	. .	IV.	4	47.875	25 28.73	11.19	9.67	49 25.41	43 39.6
113	9.10	. .	. .	. .	. .	52.	4.5	. .	. .	. .	49 40.26	23.91	. .	VI.	4	46.840	26 4.26	11.13	9.71	50 4.17	44 15.1
114	10	. .	6.2	18.2	. .	. .	. .	. .	. .	. .	52 30.16	23.91	−0.01	IV.	6	43.752	13 21.52	10.84	8.74	52 54.06	31 31.1
115	10	7.	19.2	31.	. .	. .	. .	. .	. .	. .	54 43.12	23.91	. .	IV.	3	46.682	32 2.01	10.63	10.16	55 7.03	23 50 12.8
116	9.10	39.	42.	54.	6.	. .	. .	. .	. .	. .	19 59 6.01	23.92	+0.01	V.	2	42.120	43 22.01	10.18	11.04	19 59 29.94	24 1 33.2
117	10	. .	37.	. .	60.	. .	. .	. .	. .	. .	20 3 0.48	23.93	. .	IV.	4	39.085	30 31.70	9.78	10.07	20 3 24.41	23 48 41.6
118	10	. .	. .	. .	. .	. .	. .	57.5	. .	. .	3 21.44	23.93	. .	.	3	42.072	34 40.54	9.74	10.39	3 45.37	52 50.7
119	9.10	. .	29.	41.	52.5	. .	. .	. .	. .	. .	20 6 52.84	+23.94	+0.01	III.	2	48.652	39 36.99	− 9.38	−10.79	20 7 16.79	23 57 47.2

ZONE 130. JULY 10. Ms. $D_{\circ}=-22°\ 40'\ 40''$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0
1	9	20.	32.2	44.	55.9	8.	. .	. .	. .	. .	17 46 55.99	+26.04	+0.01	IV.	2	46.732	40 43.16	− 4.68	− 6.79	17 47 22.04	23 21 34.6
2	10	. .	. .	. .	. .	52.	4.2	. .	. .	. .	47 40.18	26.04	. .	V.	4	46.399	26 19.55	4.61	5.75	48 6.22	7 9.9
3	10	. .	. .	23.	35.	47.2	59.5	. .	. .	. .	49 35.21	26.04	. .	IV.	2	53.412	36 53.06	4.42	6.51	50 1.25	17 44.0
4	10	. .	. .	. .	. .	. .	56.2	8.	. .	. .	50 32.19	26.04	. .	VII.	4	47.456	25 42.91	4.34	5.70	50 58.23	6 32.0
5	10	. .	. .	. .	12.	24.2	. .	. .	. .	. .	52 12.16	26.04	. .	IV.	3	51.682	29 9.77	4.17	5.94	52 38.20	9 59.9
6	9.10	. .	. .	. .	. .	. .	15.	27.	. .	. .	52 51.09	26.04	. .	VII.	5	46.446	20 29.76	4.11	5.33	53 17.13	1 19.2
7	10	. .	. .	. .	. .	. .	. .	41.	. .	. .	54 5.08	26.04	. .	VII.	4	44.825	27 13.53	3.99	5.81	54 31.12	8 3.3
8	10	. .	16.	28.	. .	. .	. .	. .	. .	. .	57 39.89	26.04	. .	III.	5	44.00	21 54.24	3.65	5.43	58 5.93	2 43.3
9	8.9	. .	. .	. .	13.	25.	. .	. .	. .	. .	58 13.07	26.04	. .	IV.	4	46.855	26 3.87	3.59	5.73	17 58 39.11	23 6 53.2
10	9	. .	. .	. .	45.	57.	. .	. .	. .	. .	17 59 45.08	26.04	−0.01	IV.	6	43.555	13 28.32	3.44	4.83	18 0 11.11	22 54 16.6
11	9	. .	10.5	22.5	. .	. .	. .	. .	. .	. .	18 1 34.44	+26.04	+0.01	III.	2	45.280	41 33.15	− 3.26	− 6.84	18 2 0.49	23 22 23.2

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848. h.	s.	s.	s.	s.	s.	° ′ ″	r.
July 10, 16	+21.152	l 0.047	. .	− 0.410	+ 0.535	0 0 2.33	40.019

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848. h. m.	° ′ ″				″	″	in.	°	°
Zone 130	July 10, 17 46	*301 30 30.	22.	32.2	32.	29.20	29.05	30.176	75.2	72.3
	. .	. .	. .	. .	. .	. .	. .	30.172	75.2	72.

REMARKS.

(129) 94. Micrometer reading assumed as $35^{r}.425$ instead of $34^{r}.425$.

(129) 108. Micrometer reading assumed as $50^{r}.44$ instead of $47^{r}.44$.

*This zone had −3° 33′ written under the circle-reading; and as a collation with the mural zones indicates that the circle-reading should have been about 297° 57½′, the value 297° 57′ has been adopted, with the microscope-reading as given.

ZONE 130. JULY 10. Ms. D₀ = −22° 40′ 40″—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
12	8.9	54.	6.	18.2	30.	. .	. .	. .	. .	. .	18 3 30.00	+26.04	. .	IV.	4	43.563	27 57.27	− 3.08	− 5.86	18 3 56.04	23 8 46.2
13	10.11	. .	. .	. .	. .	28.	40.	. .	. .	. .	5 16.02	26.04	. .	VII.	5	40.002	24 11.73	2.91	5.60	5 42.06	5 0.2
14	10	. .	. .	. .	. .	16.2	. .	. .	. .	. .	7 4.29	26.04	. .	V.	3	42.990	34 9.16	2.72	6.30	7 30.33	14 58.2
15	10	. .	. .	. .	. .	. .	. .	50.	. .	. .	18 8 14.07	+26.04	. .	VII.	3	35.360	38 31.76	− 2.62	− 6.60	18 8 40.11	23 19 21.0

ZONE 131. JULY 17. Ms. D₀ = −22° 40′ 30″.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
1	10	56.	8.2	. .	. .	. .	. .	. .	. .	. .	17 11 31.93	+28.32	−0.01	III.	5	48.020	19 35.76	−14.78	− 7.28	17 12 0.24	23 0 27.8
2	9.10	. .	. .	. .	31.8	44.	56.	. .	. .	. .	12 31.96	28.32	+0.01	VII.	2	40.739	44 9.34	14.71	9.00	13 0.29	25 3.0
3	9	53.	5.2	17.2	29.	. .	. .	. .	. .	. .	16 29.03	28.31	. .	IV.	5	45.68	20 56.40	14.41	7.37	16 57.34	1 48.2
4	10	42.	54.	6.	. .	. .	. .	. .	. .	. .	19 17.94	28.30	+0.01	III.	2	41.622	37 54.68	14.21	8.56	19 46.25	23 18 47.4
5	10	. .	. .	21.	33.5	45.2	. .	. .	. .	. .	20 33.29	28.30	−0.01	V.	6	41.718	8 47.09	14.13	6.50	21 1.58	22 49 37.7
6	10	. .	. .	. .	. .	41.	53.5	. .	. .	. .	21 29.36	28.30	. .	VI.	5	43.115	22 24.65	14.05	7.47	21 57.66	23 3 16.2
7	10	47.	. .	. .	. .	. .	. .	. .	. .	. .	24 22.86	28.29	−0.01	I.	5	51.808	16 50.60	13.83	7.09	24 51.14	22 57 41.5
8	9	. .	. .	. .	. .	41.5	53.5	5.	. .	. .	24 29.44	28.29	−0.01	VII.	5	52.242	14 13.31	13.83	7.12	24 57.72	22 55 4.2
9	10	36.	48.5	0.5	12.2	. .	. .	. .	. .	. .	28 12.25	28.29	. .	IV.	3	38.650	36 38.68	13.55	8.45	28 40.54	23 17 30.7
10	10	. .	. .	. .	. .	. .	10.	22.	. .	. .	28 46.09	28.28	. .	VII.	5	37.985	25 21.21	13.50	7.69	29 14.37	23 6 12.4
11	10	. .	. .	. .	22.	34.	46.	58.5	. .	. .	30 22.21	28.28	−0.01	VII.	6	36.538	17 29.77	13.38	7.14	30 50.48	22 58 20.3
12	9.10	. .	23.	. .	46.5	. .	. .	. .	. .	. .	32 46.70	28.28	. .	IV.	3	40.720	35 27.38	13.19	8.38	33 14.98	23 16 19.0
13	9	. .	. .	. .	40.	52.5	5.	. .	. .	. .	34 40.52	28.27	+0.01	VII.	1	31.270	55 24.76	13.05	9.80	35 8.80	23 36 17.6
14	9	. .	. .	. .	18.	. .	. .	. .	. .	. .	38 18.05	28.27	−0.01	IV.	6	42.98	13 48.12	12.77	6.88	38 46.31	22 54 37.8
15	8.9	. .	. .	. .	. .	59.	. .	23.	. .	. .	38 47.08	28.27	. .	VII.	4	40.588	29 39.49	12.73	7.98	39 15.35	23 10 30.2
16	10	. .	. .	. .	41.	53.	. .	. .	. .	. .	40 41.04	28.26	. .	IV.	5	40.665	23 49.16	12.59	7.57	41 9.30	23 4 39.3
17	9	. .	. .	. .	34.	46.	58.	. .	. .	. .	41 34.12	28.26	−0.01	IV.	7	36.965	11 21.18	12.52	6.71	42 2.37	22 52 10.4
18	10	50.5	13.	. .	. .	. .	. .	. .	. .	. .	17 45 26.51	28.25	−0.01	I.	6	39.220	15 57.38	12.32	7.03	17 45 54.75	22 56 46.7
19	10	. .	. .	. .	. .	. .	37.	49.	. .	. .	18 8 13.06	28.22	. .	VII.	3	34.944	38 46.08	10.40	8.63	18 8 41.28	23 19 35.1
20	10	. .	. .	. .	. .	. .	41.	53.5	. .	. .	9 17.33	28.21	. .	VII.	5	36.204	26 22.46	10.31	7.75	9 45.54	7 10.5
21	10	. .	. .	. .	. .	. .	44.	56.	. .	. .	10 20.06	28.21	+0.01	VII.	2	45.200	41 35.67	10.22	8.84	10 48.28	22 24.7
22	10	. .	. .	. .	. .	. .	. .	37.	. .	. .	11 1.12	28.21	+0.01	VII.	2	43.406	42 37.48	10.17	8.91	11 29.34	23 23 26.6
23	9	. .	. .	. .	. .	41.	53.	5.	. .	. .	12 29.11	28.21	−0.01	VII.	5	50.280	18 17.69	10.05	7.18	12 57.31	22 59 4.9
24	10	. .	. .	. .	. .	14.	. .	38.	. .	. .	14 2.09	28.21	. .	VII.	4	46.610	26 12.05	9.92	7.74	14 30.30	23 6 59.7
25	10	. .	. .	. .	. .	47.	59.	. .	. .	. .	15 35.10	28.21	. .	V.	5	42.912	22 31.72	9.80	7.47	16 3.31	3 19.0
26	10	. .	. .	. .	. .	. .	. .	46.	. .	. .	16 10.09	28.21	. .	VII.	4	42.23	28 42.93	9.75	7.91	16 38.30	9 30.6
27	9	57.5	10.	. .	33.5	. .	. .	. .	. .	. .	18 35.61	28.20	. .	I.	4	40.44	29 44.58	9.56	7.98	19 3.81	23 10 32.1
28	10	. .	. .	. .	9.	21.5	. .	. .	. .	. .	20 9.38	28.20	−0.01	V.	7	46.880	5 39.61	9.43	6.29	20 37.57	22 46 25.3
29	10	. .	. .	. .	45.	. .	10.	21.	. .	. .	21 45.06	28.20	. .	VII.	2	51.002	44 0.28	9.30	9.01	22 13.26	23 24 48.6
30	10	. .	. .	41.	53.	5.	. .	. .	. .	. .	28 52.99	28.19	. .	IV.	3	45.505	32 42.55	8.71	8.20	29 21.18	13 29.5
31	9	. .	. .	. .	. .	. .	52.	4.	. .	. .	30 28.06	28.18	. .	VII.	2	51.980	37 42.12	8.58	8.55	30 56.24	18 29.2
32	10	4.2	17.	. .	. .	. .	. .	. .	. .	. .	32 40.58	28.18	+0.01	II.	1	49.350	45 2.11	8.39	9.09	33 8.77	25 49.6
33	10	. .	. .	. .	. .	. .	. .	14.	. .	. .	32 38.11	28.18	. .	VII.	2	56.758	34 57.52	8.40	8.36	33 6.29	15 44.3
34	10	. .	. .	. .	. .	53.	4.5	. .	. .	. .	34 40.83	28.18	. .	VI.	4	42.906	28 19.80	8.24	7.88	35 9.01	23 9 5.9
35	10	17.	. .	. .	. .	. .	. .	. .	. .	. .	37 52.76	28.17	−0.01	I.	7	42.820	7 59.23	7.97	6.45	38 20.92	22 48 43.6
36	8.9	. .	16.	29.	40.	52.	. .	. .	. .	. .	40 40.24	28.17	. .	II.	5	46.010	20 10.48	7.77	7.31	41 8.41	23 0 55.6
37	10	. .	. .	. .	. .	. .	27.	. .	. .	. .	41 3.13	28.17	−0.01	VI.	5	49.252	18 18.80	7.71	7.18	41 31.29	22 59 3.7
38	10	. .	12.5	. .	. .	. .	. .	. .	. .	. .	43 36.52	28.17	+0.01	II.	1	37.398	51 53.83	7.50	9.59	44 4.70	23 32 40.9
39	5	. .	. .	27.	39.	51.	. .	. .	. .	. .	44 39.05	28.17	−0.01	IV.	6	41.205	14 49.26	7.42	6.93	45 7.21	22 55 33.6
40	6	. .	. .	. .	35.	47.	59.5	. .	. .	. .	46 35.30	28.16	−0.01	VI.	7	38.520	10 27.50	7.26	6.63	47 3.45	22 51 11.4
41	10	. .	. .	. .	. .	. .	. .	37.	. .	. .	18 47 1.12	+28.16	. .	VII.	3	34.180	39 12.40	− 7.23	− 8.66	18 47 29.28	23 19 58.3

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848.	h.	s.	s.	s.	s.	s.	° ′ ″	r.
July 17,	21	+23.326	g 0.018	. .	− 0.410	+ 0.535	0 0 2.94	40.058

INSTRUMENT READINGS.

	Date.			CIRCLE.						Barom.	Attached Thermom.	External Thermom.
				A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848.	h.	m.	° ′ ″				″	″	in.	°	°
Zone 131	Jnly 17,	17	11	297 57 30.	27.5	35.4	36.	32.33	32.22			
		17	28	. .	. .	. .	. .	. .	. .	30.106	74.	63.9
		18	34	. .	. .	. .	. .	. .	. .	30.100	72.2	62.4
			34	. .	. .	. .	. .	. .	. .	. .	. .	62.2
		19	16	. .	. .	. .	. .	. .	. .	30.104	70.8	61.2

REMARKS.

(131) 4. Micrometer reading assumed as $51^r.622$ instead of $41^r.622$.

(131) 5. Micrometer reading assumed as $51^r.718$ instead of $41^r.718$.

(131) 7. Micrometer reading assumed as $52^r.808$ instead of $51^r.808$.

(131) 8. Micrometer reading assumed as 6^t $42^r.242$ instead of 5^t $52^r.242$.

(131) 18. Time of transit over T. II assumed as 3^s instead of 13^s.

(131) 27. Time of transit over T. I assumed as $57^s.5$ instead of $37^s.5$.

(131) 29. Micrometer reading assumed as $41^r.002$ instead of $51^r.002$.

(131) 36. Micrometer reading assumed as $47^r.010$ instead of $46^r.010$.

(131) 37. Micrometer reading assumed as $50^r.252$ instead of $49^r.252$.

Zone 131. July 17. Ms. $D_0 = -22° 40' 30''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
42	7	. .	. .	. .	54.	. .	. .	. .	. .	. .	18 48 54.11	+28.16	−0.01	IV.	7	52.680	2 19.85	− 7.07	− 6.05	18 49 22.26	22 43 3.0
43	10	. .	. .	. .	. .	17.	. .	. .	. .	. .	51 5.10	28.16	. .	V.	4	50.808	23 47.67	6.86	7.56	51 33.26	23 4 32.1
44	9	. .	. .	. .	7.	19.	31.	. .	. .	. .	52 7.12	28.16	−0.01	IV.	6	43.750	13 21.59	6.81	6.83	52 35.27	22 54 5.2
45	10	38.	. .	52.	. .	. .	. .	. .	. .	. .	54 13.88	28.15	−0.01	III.	6	41.300	14 45.95	6.64	6.93	54 42.02	22 55 29.5
46	9	. .	. .	. .	43.	55.	7.	. .	. .	. .	54 43.05	28.15	. .	VI.	4	46.870	26 3.24	6.60	7.73	55 11.20	23 6 47.6
47	10	. .	. .	18.	31.	. .	. .	. .	. .	. .	56 30.48	28.15	. .	IV.	5	41.275	23 28.14	6.45	7.54	56 58.63	23 4 12.1
48	10	. .	. .	. .	. .	. .	27.	. .	. .	. .	57 51.03	28.15	−0.01	VI.	7	41.728	8 37.00	6.34	6.49	57 17.17	22 49 19.8
49	10	. .	. .	. .	. .	53.	. .	. .	. .	. .	58 41.09	28.15	+0.01	V.	2	42.148	43 21.05	6.27	8.96	59 9.25	23 24 6.3
50	9	. .	. .	. .	. .	. .	. .	48.	. .	. .	18 59 12.03	28.15	−0.01	VII.	7	40.280	44 25.16	6.23	9.05	18 59 40.17	25 10.5
51	9	. .	. .	. .	. .	. .	. .	39.	. .	. .	19 0 3.10	28.15	+0.01	VII.	2	40.702	44 45.06	6.17	9.08	19 0 31.26	25 30.3
52	10	. .	. .	. .	. .	. .	23.	35.	. .	. .	2 59.07	28.14	. .	VII.	3	40.460	36 10.53	5.93	8.46	3 27.21	16 54.9
53	10	. .	. .	. .	28.	. .	. .	. .	. .	. .	4 27.96	28.14	. .	F. W.	.	40.058	29 58.01	5.81	8.00	4 56.10	10 41.8
54	10	33.	. .	. .	. .	. .	. .	. .	. .	. .	8 8.98	28.14	. .	I.	4	39.980	30 0.45	5.51	8.00	8 37.12	10 44.0
55	10	35.	48.	. .	. .	. .	. .	. .	. .	. .	11 11.46	28.14	. .	I.	3	34.414	39 4.34	5.26	8.67	11 39.60	19 48.3
56	10	. .	. .	. .	27.	. .	52.	. .	. .	. .	12 27.50	28.14	. .	IV.	4	31.97	34 36.61	5.16	8.34	12 55.64	15 20.1
57	10	58.	10.	. .	. .	. .	. .	. .	. .	. .	14 33.96	28.14	. .	II.	3	32.590	40 7.33	5.00	8.75	15 2.10	20 51.1
58	10	. .	. .	. .	4.	. .	. .	. .	. .	. .	15 4.02	28.13	+0.01	IV.	2	36.175	46 46.83	4.95	9.23	15 32.16	27 31.0
59	9	. .	. .	. .	. .	. .	51.	2.	. .	. .	16 26.56	28.13	. .	VII.	3	34.250	39 9.99	4.85	8.68	16 54.69	19 53.5
60	10	. .	. .	. .	. .	47.	59.	. .	. .	. .	19 35.08	28.13	. .	VI.	4	40.53	29 41.63	4.59	7.98	19 3.21	10 24.2
61	10	. .	. .	. .	. .	. .	33.	. .	. .	. .	19 23 57.08	+28.13	. .	VI.	5	42.375	22 50.15	− 4.31	− 7.48	19 23 25.21	23 3 31.9

Zone 132. July 18. Maj. $D_0 = -23° 18' 30''$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	8	. .	. .	57.2	9.	22.	. .	. .	. .	. .	17 4 9.40	+28.51	. .	IV.	4	34.635	33 4.81	−20.72	− 8.24	17 4 37.91	23 52 3.8
2	7	. .	. .	59.	. .	23.	. .	. .	. .	. .	5 11.01	28.49	. .	.	4	33.207	33 54.00	20.62	8.29	5 39.50	23 52 52.9
3	9	. .	. .	22.8	. .	46.5	. .	. .	. .	. .	6 34.62	28.49	+0.01	.	1	42.125	49 11.11	20.48	9.42	7 3.12	24 8 11.0
4	6	. .	. .	. .	23.0	35.5	47.5	. .	. .	. .	8 23.30	28.49	0.01	V.	1	43.970	48 7.52	20.33	9.34	8 51.80	7 7.2
5	8	28.5	40.3	52.4	4.0	. .	. .	. .	. .	. .	11 4.35	28.48	+0.01	IV.	1	44.550	47 47.57	20.08	9.32	11 32.84	24 6 47.0
6	8	55.2	7.5	19.2	31.4	43.4	. .	. .	. .	. .	12 31.34	28.48	−0.01	IV.	7	45.935	6 12.19	19.94	6.28	12 59.81	23 25 8.4
7	8	51.4	3.2	15.2	26.5	39.	. .	. .	. .	. .	14 27.08	28.47	. .	IV.	5	42.275	22 53.70	19.76	7.50	14 55.55	41 51.0
8	9	. .	. .	. .	. .	27.0	38.8	. .	. .	. .	15 14.90	28.47	. .	IV.	4	45.521	27 58.71	19.68	7.86	15 43.37	23 46 56.2
9	4	. .	20.5	32.4	44.2	56.2	. .	. .	. .	. .	16 44.34	28.47	+0.01	IV.	2	42.845	42 57.06	19.54	8.95	17 12.82	24 1 55.6
10	8	. .	. .	9.5	. .	33.0	. .	58.7	. .	. .	19 21.66	28.46	+0.01	VII.	1	34.59	53 30.39	19.28	9.73	19 50.13	24 12 29.4
11	8	49.2	1.2	. .	. .	. .	. .	. .	. .	. .	21 13.19	28.46	. .	III.	5	40.010	24 11.69	19.08	7.59	21 41.65	23 43 8.4
12	5	. .	. .	35.2	47.3	59.2	. .	. .	. .	. .	21 47.23	28.46	. .	IV.	4	37.300	31 33.00	19.04	8.12	22 15.69	23 50 30.2
13	9	. .	. .	9.5	21.	33.7	. .	. .	. .	. .	23 21.39	28.45	+0.01	IV.	1	35.021	53 15.82	18.88	9.72	23 49.85	24 12 14.4
14	9	. .	. .	. .	. .	. .	14.2	26.	. .	. .	23 50.02	28.45	. .	V.	3	35.601	38 23.69	18.84	8.61	24 18.47	23 57 21.1
15	9	. .	. .	. .	. .	. .	. .	33.	. .	. .	23 56.93	28.45	. .	IX.	4	34.502	33 8.80	18.83	8.24	24 25.38	52 5.9
16	8	. .	. .	. .	55.5	7.4	. .	. .	. .	. .	25 55.52	28.45	−0.01	VI.	7	35.843	11 59.70	18.64	6.70	26 23.96	30 55.0
17	8	31.4	43.5	55.5	7.5	19.4	. .	. .	. .	. .	29 7.49	28.44	. .	IV.	3	36.38	37 56.88	18.32	8.58	29 35.93	56 53.8
18	7	36.5	48.6	0.5	12.4	24.4	. .	. .	. .	. .	31 12.50	28.44	. .	IV.	5	36.75	26 4.01	18.11	7.73	31 40.94	44 59.8
19	8	. .	24.2	36.	48.	0.4	. .	. .	. .	. .	32 48.16	28.43	. .	IV.	6	31.33	20 29.42	17.94	7.32	33 16.59	39 24.7
20	7	4.2	16.5	28.2	40.4	52.5	4.5	16.5	. .	. .	34 40.40	28.43	−0.01	IV.	6	36.72	17 23.76	17.76	7.09	35 8.82	36 18.6
21	7	. .	. .	. .	. .	65.4	. .	29.	. .	. .	35 53.18	28.43	. .	VI.	5	45.97	20 46.29	17.63	7.34	36 21.61	39 41.3
22	6	. .	. .	. .	. .	16.2	28.	40.	. .	. .	37 4.06	28.42	−0.01	VII.	6	35.165	18 17.05	17.51	7.16	37 32.47	37 11.7
23	9	27.2	39.5	. .	. .	. .	. .	. .	. .	. .	39 3.30	28.42	0.01	III.	6	39.407	15 51.20	17.22	6.99	39 31.71	34 45.4
24	8	. .	. .	49.	1.4	13.8	26.	37.2	. .	. .	42 1.49	28.41	−0.01	VII.	6	33.978	18 57.95	17.00	7.21	42 29.89	23 37 52.2
25	8	. .	. .	. .	. .	. .	. .	51.5	. .	. .	17 43 15.35	+28.41	+0.01	VII.	1	38.28	51 23.28	−16.88	− 9.59	17 43 43.77	24 10 19.8

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848.	h.	s.	s.	s.	s.	s.	° ′ ″	r.
July 18,	15	+23.638	g 0.023	. .	− 0.410	+ 0.535	0 0 3.57	40.021

INSTRUMENT READINGS.

	Date.			CIRCLE.						Barom.	Attached Thermom.	External Thermom.
				A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848.	h.	m.	° ′ ″				″	″	in.	°	°
Zone 132	July 18,	17	4	297 19 27.2 27.0	25.5 26.4	32.8 32.7	34.2 32.2	. .	29.75	30.214	75.2	69.1
		17	20	. .	. .	. .	. .	. .	. .	. .	. .	68.0
		17	40	. .	. .	. .	. .	. .	. .	30.222	74.0	67.7
		18	0	. .	. .	. .	. .	. .	. .	. .	. .	67.3
		18	20	. .	. .	. .	. .	. .	. .	30.228	73.3	67.0
		18	40	. .	. .	. .	. .	. .	. .	. .	. .	66.8
		19	20	. .	. .	. .	. .	. .	. .	30.218	72.2	65.8

REMARKS.

(131) 45. Time of transit over T. III assumed as 2^s instead of 52^s.

(131) 48. Transit over T. VII assumed to have been recorded over T. VI, and minutes as 56 instead of 57.

(131) 50. Hor. thread assumed as 2 instead of 7.

(131) 51. Micrometer reading assumed as $39^r.702$ instead of $40^r.702$.

(131) 52. Micrometer reading assumed as $39^r.460$ instead of $40^r.460$.

(131) 60. Minutes assumed as 18 instead of 19.

(131) 61. Transit over T. VII assumed to have been recorded over T. VI, and minutes as 22 instead of 23.

(132) 3. Double.

(132) 8. Micrometer reading assumed as $43^r.521$ instead of $45^r.521$.

(132) 11. Transits over T.'s II and III assumed to have been recorded over T.'s I and II.

ZONE 132. JULY 18. MAJ. $D_0 = -23^\circ\ 18'\ 30''$.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
26	9	. .	. .	. .	. .	. .	48.5	60.5	. .	. .	17 45 24.36	+28.41	+0.01	VI.	1	39.060	50 56.57	−16.65	− 9.56	17 45 52.78	24 9 52.8
27	6	. .	. .	. .	29.	41.2	53.4	. .	. .	. .	47 29.18	28.40	. .	VII.	3	40.080	35 49.16	16.42	− 8.44	47 57.58	23 54 44.0
28	.	. .	. .	. .	. .	. .	33.7	45.6	. .	. .	17 50 9.58	28.40	. .	.	.	. .	. . .	16.14	. .	17 50 37.98	
29	5	5.	. .	. .	. .	. .	. .	. .	. .	. .	18 0 41.14	28.38	. .	.	4	42.21	28 43.88	15.01	− 7.91	18 1 9.52	23 47 36.8
30	4	. .	. .	. .	6.	17.5	. .	. .	. .	. .	2 5.76	28.38	. .	.	5	39.14	24 41.69	14.86	7.61	2 34.14	43 34.2
31	7	. .	. .	. .	. .	22.	34.0	. .	. .	. .	3 10.05	28.38	−0.01	.	6	37.30	17 3.77	14.75	7.09	3 38.42	35 55.6
32	8	. .	. .	30.3	41.2	54.	. .	. .	. .	. .	4 41.85	28.37	. .	.	5	41.31	23 26.93	14.60	7.52	5 10.22	42 19.0
33	8	. .	. .	. .	. .	39.	. .	3.	. .	. .	5 26.99	28.37	. .	VII.	3	36.87	37 39.73	14.50	8.58	5 55.36	23 56 32.8
34	8	. .	. .	. .	. .	39.8	. .	4.0	. .	. .	5 27.88	28.37	+0.01	VII., V.	2	42.242	43 17.40	14.49	9.00	5 56.26	24 2 10.9
35	6	. .	. .	. .	. .	. .	19.8	32.	. .	. .	6 55.82	28.37	. .	VI.	3	36.685	37 46.27	14.34	8.58	7 24.19	23 56 39.2
36	7	. .	. .	. .	. .	. .	. .	35.2	. .	. .	7 59.09	28.37	−0.01	VII., V.	6	33.205	19 24.42	14.22	7.23	8 27.45	38 15.9
37	8	. .	. .	. .	. .	. .	. .	. .	35.5	. .	8 41.78	28.37	0.01	.	7	35.000	12 28.86	14.14	6.50	9 10.14	31 19.5
38	8	. .	. .	. .	. .	. .	. .	31.5	. .	. .	9 55.38	28.36	−0.01	.	7	35.332	12 17.42	14.01	6.49	10 23.73	23 31 7.9
39	8	. .	. .	. .	. .	25.4	37.5	. .	. .	. .	11 13.40	28.36	+0.01	VI.	3	30.58	41 16.56	13.87	8.85	11 41.77	24 0 9.3
40	9	. .	. .	. .	. .	. .	. .	33.5	. .	. .	11 57.44	28.36	+0.01	VII, VIII	2	41.85	43 30.90	13.79	9.01	12 25.81	24 2 23.7
41	9	. .	. .	. .	. .	. .	31.	42.7	. .	. .	13 6.82	28.36	−0.01	VII.	7	36.40	11 40.37	13.66	6.65	13 35.17	23 30 30.7
42	8	. .	. .	. .	. .	. .	. .	. .	36.3	. .	13 42.50	28.36	+0.01	II.	2	36.855	46 22.81	13.59	9.23	14 10.87	24 5 15.6
43	9	53.5	5.0	17.5	29.2	. .	. .	. .	. .	. .	16 29.30	28.35	−0.01	.	6	41.238	14 48.13	13.28	6.84	16 57.64	23 33 38.2
44	7	. .	. .	. .	5.5	17.4	29.2	. .	. .	. .	17 5.44	28.35	0.01	.	6	45.85	12 9.16	13.21	6.69	17 33.78	30 59.1
45	7	5.	. .	29.	. .	. .	. .	. .	. .	. .	18 41.00	28.35	−0.01	IV.	6	46.662	11 41.29	13.04	6.66	19 9.34	30 31.0
46	7	. .	13.5	25.7	37.4	. .	. .	. .	. .	. .	19 37.54	28.35	. .	IV.	3	36.58	37 49.99	12.93	8.59	20 5.89	56 41.5
47	7	. .	. .	41.8	54.8	. .	. .	. .	. .	. .	19 54.28	28.35	. .	VII.	3	38.470	36 44.61	12.90	8.51	20 22.63	55 36.0
48	9	. .	. .	. .	. .	. .	. .	36.0	. .	. .	20 59.96	28.35	. .	VII.	3	32.642	40 5.37	12.78	8.76	21 28.31	58 56.9
49	9	7.3	19.5	31.2	. .	. .	. .	. .	. .	. .	23 43.33	28.34	−0.01	.	6	34.238	18 49.26	12.48	7.19	24 11.66	23 37 38.9
50	5	. .	. .	. .	. .	. .	. .	11.1	. .	. .	23 34.95	28.34	+0.01	VII., V.	1	33.74	53 59.51	12.48	9.80	24 3.30	24 12 51.8
51	4	. .	. .	. .	. .	. .	. .	51.	. .	. .	24 14.88	28.34	+0.01	VII., V.	2	31.427	49 29.94	12.42	9.46	24 43.23	24 8 21.8
52	8.9	. .	. .	66.4	. .	. .	. .	. .	. .	. .	26 18.43	28.34	. .	V.	6	31.190	20 34.22	12.19	7.32	26 46.77	23 39 23.7
53	7	. .	. .	. .	. .	. .	34.5	46.	. .	. .	27 10.18	28.34	. .	.	4	33.080	33 58.38	12.09	8.31	27 38.52	52 48.8
54	8	. .	. .	. .	. .	45.2	57.2	. .	. .	. .	28 33.18	28.33	. .	.	4	37.23	31 35.42	11.94	8.12	29 1.51	50 25.5
55	4	. .	. .	. .	. .	. .	. .	. .	48.5	. .	28 54.72	28.33	−0.01	.	6	34.149	18 52.32	11.91	7.20	29 23.04	37 41.4
56	10	4.0	16.2	28.2	. .	. .	. .	. .	. .	. .	30 40.18	28.33	. .	IV.	3	42.862	34 13.60	11.70	8.32	31 8.51	53 3.6
57	6	. .	. .	. .	14.0	26.	37.7	50.2	. .	. .	32 13.94	28.33	. .	.	3	34.162	39 13.28	11.53	8.70	32 42.27	23 58 3.5
58	7	. .	. .	. .	. .	31.7	43.8	56.0	. .	. .	33 19.77	28.33	+0.01	.	2	34.682	47 38.25	11.40	9.34	33 48.11	24 6 29.0
59	10	. .	. .	. .	. .	46.5	. .	. .	. .	. .	34 34.58	28.33	−0.01	.	7	31.652	14 24.16	11.25	6.86	35 2.90	23 33 12.3
60	9	. .	. .	. .	. .	36.3	48.	60.2	. .	. .	35 24.14	28.32	. .	.	5	32.835	28 18.85	11.17	7.88	35 52.46	23 47 7.9
61	9	. .	. .	. .	. .	57.3	10.	21.5	. .	. .	36 45.54	28.32	+0.01	.	2	39.780	44 42.61	11.01	9.12	37 13.87	24 3 32.7
62	8	. .	. .	. .	. .	. .	. .	. .	9.0	. .	37 15.14	28.32	. .	II.	4	43.757	27 49.99	10.95	7.85	37 43.46	23 46 38.8
63	8	. .	. .	. .	. .	33.3	45.2	57.0	. .	. .	41 21.14	28.32	. .	VII.	5	41.510	23 19.77	10.50	7.52	41 49.46	42 7.8
64	7	. .	. .	24.2	36.	47.2	. .	. .	. .	. .	43 35.86	28.31	−0.01	IV.	6	43.044	13 45.91	10.25	6.81	44 4.16	32 33.0
65	8	. .	29.4	40.7	52.6	. .	. .	. .	. .	. .	44 52.57	28.31	. .	V.	3	41.127	35 13.33	10.08	8.39	45 20.88	54 1.8
66	9	. .	59.	10.7	22.6	34.7	46.6	. .	. .	. .	46 22.71	28.31	. .	.	3	32.264	37 26.43	9.93	8.56	46 51.02	56 14.9
67	8	. .	. .	. .	. .	. .	. .	53.0	. .	. .	47 16.87	28.31	−0.01	.	7	38.345	10 33.64	9.83	6.58	47 45.17	29 20.0
68	10	. .	. .	. .	. .	. .	51.4	3.5	. .	. .	48 27.38	28.31	. .	.	4	40.325	29 48.70	9.70	7.99	48 55.69	48 36.4
69	7	. .	. .	. .	56.3	8.0	20.2	. .	. .	. .	49 56.25	28.30	−0.01	.	7	41.000	9 2.18	9.53	6.45	50 24.54	27 48.2
70	9	. .	. .	. .	. .	17.	. .	. .	. .	. .	51 5.10	28.30	0.01	VII.	7	39.555	9 51.70	9.33	6.51	51 33.39	28 37.5
71	.	. .	. .	. .	. .	29.2	41.5	. .	. .	. .	51 17.43	28.30	−0.01	VII.	7	37.99	10 45.60	9.37	6.59	51 45.72	29 31.6
72	.	. .	. .	. .	. .	51.2	3.0	. .	. .	. .	52 39.08	28.30	. .	.	3	40.925	35 20.29	9.21	8.40	53 7.38	54 7.9
73	7	. .	. .	. .	. .	. .	. .	39.2	. .	. .	53 3.12	28.30	. .	VII.	4	42.443	28 35.58	9.18	7.90	53 31.42	23 47 22.7
74	8	. .	. .	. .	. .	. .	. .	47.5	. .	. .	18 54 11.38	+28.30	+0.01	.	1	40.784	49 57.29	− 9.04	− 9.50	18 54 39.69	24 8 45.8

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848.	h. m.	s.	s.	s.	s.	s.	° ′ ″	r.

REMARKS.

(132) 66. Micrometer reading assumed as $37^{r}.264$ instead of $32^{r}.264$, to agree with Arg. 220, 162.

INSTRUMENT READINGS.

	Date.	CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1848. h. m.	° ′ ″				″	″	in.	°	°
Zone 132	July 18, 19 50	297 19 {30.5 29.2	28.3 29.9	35.7 35.3	35.0 37.2}	. .	. .	. .	. .	65.9

ZONE 132. JULY 18. MAJ. $D_0 = -23^\circ\ 18'\ 30''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
75	9	. .	. .	. .	48.4	1.2	. .	. .	. .	. .	18 55 48.79	+28.30	. .	.	4	41.73	29 0.40	− 8.88	− 7.93	18 56 17.09	23 47 47.2
76	6	. .	35.2	47.4	59.5	. .	. .	. .	. .	. .	56 59.37	28.30	−0.01	IV.	7	39.54	9 52.48	8.74	6.51	57 27.66	23 28 37.7
77	9	. .	. .	. .	. .	51.4	3.3	15.2	. .	. .	57 39.23	28.29	+0.01	VII.	2	36.297	46 42.35	8.67	9.26	58 7.53	24 5 30.3
78	5	. .	. .	. .	12.	23.4	35.4	. .	. .	. .	59 11.70	28.29	−0.01	VII.	7	45.405	6 30.18	8.49	6.27	18 59 39.98	23 25 14.9
79	8	. .	. .	. .	. .	. .	. .	. .	42.5	. .	18 59 48.64	28.29	. .	.	4	46.957	26 0.36	8.42	7.71	19 0 16.93	44 46.5
80	7	. .	6.	17.7	29.5	42.4	. .	. .	. .	. .	19 2 29.91	28.29	. .	IV.	3	32.514	40 10.05	8.12	8.79	2 58.20	58 57.0
81	7	. .	. .	. .	36.2	48.4	. .	. .	. .	. .	3 36.38	28.29	−0.01	VI.	7	39.082	10 8.14	7.99	6.53	4 4.66	28 52.7
82	8	. .	. .	. .	. .	. .	. .	. .	25.4	. .	3 31.55	28.29	. .	II.	3	35.452	38 28.26	8.01	8.64	3 59.84	57 14.9
83	8	24.7	37.0	48.8	60.5	. .	. .	. .	. .	. .	6 0.78	28.29	. .	.	3	35.534	38 26.02	7.72	8.64	6 29.07	57 12.4
84	7	. .	56.	7.7	19.3	. .	. .	. .	. .	. .	7 19.67	28.28	−0.01	.	7	39.24	10 2.81	7.57	6.52	7 47.94	23 28 46.9
85	7	. .	. .	. .	. .	. .	10.2	22.2	. .	. .	7 46.08	28.28	+0.01	.	2	35.015	47 26.79	7.52	9.35	8 14.37	24 6 13.7
86	9	. .	. .	. .	. .	. .	. .	10.	. .	. .	8 33.93	28.28	. .	.	4	34.564	33 6.98	7.43	8.25	9 2.21	23 51 52.7
87	8	. .	. .	. .	. .	56.4	8.7	. .	. .	. .	9 44.53	28.28	. .	VII.	4	38.687	30 44.96	7.31	8.07	10 12.81	49 30.3
88	8	. .	48.	0.7	12.3	. .	. .	. .	. .	. .	11 12.34	28.28	. .	VI.	2	47.214	40 26.44	7.14	8.81	11 40.62	59 12.4
89	8	. .	. .	. .	. .	. .	. .	8.0	. .	. .	11 31.94	28.28	. .	VII.	3	41.905	34 46.29	7.10	8.36	12 0.22	53 31.8
90	8	. .	. .	. .	6.4	19.0	31.0	43.0	. .	. .	13 6.81	28.28	. .	VI.	4	35.060	32 50.06	6.92	8.22	13 35.09	51 35.2
91	8	. .	. .	21.0	32.7	. .	. .	. .	. .	. .	14 32.88	28.28	−0.01	.	6	37.198	17 7.30	6.76	7.04	15 1.15	35 51.1
92	9	. .	. .	. .	. .	. .	. .	17.	. .	. .	14 40.90	28.28	. .	.	5	39.162	24 40.66	6.75	7.62	15 9.18	43 25.0
93	8	. .	. .	. .	. .	. .	61.0	12.	. .	. .	15 36.45	28.27	. .	VII, V.	6	32.174	19 59.93	6.64	7.26	16 4.72	38 43.8
94	8	. .	24.2	35.4	47.5	. .	. .	. .	. .	. .	17 47.70	28.27	. .	.	6	32.17	20 0.50	6.40	7.26	18 15.97	38 44.2
95	9	. .	. .	. .	44.3	57.2	8.5	. .	. .	. .	21 44.64	28.27	. .	.	3	38.608	36 40.13	5.96	8.51	22 12.91	55 24.6
96	9	. .	. .	. .	. .	. .	. .	3.2	. .	. .	22 27.14	28.27	. .	.	3	42.583	34 22.94	5.87	8.34	22 55.41	53 7.2
97	9	. .	22.	. .	. .	. .	. .	. .	. .	. .	24 45.92	28.26	−0.01	.	6	35.978	17 49.20	5.62	7.08	25 14.17	36 31.9
98	9	. .	. .	. .	. .	. .	11.2	23.7	. .	. .	24 47.40	28.26	. .	.	6	32.198	19 59.42	5.61	7.26	25 15.66	38 42.3
99	9	. .	. .	. .	. .	21.2	33.0	44.6	. .	. .	26 8.92	28.26	. .	.	6	33.39	19 18.44	5.47	7.21	26 37.18	38 1.1
100	9	52.	4.3	16.2	. .	. .	. .	. .	. .	. .	28 28.14	28.26	−0.01	.	7	32.13	14 7.70	5.19	6.82	28 56.39	32 49.7
101	6	44.2	56.4	8.3	. .	31.2	. .	. .	. .	. .	30 20.05	28.26	. .	.	5	34.91	27 7.39	5.00	7.79	30 48.31	45 50.2
102	6	. .	13.2	25.7	. .	. .	. .	. .	. .	. .	30 37.44	28.26	. .	.	5	34.535	27 20.31	4.95	7.82	31 5.70	46 3.1
103	7	. .	. .	. .	. .	. .	. .	10.5	. .	. .	31 34.46	28.26	. .	.	3	31.350	40 50.14	4.84	8.83	32 2.72	59 33.8
104	7	.	. .	. .	. .	. .	. .	47.2	. .	. .	32 11.16	28.26	. .	.	3	32.694	40 3.85	4.77	8.78	32 39.42	58 47.4
105	9	. .	29.2	41.5	53.2	. .	. .	. .	. .	. .	33 53.30	28.26	. .	.	3	34.180	39 12.66	4.58	8.72	34 21.56	57 56.0
106	6	. .	. .	47.3	59.4	. .	. .	. .	. .	. .	34 59.40	28.25	−0.01	.	7	36.624	11 32.92	4.46	6.63	35 27.64	30 14.0
107	6	. .	. .	. .	. .	. .	36.5	48.5	. .	. .	35 12.46	28.25	−0.01	.	6	35.109	18 19.25	4.44	7.12	35 40.70	37 0.8
108	8	. .	22.	34.2	45.4	. .	. .	. .	. .	. .	36 45.87	28.25	. .	.	3	37.30	37 25.18	4.27	8.57	37 14.12	23 56 8.0
109	7	. .	. .	. .	37.4	49.8	. .	. .	. .	. .	37 37.62	28.25	+0.01	.	2	35.605	47 6.46	4.17	9.30	38 5.88	24 5 49.9
110	8	. .	. .	. .	. .	. .	. .	18.5	. .	. .	37 42.41	28.25	. .	.	5	37.058	25 53.41	4.16	7.70	38 10.66	23 44 35.3
111	8	. .	. .	. .	. .	. .	20.7	. .	. .	. .	38 56.78	28.25	−0.01	.	7	39.75	9 45.24	4.03	6.48	39 25.02	23 28 25.8
112	8	. .	. .	. .	. .	39.4	51.	3.5	. .	. .	40 27.23	28.25	+0.01	.	2	36.447	46 37.45	3.85	9.27	40 55.49	24 5 20.6
113	9	. .	. .	. .	. .	. .	. .	. .	48.7	. .	40 54.86	28.25	. .	.	3	32.35	40 15.11	3.80	8.80	41 23.11	23 58 57.7
114	8	. .	. .	. .	. .	. .	. .	. .	32.	. .	41 38.14	28.25	. .	II.	5	37.680	25 31.39	3.68	7.68	42 6.39	44 12.8
115	8	. .	. .	. .	23.7	35.5	. .	. .	. .	. .	43 23.67	28.25	−0.01	IV.	6	43.464	13 31.45	3.52	6.77	43 51.91	32 11.7
116	9	. .	. .	. .	. .	. .	28.5	40.7	. .	. .	44 4.54	28.25	. .	.	4	43.837	27 47.71	3.44	7.85	44 32.79	23 46 29.0
117	9	. .	. .	. .	. .	. .	52.5	. .	. .	. .	45 28.37	28.25	+0.01	.	2	41.807	43 32.69	3.28	9.03	45 56.63	24 2 15.0
118	8	. .	. .	. .	. .	. .	. .	41.5	. .	. .	46 5.41	28.24	+0.01	.	1	45.588	47 11.81	3.21	9.31	46 33.66	24 5 54.3
119	7	. .	. .	. .	. .	. .	38.5	49.5	. .	. .	47 13.98	28.24	−0.01	.	7	41.383	8 48.99	3.09	6.42	47 42.21	23 27 28.5
120	7	. .	. .	44.	56.4	8.2	. .	. .	. .	. .	48 56.22	28.24	. .	.	5	38.594	25 0.49	2.89	7.64	49 24.46	43 41.0
121	7	. .	. .	. .	. .	47.3	59.3	. .	. .	. .	49 25.31	28.24	. .	.	5	37.604	25 34.59	2.82	7.68	50 3.55	23 44 15.1
122	9.10	. .	. .	. .	. .	. .	. .	4.5	. .	. .	50 28.40	28.24	. .	.	2	32.94	48 37.99	2.72	8.31	50 56.64	24 7 19.0
123	9	. .	. .	. .	47.3	59.5	. .	. .	. .	. .	19 53 47.42	+28.24	. .	.	2	39.962	44 36.37	− 2.34	− 8.00	19 54 15.66	24 3 16.7

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848. h.	s.	s.	s.	s.	s.	° ′ ″	r.

REMARKS.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848. h. m.	° ′ ″				″	″	in.	°	°

ZONE 132. JULY 18. MAJ. $D_0 = -23° 18' 30''$.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
124	7	. .	. .	. .	. .	. .	. .	14.5	. .	. .	19 54 38.39	+28.24	. .	.	6	32.405	19 52.40	− 2.25	− 7.25	19 55 6.63	23 38 31.9
125	9	37.2	. .	1.5	. .	. .	37.2	. .	. .	. .	58 13.31	28.24	. .	.	4	29.604	35 58.11	1.85	8.47	58 41.55	23 54 38.4
126	6	. .	. .	. .	. .	23.2	35.4	47.3	. .	. .	19 59 11.26	+28.24	+0.01	.	2	43.968	42 18.38	− 1.74	− 8.95	19 59 39.51	24 0 59.1

ZONE 133. JULY 19. MS. $D_0 = -20° 50' 50''$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	10	. .	. .	. .	. .	21.	32.5	44.5	. .	. .	17 45 9.07	+27.87	. .	VII.	3	44.956	33 35.68	−21.11	− 3.26	17 45 36.94	21 24 50.0
2	10	. .	. .	. .	47.	. .	11.	23.	. .	. .	46 47.31	27.87	. .	VII.	3	44.799	33 6.70	20.94	3.17	47 15.18	24 20.8
3	10	. .	32.	44.	. .	7.	. .	. .	. .	. .	50 55.54	27.86	. .	V.	3	40.825	35 23.74	20.55	3.33	51 23.40	21 26 37.6
4	9	. .	. .	. .	. .	. .	. .	6.	. .	. .	51 30.50	27.86	−0.01	VII.	7	43.952	7 20.26	20.50	1.60	51 58.35	20 58 32.4
5	9	. .	. .	. .	. .	. .	35.	46.8	. .	. .	53 11.36	27.86	. .	VII.	3	34.555	38 59.51	20.34	3.54	53 39.22	21 30 13.4
6	10	. .	. .	56.	. .	. .	. .	. .	. .	. .	55 7.80	27.86	. .	III.	5	37.382	25 42.22	20.15	2.72	55 35.66	16 55.1
7	9	. .	. .	50.	2.	14.	. .	. .	. .	. .	56 2.04	27.86	−0.01	IV.	6	36.285	17 38.75	20.06	2.24	56 29.89	8 51.0
8	9	. .	. .	22.	. .	. .	. .	. .	. .	. .	57 33.74	27.85	. .	III.	2	48.435	39 44.47	19.91	3.59	58 1.59	30 58.0
9	8	. .	. .	. .	. .	. .	. .	19.	. .	. .	57 43.59	27.85	. .	VII.	3	39.48	36 9.86	19.90	3.36	58 11.44	27 23.1
10	8	. .	. .	. .	11.	. .	. .	. .	. .	. .	59 10.99	27.85	. .	IV.	3	38.40	36 47.29	19.76	3.40	17 59 38.84	28 0.4
11	9	. .	. .	. .	. .	. .	. .	35.	. .	. .	17 59 59.59	27.85	. .	VII.	3	43.218	34 1.10	19.68	3.23	18 0 27.44	25 14.0
12	9	. .	. .	. .	. .	59.	. .	. .	. .	. .	18 0 47.24	27.85	. .	V.	4	40.40	29 46.20	19.60	3.00	1 15.09	20 58.8
13	9	. .	. .	. .	. .	. .	. .	3.	. .	. .	(?) 27.55	27.85	. .	VII.	5	42.530	22 44.67	19.54	2.54	1 55.40	13 56.8
14	9.10	. .	. .	. .	. .	53.5	5.	. .	. .	. .	2 41.59	27.85	. .	V.	5	40.699	23 47.96	19.42	2.61	3 9.44	15 0.0
15	10	. .	. .	. .	. .	59.	11.5	. .	. .	. .	3 47.58	27.84	. .	V.	5	35.956	26 31.36	19.31	2.78	4 15.42	17 43.4
16	10	. .	. .	. .	. .	. .	. .	55.	. .	. .	4 19.52	27.84	−0.01	VII.	6	41.745	14 30.42	19.26	2.02	4 47.35	5 41.7
17	10	. .	8.	20.	. .	. .	. .	. .	. .	. .	9 31.68	27.84	. .	III.	4	37.570	31 23.69	18.76	3.07	9 59.52	22 35.5
18	10	. .	. .	33.	45.	. .	. .	. .	. .	. .	10 44.88	27.83	. .	IV.	4	40.688	29 36.31	18.64	2.97	11 12.71	20 47.9
19	9.10	. .	. .	. .	. .	3.	. .	. .	. .	. .	10 51.30	27.83	−0.01	V.	7	39.348	9 59.08	18.63	1.73	11 19.12	1 9.4
20	10	. .	. .	. .	33.	45.	. .	. .	. .	. .	12 33.16	27.83	0.01	IV.	6	36.088	17 45.54	18.46	2.23	13 0.98	8 56.2
21	10	. .	. .	. .	. .	. .	. .	47.5	. .	. .	13 12.03	27.83	−0.01	VII.	6	36.81	17 20.42	18.39	2.21	13 39.85	8 31.0
22	10	. .	. .	. .	. .	. .	. .	23.	. .	. .	14 47.54	27.83	. .	VII.	5	44.926	21 22.14	18.24	2.46	15 15.37	12 32.8
23	9	. .	. .	. .	13.	25.	37.	. .	. .	. .	16 13.26	27.83	−0.01	IV.	6	39.500	15 48.00	18.10	2.09	16 41.08	6 58.2
24	9.10	. .	. .	. .	. .	34.	46.	. .	. .	. .	17 22.28	27.82	+0.01	V.	2	39.192	45 2.88	17.98	3.94	17 50.11	36 14.8
25	10	. .	. .	. .	40.	. .	. .	. .	. .	. .	18 39.98	27.82	. .	IV.	3	41.440	35 2.57	17.85	3.31	19 7.80	26 13.7
26	9.10	. .	. .	. .	. .	. .	. .	46.	. .	. .	19 0.59	27.82	. .	VII.	3	42.406	34 29.07	17.80	3.27	19 28.41	25 40.1
27	9	. .	. .	. .	. .	38.5	. .	1.	. .	. .	20 26.16	27.82	−0.01	VII.	6	46.835	11 35.09	17.68	1.84	20 53.97	2 44.6
28	9	. .	. .	. .	2.5	. .	26.2	. .	. .	. .	22 2.52	27.82	. .	VI.	4	40.322	29 48.81	17.52	2.99	22 30.34	20 59.3
29	9	. .	. .	. .	. .	22.5	34.5	. .	. .	. .	23 10.81	27.82	. .	V.	4	40.630	29 38.28	17.40	2.98	23 38.63	20 48.7
30	10	. .	. .	. .	. .	22.	33.5	. .	. .	. .	24 10.06	27.82	. .	V.	4	41.162	29 19.95	17.30	2.95	24 37.88	20 30.2
31	8.9	. .	33.	44.6	56.	8.	. .	. .	. .	. .	25 56.32	27.81	−0.01	IV.	7	46.192	6 3.34	17.13	1.51	26 24.12	57 12.0
32	9.10	. .	. .	22.5	34.5	. .	. .	. .	. .	. .	27 34.43	27.81	−0.01	IV.	5	49.315	18 51.19	16.96	2.28	28 2.23	10 0.4
33	10	26.	38.	. .	. .	. .	. .	. .	. .	. .	29 1.50	27.81	. .	II.	4	45.828	26 39.14	16.82	2.79	29 29.31	17 48.8
34	8	. .	. .	. .	28.5	40.5	53.	. .	. .	. .	29 28.92	27.81	−0.01	IV.	5	48.652	19 14.02	16.77	2.31	29 56.72	10 23.1
35	10	. .	. .	. .	. .	. .	37.	. .	. .	. .	30 13.50	27.81	−0.01	.	6	48.892	10 24.36	16.70	1.76	30 41.30	1 32.8
36	9.10	57.5	9.5	21.6	. .	. .	. .	. .	. .	. .	32 33.15	27.80	. .	III.	3	39.088	36 23.59	16.46	3.39	33 0.95	27 33.4
37	10	. .	. .	. .	. .	49.	. .	. .	. .	. .	33 37.25	27.80	. .	V.	4	44.840	27 13.25	16.36	2.81	34 5.05	18 22.4
38	10	. .	. .	. .	. .	. .	19.5	. .	. .	. .	33 55.85	27.80	. .	VI.	3	38.802	36 33.34	16.33	3.40	34 23.65	27 43.1
39	9	. .	. .	. .	13.	25.	. .	. .	. .	. .	35 13.16	27.80	−0.01	IV.	6	39.210	15 57.99	16.20	2.10	35 40.95	7 6.3
40	.	. .	. .	. .	53.5	. .	17.	. .	. .	. .	36 53.50	27.80	−0.01	.	6	35.162	18 17.42	16.03	2.27	37 21.29	9 25.7
41	.	. .	. .	. .	. .	. .	. .	13.5	. .	. .	36 38.07	27.80	. .	.	.	40.952	29 26.97	16.06	2.96	37 5.87	20 36.0
42	10	38.	50.	. .	. .	. .	. .	. .	. .	. .	18 42 13.39	+27.79	−0.01	II.	6	43.650	13 24.94	−15.50	− 1.95	18 42 41.17	21 4 32.4

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848.	h.	s.	s.	s.	s.	s.	° ′ ″	r.
July. 19,	15	+23.152	*g* 0.000	. .	− 0.410	+ 0.535	0 0 4.51	40.021

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848. h. m.	° ′ ″				″	″	in.	°	°
Zone 133	July 19, 17 45	299 50 0.0	57.2	4.4	4.2	. .	1.45	. .	. .	71.
	18 14	. .	. .	. .	. .	. .	. .	30.160	75.	
	19 15	. .	. .	. .	. .	. .	. .	30.158	74.	69.5
	19 52	. .	. .	. .	. .	. .	. .	30.154	73.8	69.
	20 20	. .	. .	. .	. .	. .	. .	30.152	73.	68.2
	. .	. .	. .	. .	. .	. .	. .	30.150	73.	68.

REMARKS.

(133) 1. Micrometer reading assumed as $43^r.956$ instead of $44^r.956$.
(133) 13. Minutes assumed to be 1.
(133) 26. Transit over T. VII assumed as 36^s instead of 46^s.
(133) 41. Hor. thread assumed as 4.

ZONE 133. JULY 19. Ms. $\mathrm{D}_{\circ} = -20^\circ\ 50'\ 50''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
43	10	. .	. .	. .	. .	37.	49.5	. .	. .	. .	18 42 25.65	+27.79	−0.01	VI.	7	37.942	10 47.42	−15.48	− 1.78	18 42 53.43	21 1 54.7
44	9.10	. .	. .	. .	. .	25.6	37.2	. .	. .	. .	44 12.74	27.79	. .	V.	5	42.430	22 48.34	15.30	2.54	44 40.53	13 56.2
45	10	. .	. .	. .	. .	. .	. .	21.	. .	. .	44 45.52	27.79	−0.01	VII.	6	39.575	15 45.18	15.24	2.09	45 13.30	6 52.5
46	10	. .	. .	. .	. .	. .	. .	28.5	. .	. .	45 53.01	27.79	−0.01	VII.	7	38.275	10 35.81	15.12	1.77	46 20.79	1 42.7
47	10	37.	49.	. .	. .	. .	. .	. .	. .	. .	48 12.53	27.79	. .	II.	4	40.691	29 36.10	14.89	2.97	48 40.32	20 44.0
48	5	. .	. .	. .	18.	30.5	42.5	54.5	. .	. .	48 18.67	27.79	. .	V.	4	45.335	26 56.20	14.88	2.81	48 46.46	18 3.9
49	10	. .	. .	. .	49.	1.5	. .	. .	. .	. .	49 49.36	27.78	. .	IV.	3	42.042	34 41.84	14.73	3.29	50 17.14	25 49.9
50	10	. .	1.	13.	24.5	. .	. .	. .	. .	. .	52 24.62	27.78	−0.01	IV.	6	36.480	17 32.03	14.47	2.21	52 52.39	8 38.7
51	10	. .	43.	54.5	. .	. .	. .	. .	. .	. .	54 6.42	27.78	. .	III.	5	43.390	22 15.27	14.30	2.50	54 34.20	13 22.1
52	10	. .	. .	. .	47.	. .	. .	. .	. .	. .	54 47.07	27.78	−0.01	IV.	7	39.422	9 56.54	14.23	1.75	55 14.84	1 2.5
53	10	. .	. .	. .	. .	27.	. .	. .	. .	. .	55 15.26	27.78	. .	V.	5	42.49	22 46.27	14.17	2.54	55 43.04	13 53.0
54	9	. .	. .	. .	. .	. .	. .	4.	. .	. .	55 40.42	27.78	. .	VII.	5	49.265	18 52.68	14.13	2.29	56 8.20	9 59.1
55	10	. .	. .	. .	. .	. .	. .	48.	. .	. .	56 12.52	27.78	−0.01	VII.	7	36.769	11 27.69	14.08	1.83	56 40.29	2 33.6
56	10	. .	. .	. .	. .	. .	. .	8.	. .	. .	56 32.60	27.78	. .	VII.	3	37.278	37 25.71	14.05	3.46	57 0.38	28 33.2
57	10	. .	. .	. .	. .	. .	34.	46.	. .	. .	18 59 10.48	27.77	. .	VI.	5	43.382	22 15.46	13.78	2.50	18 59 38.25	13 21.7
58	4	. .	. .	. .	. .	34.	46.	58.5	. .	. .	19 0 22.57	27.77	. .	VII.	5	39.610	24 25.26	13.66	2.63	19 0 50.34	15 31.6
59	10	. .	. .	. .	. .	. .	21.	33.	. .	. .	2 57.64	27.77	. .	VII.	4	38.852	30 39.30	13.40	3.03	3 25.41	21 45.7
60	10	. .	. .	25.	37.	. .	. .	. .	. .	. .	4 36.87	27.77	. .	IV.	3	39.439	36 11.51	13.24	3.39	5 4.64	27 18.1
61	10	. .	. .	. .	. .	25.	37.5	. .	. .	. .	5 13.54	27.77	. .	VI.	3	35.852	38 14.97	13.17	3.54	5 41.31	29 21.7
62	10	. .	. .	. .	. .	. .	24.	36.	. .	. .	6 0.48	27.77	. .	VII.	5	38.070	25 18.30	13.09	2.69	6 28.25	16 24.1
63	10	. .	. .	. .	. .	. .	. .	17.	. .	. .	6 41.54	27.77	. .	VII.	5	44.40	21 40.25	13.02	2.45	7 9.31	12 45.7
64	9	. .	. .	. .	. .	. .	16.	27.8	. .	. .	7 52.38	27.77	. .	VI.	4	40.80	28 57.89	12.90	2.93	8 20.15	20 3.7
65	10	. .	31.5	43.	. .	. .	. .	. .	. .	. .	9 54.91	27.76	−0.01	III.	5	49.630	18 40.32	12.70	2.44	10 22.66	9 45.5
66	10	. .	. .	. .	. .	. .	. .	3.5	. .	. .	9 28.09	27.76	. .	VII.	3	42.838	34 14.19	12.74	3.27	9 55.85	21 25 20.2
67	10	. .	. .	. .	. .	. .	. .	15.	. .	. .	11 39.50	27.76	−0.01	VII.	7	44.596	6 58.08	12.53	1.55	12 7.25	20 58 2.2
68	8	. .	. .	. .	19.	. .	. .	. .	. .	. .	13 19.11	27.76	0.01	IV.	7	49.350	4 14.55	12.36	1.36	13 46.86	20 55 18.3
69	10	. .	. .	. .	. .	. .	. .	13.	. .	. .	13 37.52	27.76	0.01	VII.	6	44.315	13 1.89	12.33	1.89	14 5.27	21 4 6.1
70	10	. .	9.5	21.	. .	. .	. .	. .	. .	. .	15 32.89	27.76	0.01	II.	7	42.095	7 49.95	12.13	1.62	16 0.64	58 53.7
71	10	. .	. .	. .	. .	. .	6.5	18.	. .	. .	15 42.76	27.76	−0.01	VI.	7	40.575	9 16.73	12.12	1.68	16 10.51	0 20.5
72	9	. .	. .	. .	. .	. .	29.	41.	. .	. .	17 5.45	27.76	+0.01	VII.	2	43.690	42 27.71	11.98	3.80	17 33.22	21 33 33.5
73	10	. .	. .	. .	. .	. .	23.5	. .	. .	. .	18 0.02	27.76	−0.01	VI.	7	46.139	6 5.06	11.89	1.49	18 27.77	20 57 8.4
74	10	. .	. .	. .	. .	. .	37.	49.	. .	. .	19 13.48	27.76	. .	VI.	4	46.020	26 32.53	11.77	2.78	19 41.24	21 17 37.1
75	10	. .	. .	. .	. .	. .	44.	56.	. .	. .	20 20.43	27.76	+0.01	VI.	1	45.132	47 27.41	11.66	4.12	20 48.20	38 33.2
76	8.9	. .	. .	. .	. .	43.	55.5	7.	. .	. .	21 31.54	27.76	+0.01	V.	1	47.192	46 16.54	11.54	4.08	21 59.31	37 22.2
77	9	. .	. .	. .	. .	. .	. .	39.	. .	. .	22 3.57	27.76	. .	F.W.	.	40.021	29 59.04	11.49	3.00	22 31.33	21 3.5
78	9	. .	52.	3.5	. .	27.	. .	. .	. .	. .	26 15.37	27.75	−0.01	II.	6	40.825	15 2.25	11.06	2.03	26 43.11	6 5.3
79	10	. .	. .	. .	. .	. .	. .	56.	. .	. .	26 20.55	27.75	. .	VII.	5	40.355	23 59.59	11.05	2.61	26 48.30	15 3.2
80	10	. .	. .	. .	. .	25.5	37.5	. .	. .	. .	27 13.87	27.75	−0.01	V.	6	35.802	17 55.35	10.97	2.22	27 41.61	8 58.5
81	10	. .	34.	. .	. .	. .	. .	. .	. .	. .	29 57.62	27.75	. .	II.	3	35.599	38 23.69	10.70	3.55	30 25.37	29 27.9
82	10	. .	. .	. .	33.5	. .	. .	. .	. .	. .	30 33.46	27.75	. .	IV.	4	40.775	29 33.31	10.63	2.97	31 1.21	20 36.9
83	10	. .	. .	. .	. .	. .	. .	31.	. .	. .	30 55.56	27 75	+0.01	VII.	2	34.842	47 32.49	10.60	4.12	31 23.32	38 37.2
84	10	. .	. .	. .	31.	. .	54.8	. .	. .	. .	32 31.14	27.75	. .	IV.	5	47.390	19 57.40	10.44	2.34	32 58.89	11 0.2
85	10	. .	. .	. .	. .	15.	. .	. .	. .	. .	34 3.30	27.75	−0.01	V.	6	48.760	10 28.99	10.29	1.73	34 31.04	1 31.0
86	10	. .	. .	. .	. .	20.	32.	. .	. .	. .	35 8.37	27.75	−0.01	VI.	5	51.400	17 39.26	10.19	2.20	35 36.11	8 41.6
87	10	. .	. .	34.	46.	. .	. .	. .	. .	. .	36 45.88	27.75	. .	V.	4	44.587	27 21.97	10.02	2.82	37 13.63	18 24.8
88	10	. .	. .	. .	. .	. .	42.	. .	. .	. .	37 18.41	27.75	. .	VI.	4	48.442	25 9.09	9.97	2.68	37 46.16	16 12.7
89	9	. .	. .	. .	. .	53.5	5.	16.5	. .	. .	38 41.40	27.75	. .	V.	4	42.614	28 29.94	9.83	2.90	39 9.15	19 32.7
90	10	. .	. .	. .	. .	19.	. .	. .	. .	. .	40 7.29	27.75	−0.01	V.	6	41.080	14 53.55	9.69	2.02	40 35.03	5 55.3
91	10	. .	39.	51.	3.5	. .	. .	. .	. .	. .	19 42 2.63	+27.74	. .	IV.	2	46.960	40 35.31	− 9.50	− 3.69	19 42 30.37	21 31 38.5

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848.	h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.			CIRCLE.						Barom.	Attached Thermom.	External Thermom.
				A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848.	h.	m.	° ′ ″				″	″	in.	°	°

REMARKS.

(133) 54. Transit over T. VI assumed to have been recorded as over T. VII.

(133) 64. Micrometer reading assumed as 41r.80 instead of 40r.80.

(133) 69. Minutes of transit assumed as 14 instead of 13.

(133) 70. Micrometer reading assumed as 43r.095 instead of 42r.095.

ZONE 133. JULY 19. MS. D₀=−20° 50′ 50″—Continued.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
92	10	. .	11.	22.	33.5	. .	. .	. .	. .	. .	19 43 33.95	+27.74	. .	IV.	3	39.770	36 0.11	− 9.35	− 3.38	19 44 1.69	21 27 2.8
93	10	. .	. .	. .	19.	31.	. .	. .	. .	. .	44 19.10	27.74	. .	IV.	4	40.292	29 49.94	9.28	2.99	44 46.84	20 52.2
94	9	21.	33.	45.	56.5	. .	. .	. .	. .	. .	50 56.58	27.74	. .	III.	5	35.725	26 39.31	8.63	2.79	51 24.32	17 40.7
95	9	. .	33.5	45.5	57.	9.	. .	. .	. .	. .	52 57.15	27.74	. .	IV.	3	34.852	38 49.51	8.43	3.57	53 24.89	29 51.5
96	10	. .	. .	. .	. .	. .	. .	17.	. .	. .	53 41.53	27.74	−0.01	VII.	6	34.490	18 40.33	8.36	2.25	54 9.26	21 9 40.9
97	10	. .	8.	20.	31.5	. .	. .	. .	. .	. .	55 31.62	27.74	−0.01	IV.	7	45.720	6 19.60	8.19	1.50	55 59.35	20 57 19.3
98	9.10	. .	28.5	40.	52.	. .	. .	. .	. .	. .	56 51.95	27.74	. .	III.	3	41.724	34 35.55	8.05	3.31	57 19.69	21 25 36.9
99	10	. .	. .	. .	. .	31.	43.	. .	. .	. .	57 19.32	27.74	. .	V.	4	41.719	29 0.76	8.01	2.93	57 47.06	20 1.7
100	10	. .	. .	. .	. .	35.6	. .	59.	. .	. .	19 58 23.70	27.74	. .	V.	5	39.872	24 50.90	7.91	2.63	19 58 51.44	15 51.4
101	10	. .	. .	7.5	. .	31.	43.	. .	. .	. .	20 0 19.38	27.74	−0.01	VI.	7	38.308	10 34.81	7.72	1.73	20 0 47.11	1 34.3
102	10	. .	. .	. .	37.	49.	. .	. .	. .	. .	1 37.12	27.74	. .	IV.	3	38.505	36 43.68	7.60	3.44	2 4.86	27 44.7
103	10	. .	. .	. .	. .	. .	2.	13.5	. .	. .	5 38.24	27.74	. .	VI.	5	40.450	23 56.46	7.22	2.60	6 5.98	14 56.3
104	10	. .	. .	22	33.5	45.	. .	. .	. .	. .	7 33.50	27.74	. .	V.	4	35.505	32 34.83	7.03	3.17	8 1.24	23 35.0
105	9	37.5	49.5	61.	. .	. .	. .	. .	. .	. .	10 12.95	27.74	. .	III.	4	32.962	34 2.42	6.78	3.26	10 40.69	25 2.5
106	10	. .	. .	. .	. .	37.	49.	. .	. .	. .	10 25.31	27.74	. .	V.	4	36.650	31 55.38	6.76	3.12	10 53.05	22 55.3
107	10	. .	. .	. .	. .	45.	57.	8.5	. .	. .	11 33.23	27.74	. .	V.	3	37.972	25 21.90	6.65	2.70	12 0.97	16 21.2
108	10	. .	28.	39.5	51.	. .	. .	. .	. .	. .	13 51.27	27.74	. .	IV.	4	42.815	28 23.04	6.44	2.89	14 19.01	19 22.4
109	10	. .	. .	. .	. .	. .	42.5	54.5	. .	. .	14 19.01	27.74	−0.01	V.	7	40.273	9 27.21	6.40	1.66	14 46.74	0 25.3
110	10	. .	. .	. .	. .	. .	. .	43.	. .	. .	15 7.58	27.74	. .	VII.	4	35.182	32 45.73	6.32	3.18	15 35.32	23 45.2
111	9.10	4.	16.	28.	. .	. .	. .	. .	. .	. .	17 39.61	27.74	. .	IV.	4	45.532	26 49.43	6.07	2.79	18 7.35	17 48.3
112	10	. .	55.	6.5	. .	. .	. .	. .	. .	. .	19 18.40	27.74	−0.01	II.	6	43.708	13 22.94	5.93	1.90	19 46.13	4 20.8
113	9	. .	. .	37.5	48.8	0.5	. .	. .	. .	. .	19 48.93	27.74	. .	IV.	3	45.265	32 50.82	5.90	3.19	20 16.67	23 49.9
114	9	55.	7.5	19.	. .	. .	. .	. .	. .	. .	21 30.75	27.74	. .	III.	5	44.430	21 39.44	5.72	2.44	21 58.49	12 37.6
115	10	. .	. .	. .	. .	. .	39.	51.	. .	. .	24 15.49	27.74	. .	VII.	5	44.582	21 33.98	5.47	2.43	24 43.23	12 31.9
116	10	. .	. .	. .	15.	. .	39.	. .	. .	. .	26 15.20	27.74	. .	IV.	5	37.58	16 54.13	5.29	2.15	26 42.94	7 51.6
117	10	. .	. .	. .	. .	. .	41.	53.	. .	. .	27 17.50	27.74	−0.01	VII.	6	40.580	15 10.55	5.19	2.03	27 45.23	6 7.8
118	9	. .	. .	. .	15.	27.	39.	. .	. .	. .	29 15.19	27.74	. .	V.	2	47.099	39 56.05	5.01	3.69	29 42.93	30 54.8
119	9	. .	. .	. .	26.8	39.	. .	. .	. .	. .	30 27.01	27.74	. .	IV.	3	38.184	36 54.73	4.90	3.45	30 54.75	27 53.1
120	10	. .	. .	. .	. .	34.5	46.5	58.8	. .	. .	32 23.00	27.74	. .	V.	4	40.662	29 37.18	4.75	2.97	32 50.74	20 34.9
121	10	. .	. .	51.5	3.5	14.6	. .	. .	. .	. .	34 3.20	27.74	. .	IV.	4	40.392	29 46.50	4.59	2.99	34 30.94	20 44.1
122	9.10	. .	18.	29.6	41.3	. .	. .	. .	. .	. .	35 41.41	27.74	. .	IV.	3	41.506	35 0.31	4.45	3.33	36 9.15	25 58.1
123	10	. .	. .	. .	. .	. .	59.	11.	. .	. .	36 35.46	27.74	. .	V.	3	45.195	32 53.21	4.37	3.19	37 3.20	23 50.8
124	10	. .	. .	15.5	27.5	. .	. .	. .	. .	. .	39 27.38	27.71	. .	III.	4	41.418	29 11.14	4.12	2.94	39 55.12	20 8.2
125	10	. .	. .	. .	. .	. .	4.5	16.	. .	. .	40 40.73	27.74	−0.01	V.	3	49.742	18 36.46	4.01	2.23	41 8.46	9 32.7
126	10	28.	40.	52.	. .	. .	. .	. .	. .	. .	44 3.59	27.74	. .	III.	4	49.852	24 20.61	3.72	2.62	44 31.33	15 17.0
127	9	. .	. .	26.	37.5	49.4	. .	. .	. .	. .	20 45 37.63	+27.74	. .	IV.	2	47.854	40 4.51	− 3.59	− 3.66	20 46 5.37	21 31 1.8

ZONE 134. JULY 20. MAJ. D₀=−30° 47′ 30″.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	7	. .	. .	35.3	47.4	0.8	. .	. .	. .	. .	17 58 47.85	+28.89	. .	IV.	5	42.932	22 31.06	−21.82	− 9.00	17 59 16.74	31 10 31.9
2	8	. .	41.2	54.4	6.4	. .	. .	. .	. .	. .	18 0 6.87	28.88	. .	IV.	2	39.052	45 7.72	21.70	12.06	18 0 35.75	33 11.5
3	9	. .	. .	. .	. .	59.5	2.5	. .	. .	. .	1 47.21	28.88	. .	VI.	4	40.882	29 29.46	21.56	9.93	2 16.09	17 31.0
4	7	. .	. .	. .	. .	52.0	5.	. .	. .	. .	2 39.33	28.88	−0.01	.	7	38.19	10 38.98	21.49	7.41	3 8.20	58 37.9
5	8	. .	. .	. .	36.	50.2	. .	. .	. .	. .	3 36.68	28.88	. .	VI.	4	32.16	34 29.91	21.40	10.61	4 5.56	22 31.9
6	8	. .	. .	29.2	41.	54.5	. .	. .	. .	. .	4 41.56	28.88	. .	.	3	37.612	37 14.44	21.31	10.98	5 10.44	25 16.7
7	6	. .	34.5	. .	59.3	. .	. .	. .	. .	. .	5 59.72	28.88	. .	.	5	40.212	24 4.76	21.20	9.21	6 28.60	12 5.2
8	6	. .	41.	54.	. .	. .	. .	. .	. .	. .	18 6 6.78	+28.88	. .	.	4	33.363	33 48.63	−21.19	−10.51	18 6 35.66	31 21 50.3

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848.	h.	s.	s.	s.	s.	s.	° ′ ″	r.
July 20,	16	+23.719	l 0.008	. .	− 0.410	+ 0.535	0 0 3.61	40.030

INSTRUMENT READINGS.

	Date.	CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean	Barom.	Attached Thermom.	External Thermom.
	1848. h. m.	° ′ ″				″	″	in.	°	°
Zone 134	July 20, 17 58	289 51 2.6	2.0	8.7	7.4	5.21	5.18	. .	. .	72.3
	18 38	. .	. .	. .	. .	. .	. .	30.070	76.	71.3
	19	. .	. .	. .	. .	. .	. .	. .	. .	70.7
	19 20	. .	. .	. .	. .	. .	. .	30.068	75.4	70.0
	19 40	. .	. .	. .	. .	. .	. .	30.066	75.	69.9
	20	. .	. .	. .	. .	. .	. .	. .	. .	69.7
	20 12	. .	. .	. .	. .	. .	. .	. .	. .	69.4
	20 40	. .	. .	. .	. .	. .	. .	. .	. .	68.9

REMARKS.

(133) 98. Micrometer reading assumed as 42ʳ.224 instead of 41ʳ.724.
(133) 100. Micrometer reading assumed as 38ʳ.872 instead of 39ʳ.872.
(133) 107. Hor. thread assumed as 5 instead of 3.
(133) 116. Hor. thread assumed as 6 instead of 5.
(133) 118. Micrometer reading assumed as 48ʳ.099 instead of 47ʳ.099.
(133) 125. Hor. thread assumed as 5 instead of 3.
(134) 3. Time of transit over T. VI assumed as at 12ˢ.5 instead of 2ˢ.5.

ZONE 134. JULY 20. MAJ. $D_0 = -30° 47' 30''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a^1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
9	6	. .	. .	. .	. .	17.	30.1	. .	. .	. .	18 7 4.26	+28.88	. .	.	4	35.172	32 46.32	−21.10	−10.38	18 7 33.14	31 20 47.8
10	8	. .	. .	. .	. .	. .	. .	. .	13.	. .	7 15.32	28.88	. .	.	2	42.790	42 58.96	21.08	11.77	7 44.20	31 0.8
11	7	. .	. .	. .	. .	. .	4.5	17.	. .	. .	7 38.56	28.88	. .	.	4	42.152	28 45.88	21.06	9.83	8 7.44	16 46.8
12	6	. .	49.5	2.0	14.6	. .	. .	. .	. .	. .	10 14.88	28.87	. .	.	3	42.401	34 29.48	20.83	10.60	10 43.75	22 30.9
13	5	. .	. .	53.5	6.5	19.4	. .	. .	. .	. .	11 6.53	28.87	−0.01	.	6	45.857	12 9.02	20.76	7.62	11 35.39	0 7.4
14	9	. .	. .	. .	. .	57.2	. .	. .	. .	. .	11 44.37	28.87	+0.01	.	1	40.680	50 0.84	20.70	12.74	12 13.25	38 4.3
15	9	. .	. .	. .	. .	. .	. .	64.5	. .	. .	12 25.85	28.87	−0.01	.	7	41.050	9 0.10	20.64	7.21	12 54.71	56 58.0
16	9	. .	. .	. .	56.4	. .	. .	. .	. .	. .	13 56.39	28.87	. .	.	5	40.038	24 10.76	20.52	9.22	14 25.26	12 10.5
17	9	. .	. .	. .	. .	. .	14.	. .	. .	. .	13 48.27	28.87	. .	.	5	32.714	28 22.88	20.52	9.78	14 17.14	16 23.2
18	8	. .	. .	. .	. .	. .	57.5	10.4	. .	. .	15 31.68	28.87	+0.01	.	2	36.44	46 37.69	20.39	12.34	16 0.56	34 40.4
19	6	. .	. .	. .	51.2	5.	17.7	. .	. .	. .	16 51.75	28.87	. .	VI.	3	34.214	39 11.33	20.26	11.24	17 20.62	27 12.8
20	7	. .	. .	. .	. .	. .	. .	61.5	. .	. .	17 22.80	28.87	+0.01	.	2	32.572	48 50.94	20.21	12.58	17 51.68	36 53.7
21	6	. .	. .	. .	. .	. .	41.0	53.6	. .	. .	18 15.14	28.86	. .	.	5	38.542	25 2.28	20.14	9.33	18 44.00	13 1.8
22	7	. .	. .	. .	. .	. .	32.	45.5	. .	. .	19 6.45	28.86	+0.01	.	1	39.27	50 49.45	20.07	12.85	19 35.32	38 52.4
23	8	. .	. .	. .	. .	22.4	. .	58.0	. .	. .	20 9.50	28.86	−0.01	.	6	40.245	15 22.33	19.98	8.05	20 38.35	3 20.4
24	9	. .	. .	. .	6.0	18.8	32.4	. .	. .	. .	22 6.22	28.86	. .	.	5	37.062	25 53.27	19.82	9.45	22 35.08	13 52.5
25	8	. .	13.5	26.2	. .	. .	. .	. .	. .	. .	23 39.15	28.86	. .	.	2	37.587	45 58.18	19.67	12.18	24 8.01	34 0.0
26	7	. .	. .	. .	. .	26.4	. .	. .	. .	. .	24 13.58	28.86	. .	.	5	33.565	27 53.73	19.62	8.94	24 42.44	15 52.3
27	7	. .	. .	9.	22.	. .	. .	. .	. .	. .	24 21.90	28.86	. .	II.	4	32.587	34 14.54	19.61	10.58	24 50.76	31 22 14.7
28	7	. .	. .	. .	52.4	5.5	18.4	. .	. .	. .	25 52.69	28.86	−0.01	.	7	41.830	8 33.59	19.48	7.14	26 21.54	30 56 30.2
29	7	. .	. .	5.	17.2	30.1	. .	. .	. .	. .	27 17.53	28.85	−0.01	IV.	7	47.365	5 22.93	19.36	6.72	27 46.37	30 53 19.0
30	7	. .	. .	. .	10.2	24.2	. .	. .	. .	. .	28 10.78	28.85	. .	.	2	51.049	38 14.45	19.28	11.12	28 39.63	31 26 14.8
31	7	. .	. .	. .	25.	39.0	51.5	. .	. .	. .	28 25.62	28.85	. .	II.	2	46.858	40 38.01	19.26	11.44	28 54.47	28 38.7
32	8	. .	. .	. .	. .	11.5	. .	. .	. .	. .	28 58.67	28.85	. .	.	3	42.172	34 37.37	19.21	10.62	29 27.52	22 37.2
33	8	. .	. .	. .	. .	. .	61.5	. .	. .	. .	30 35.88	28.85	−0.01	.	6	40.72	15 5.97	19.07	8.01	31 4.72	3 3.0
34	8	. .	. .	. .	. .	. .	. .	37.5	. .	. .	30 58.87	28.85	. .	.	5	39.82	24 18.26	19.04	9.23	31 27.72	12 16.5
35	8	. .	. .	. .	. .	49.5	2.4	. .	. .	. .	31 36.66	28.85	. .	.	4	39.46	30 18.61	18.98	10.03	32 5.51	18 16.6
36	6	. .	. .	. .	. .	. .	. .	. .	. .	57.0	31 46.02	28.85	+0.01	.	1	42.852	48 46.06	18.96	12.56	32 14.88	36 47.6
37	9	. .	. .	53.0	. .	18.	. .	. .	. .	. .	34 5.48	28.85	. .	.	2	42.357	43 13.87	18.76	11.80	34 34.33	31 14.4
38	8	. .	1.0	14.5	. .	. .	. .	. .	. .	. .	34 27.04	28.85	. .	.	2	40.804	44 7.36	18.73	11.93	34 55.89	32 8.0
39.	9	. .	42.2	54.7	7.6	. .	. .	. .	. .	. .	36 7.67	28.85	. .	.	4	41.252	29 16.87	18.58	9.90	36 36.52	17 15.4
40	9	. .	. .	. .	. .	. .	42.2	54.7	. .	. .	36 16.23	28.85	. .	.	2	45.14	41 37.84	18.57	11.58	36 45.08	29 38.0
41	7	. .	. .	. .	. .	. .	35.5	48.0	. .	. .	37 9.63	28.84	−0.01	.	6	44.23	13 5.06	18.49	7.75	37 38.46	1 1.3
42	8	. .	. .	. .	. .	. .	28.4	41.4	. .	. .	40 2.71	28.84	. .	VII.	4	39.215	30 26.69	18.24	10.05	40 31.55	18 25.0
43	7	. .	. .	. .	. .	. .	15.2	28.	. .	. .	40 49.45	28.84	. .	.	5	47.58	19 50.95	18.17	8.64	41 18.29	7 47.8
44	7	. .	. .	. .	. .	. .	4.2	17.3	. .	. .	41 38.54	28.84	. .	II.	3	36.182	38 2.88	18.10	11.09	42 7.38	26 2.1
45	6	. .	. .	. .	. .	. .	. .	. .	15.	. .	41 17.41	28.84	. .	.	6	29.182	21 43.42	18.13	8.83	41 46.25	9 40.4
46	8	. .	. .	. .	. .	64.3	7.5	. .	. .	. .	43 51.60	28.84	. .	.	4	31.792	34 42.74	17.91	10.63	44 20.44	22 41.3
47	8	. .	. .	. .	. .	44.	57.0	9.6	. .	. .	44 31.13	28.84	. .	.	4	38.901	30 37.86	17.84	10.08	44 59.97	18 35.8
48	7	. .	. .	. .	. .	. .	48.0	61.0	. .	. .	45 22.36	28.84	−0.01	.	6	37.190	17 7.57	17.76	5.27	45 51.19	5 3.6
49	6	. .	34.5	47.2	. .	. .	. .	. .	. .	. .	48 0.06	28.83	−0.01	.	7	38.89	13 7.10	17.54	7.74	48 28.88	1 2.4
50	5.6	. .	. .	. .	. .	27.6	40.	52.4	. .	. .	48 14.28	28.83	. .	.	5	37.304	25 44.92	17.52	9.43	48 43.11	13 41.9
51	10	. .	. .	. .	. .	. .	34.0	. .	. .	. .	50 8.39	28.83	−0.01	.	7	33.681	13 14.15	17.35	7.75	50 37.21	1 9.2
52	9	. .	. .	32.	44.5	. .	. .	. .	. .	. .	51 44.66	28.83	+0.01	.	1	34.73	53 25.83	17.21	13.21	52 13.50	41 26.2
53	8	. .	. .	. .	. .	28.4	41.	. .	. .	. .	52 15.46	28.83	. .	.	6	30.691	20 51.44	17.16	8.78	52 44.29	8 47.4
54	4	39.2	52.4	5.4	17.5	30.2	43.8	56.5	. .	. .	54 17.86	28.83	. .	.	5	33.74	27 47.70	16.98	9.69	54 46.69	15 44.4
55	9	. .	. .	. .	. .	. .	4.5	17.	. .	. .	54 38.60	28.83	. .	.	6	28.647	22 1.68	16.96	8.92	55 7.43	9 57.6
56	10	. .	. .	. .	. .	. .	. .	46.5	. .	. .	56 7.87	28.83	. .	II.	5	37.072	25 52.10	16.82	9.45	56 36.70	13 48.4
57	9	. .	. .	. .	44.2	57.4	. .	. .	. .	. .	18 57 44.37	+28.82	. .	.	4	31.978	34 36.34	−16.68	−10.62	18 58 13.19	31 22 33.6

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848.	h.	s.	s.	s.	s.	s.	° ′ ″	r.

REMARKS.

(134) 23. Time of transit over T. VII assumed as 48ˢ.0 instead of 58ˢ.0.

(134) 49. Micrometer reading assumed as 33ʳ.89 instead of 38ʳ.89.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848. h. m.	° ′ ″				″	″	in.	°	°
Zone 134	July 20, 21	. .	. .	. .	. .	. .	. .	30.058	74.	68.7
	21 42	289 51 3.7	2.9	9.5	8.6	6.21	6.18	. .	. .	68.5
	45	. .	. .	. .	. .	. .	. .	30.052	73.8	68.3

ZONE 134. JULY 20. MAJ. $D_0 = -30° 47' 30''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
58	7	. .	. .	. .	. .	38.	51.	. .	. .	. .	18 58 25.25	+28.82	. .	.	5	40.164	24 6.41	−16.62	− 9.21	18 58 54.07	31 12 2.2
59	8	. .	. .	. .	. .	40.	52.5	. .	. .	. .	18 58 26.96	28.82	. .	.	4	37.278	31 33.79	16.62	10.21	18 58 55.78	19 30.6
60	9	. .	31.	44.4	57.8	. .	. .	. .	. .	. .	19 1 57.25	28.82	. .	IV.	3	34.638	38 56.89	16.31	11.22	19 2 26.07	26 54.4
61	9	. .	42.0	55.	7.0	20.	. .	. .	. .	. .	3 7.43	28.82	. .	.	5	42.938	22 30.86	16.21	8.98	3 36.25	10 26.0
62	9	. .	. .	. .	8.7	21.5	. .	. .	. .	. .	3 8.71	28.82	. .	.	5	43.095	22 25.45	16.21	8.97	3 37.53	10 20.6
63	9	. .	. .	. .	. .	56.2	8.5	. .	. .	. .	4 43.06	28.82	. .	.	4	36.122	32 13.55	16.07	10.30	5 11.88	20 9.9
64	8	. .	. .	. .	. .	. .	. .	24.	. .	. .	4 45.36	28.82	. .	.	6	36.462	17 32.65	16.06	8.32	5 14.18	5 27.0
65	8	. .	. .	. .	. .	37.2	50.0	. .	. .	. .	6 24.24	28.82	+0.01	.	1	37.423	51 53.07	15.92	13.03	6 53.07	39 52.0
66	9	52.	5.2	16.2	29.3	42.4	. .	. .	. .	. .	8 29.88	28.81	. .	.	6	36.199	17 41.71	15.73	8.34	8 58.69	5 35.8
67	9	. .	. .	. .	. .	30.0	42.8	55.4	. .	. .	9 17.01	28.81	. .	VI.	5	36.998	25 55.32	15.66	9.45	9 45.82	31 13 50.4
68	7	. .	. .	. .	. .	. .	. .	. .	49.4	. .	9 51.96	28.81	−0.01	.	7	39.253	10 2.37	15.62	7.30	10 20.76	30 57 55.3
69	8	. .	. .	. .	. .	. .	. .	36.4	. .	. .	10 57.78	28.81	. .	.	3	31.381	40 49.08	15.52	11.48	11 26.59	31 28 46.1
70	8	. .	. .	. .	. .	. .	37.5	50.2	. .	. .	12 11.74	28.81	−0.01	.	7	40.63	9 14.93	15.41	7.21	12 40.54	30 57 7.6
71	9	21.	. .	. .	. .	. .	25.4	38.5	. .	. .	12 59.72	28.81	. .	.	5	46.721	20 20.55	15.34	8.70	13 28.53	31 8 14.6
72	7	. .	. .	18.2	31.	44.0	. .	. .	. .	. .	14 31.12	28.81	. .	.	6	37.18	17 7.91	15.20	8.26	14 59.93	31 5 1.4
73	8	53.5	6.4	19.0	31.5	. .	. .	. .	. .	. .	16 31.83	28.81	−0.01	.	19	35.787	12 1.75	15.03	7.58	17 0.63	30 59 54.4
74	8	. .	. .	3.8	16.0	29.2	42.0	. .	. .	. .	17 16.32	28.81	. .	.	5	35.457	26 48.56	14.96	9.58	17 45.13	31 14 43.1
75	7	. .	. .	. .	. .	35.7	48.4	. .	. .	. .	18 22.68	28.81	+0.01	.	1	35.578	52 56.64	14.86	13.18	18 51.50	40 54.7
76	8	. .	. .	. .	. .	25.5	38.2	51.3	. .	. .	19 12.59	28.81	. .	.	3	38.862	36 31.38	14.79	10.90	19 41.40	24 27.1
77	7	. .	47.2	59.2	12.4	25.0	. .	. .	. .	. .	22 12.38	28.80	. .	.	3	41.018	35 17.12	14.53	10.73	22 41.18	23 12.4
78	7	. .	. .	. .	. .	. .	. .	5.0	. .	. .	22 26.37	28.80	. .	.	4	41.618	29 4.27	14.51	9.87	22 55.17	16 58.6
79	6	. .	. .	. .	. .	. .	. .	5.0	. .	. .	22 26.37	28.80	. .	11.	5	42.198	22 55.54	14.51	9.12	22 55.17	31 10 49.2
80	7	. .	56.2	8.8	21.8	. .	. .	. .	. .	. .	25 21.77	28.80	−0.01	.	7	46.60	5 49.28	14.25	6.75	25 50.56	30 53 40.3
81	8	. .	. .	10.	22.2	35.2	. .	. .	. .	. .	26 22.46	28.80	+0.01	.	1	37.771	51 41.09	14.16	13.00	26 51.27	31 39 38.2
82	9	. .	. .	. .	. .	. .	. .	57.5	. .	. .	30 18.80	28.80	+0.01	.	1	43.202	48 33.64	13.81	12.55	30 47.61	31 36 30.0
83	9	. .	. .	. .	. .	57.4	9.5	. .	. .	. .	31 44.29	28.80	−0.01	.	7	40.857	9 7.07	13.70	7.19	32 13.09	30 56 58.0
84	10	. .	. .	. .	. .	64.7	. .	. .	. .	. .	32 51.87	28.80	+0.01	.	1	42.752	48 49.46	13.59	12.59	33 20.68	31 36 45.6
85	10	. .	. .	. .	. .	. .	. .	52.4	. .	. .	33 13.78	28.80	. .	.	2	48.342	39 47.34	13.56	11.34	33 42.58	27 42.2
86	10	. .	. .	. .	. .	. .	48.0	60.5	. .	. .	34 22.04	28.79	. .	.	3	36.20	38 2.92	13.46	11.10	34 50.83	25 57.5
87	6	. .	. .	. .	. .	37.2	50.7	3.4	. .	. .	35 24.71	28.79	. .	11.	5	33.975	27 38.79	13.39	9.68	35 53.50	15 31.9
88	7	. .	. .	. .	. .	. .	. .	. .	. .	50.0	35 39.42	28.79	. .	.	6	31.088	20 37.77	13.35	8.74	36 8.21	8 29.9
89	8	. .	. .	. .	. .	. .	. .	51.2	. .	. .	37 12.58	28.79	. .	.	3	31.868	40 32.31	12.21	11.44	37 41.37	28 26.0
90	7	. .	. .	. .	. .	. .	57.0	10.5	. .	. .	40 31.57	28.79	. .	.	5	34.214	27 31.37	12.92	9.66	41 0.36	15 24.0
91	7	. .	. .	. .	. .	. .	. .	26.0	. .	. .	40 47.37	28.79	. .	.	4	39.587	30 14.23	12.90	10.02	41 16.16	18 7.2
92	8	. .	. .	. .	. .	. .	. .	. .	. .	37.4	41 26.52	28.79	. .	12.	2	44.97	41 42.64	12.85	11.62	41 55.31	29 37.1
93	8	. .	. .	. .	. .	. .	. .	33.6	. .	. .	42 54.97	28.79	. .	.	4	46.487	26 16.55	12.72	9.50	43 23.76	14 8.8
94	8	. .	. .	23.5	35.7	49.2	. .	. .	. .	. .	45 36.12	28.79	. .	.	2	46.000	41 8.38	12.48	11.52	46 4.91	29 2.4
95	7	. .	. .	. .	27.2	40.3	53.0	5.4	. .	. .	46 27.21	28.79	. .	.	5	44.638	21 32.30	12.41	8.84	46 56.00	31 9 23.6
96	5	. .	. .	. .	. .	. .	. .	. .	50.2	3.8	46 53.13	28.79	−0.01	.	7	39.405	9 57.13	12.37	7.30	47 21.91	30 57 46.8
97	5	. .	. .	. .	60.5	13.4	. .	. .	. .	. .	48 0.62	28.78	−0.01	.	7	42.23	8 19.82	12.27	7.08	48 29.39	30 56 9.2
98	8.9	. .	. .	. .	. .	. .	. .	56.5	. .	. .	50 17.86	28.78	. .	.	6	37.24	17 5.84	12.07	8.26	50 46.64	31 4 56.2
99	9	. .	46.3	59.	11.8	25.0	. .	. .	. .	. .	52 11.95	28.78	. .	.	3	40.872	35 22.14	11.91	10.74	52 40.73	23 14.8
100	9	. .	. .	. .	. .	. .	. .	60.2	. .	. .	53 21.46	28.78	+0.01	.	1	37.087	52 4.29	11.81	13.13	53 50.25	39 59.2
101	6	. .	. .	. .	. .	. .	47.2	60.5	. .	. .	54 21.70	28.78	. .	.	6	31.847	20 11.61	11.72	8.68	54 50.48	8 2.0
102	7	. .	. .	. .	12.2	24.7	37.6	. .	. .	. .	56 11.98	28.78	. .	.	5	37.128	25 51.00	11.56	9.44	56 40.76	13 42.0
103	7	. .	25.2	38.2	51.	4.0	. .	. .	. .	. .	57 51.02	28.78	. .	.	4	41.73	29 0.40	11.42	9.86	58 19.80	16 51.7
104	7	. .	. .	. .	59.	11.5	24.7	. .	. .	. .	57 58.88	28.78	. .	.	4	45.112	27 3.90	11.41	9.61	58 27.66	14 54.9
105	6.7	. .	. .	. .	. .	. .	. .	. .	31.3	. .	19 58 33.82	28.78	−0.01	11.	6	45.46	12 21.88	11.36	7.63	19 59 2.59	0 10.9
106	7	. .	. .	. .	. .	30.5	43.5	56.2	. .	. .	20 0 17.63	+28.78	. .	VII.	2	43.975	42 17.78	−11.20	−11.70	20 0 46.41	31 30 10.7

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848.	h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.		CIRCLE.						Barom.	Attached Thermom.	External Thermom.
			A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848.	h. m.	° ′ ″				″	″	in.	°	°

REMARKS.

(134) 61. Double.
(134) 71. This second may be 13.
(134) 73. Micrometer reading assumed as $7^t\ 35^r.787$.

ZONE 134. JULY 20. MAJ. $D_0 = -30° 47' 30''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
107	7	. .	. .	. .	32.	45.2	58.	. .	. .	. .	20 1 32.21	+28.78	. .	.	4	46.219	26 25.78	−11.10	− 9.51	20 2 0.99	31 14 16.4
108	8	. .	. .	. .	3.6	16.2	29.3	. .	. .	. .	3 3.49	28.78	. .	VI.	3	44.783	33 7.26	10.97	10.42	3 32.27	20 58.6
109	8	. .	36.7	49.4	2.4	. .	. .	. .	. .	. .	6 2.34	28.77	. .	IV.	5	46.168	20 39.60	10.70	8.73	6 31.11	8 29.0
110	8	. .	. .	. .	. .	. .	37.5	50.4	. .	. .	6 11.63	28.77	+0.01	.	1	34.26	53 42.03	10.69	13.31	6 40.41	41 36.0
111	7	. .	. .	. .	. .	. .	33.5	46.3	. .	. .	7 7.58	28.77	+0.01	.	1	37.53	51 49.38	10.61	13.05	7 36.36	31 39 43.0
112	7	. .	. .	. .	. .	36.5	49.5	2.4	. .	. .	8 23.81	28.77	−0.01	.	7	37.633	10 58.17	10.50	7.41	8 52.57	30 58 46.1
113	8	60.2	12.4	25.7	38.4	51.5	4.4	17.	. .	. .	10 38.51	28.77	. .	.	3	32.57	40 8.13	10.33	11.39	11 7.28	31 27 59.8
114	8	. .	. .	7.3	19.4	33.	. .	. .	. .	. .	12 19.89	28.77	+0.01	.	2	32.87	48 40.67	10.16	12.61	12 48.67	31 36 33.4
115	7	44.4	57.3	10.2	23.2	. .	. .	. .	. .	. .	14 23.01	28.77	−0.01	.	7	38.93	10 13.48	9.98	7.31	14 51.77	30 58 0.8
116	8	. .	. .	. .	. .	. .	21.0	33.8	. .	. .	14 55.28	28.77	−0.01	.	7	35.918	11 57.24	9.94	7.55	15 24.04	30 59 44.7
117	7	13.3	26.	39.4	51.5	4.6	. .	. .	. .	. .	16 51.83	28.77	. .	.	5	44.155	21 48.94	9.77	8.88	17 20.60	31 9 37.6
118	9	. .	. .	. .	. .	48.	. .	. .	. .	. .	17 35.17	28.77	. .	.	4	37.81	31 15.40	9.71	10.17	18 3.94	19 5.3
119	6	. .	. .	. .	. .	9.4	22.2	35.0	. .	. .	17 56.46	28.77	. .	.	4	36.035	32 16.59	9.68	10.31	18 25.23	31 20 6.6
120	9	. .	. .	. .	. .	56.5	9.4	. .	. .	. .	19 43.81	28.77	−0.01	.	7	46.97	5 36.54	9.53	6.69	20 12.57	30 53 22.8
121	8	. .	54.4	7.5	20.	33.	. .	. .	. .	. .	21 20.15	28.77	. .	.	5	39.404	24 32.59	9.38	9.25	21 48.92	31 12 21.2
122	9	. .	. .	. .	. .	47.	0.5	. .	. .	. .	22 34.46	28.77	. .	.	4	41.392	29 12.01	9.28	9.89	23 3.23	17 1.2
123	8	. .	. .	. .	. .	. .	. .	34.0	. .	. .	22 55.36	28.77	. .	.	6	33.64	19 9.85	9.25	8.52	23 24.13	6 57.6
124	9	. .	. .	. .	30.4	. .	. .	. .	. .	. .	24 30.44	28.77	. .	.	6	35.535	18 4.57	9.12	8.38	24 59.21	5 52.1
125	9	. .	. .	. .	. .	12.2	25.8	38.2	. .	. .	25 59.67	28.77	. .	.	5	33.925	27 41.29	8.99	9.69	26 28.44	15 30.0
126	8	. .	. .	. .	. .	5.0	18.0	30.5	. .	. .	25 52.12	28.77	. .	.	6	30.498	20 58.09	9.00	8.78	26 20.89	8 45.9
127	8	. .	. .	. .	. .	. .	37.4	50.	. .	. .	26 11.56	28.77	. .	.	7	29.00	15 55.55	8.97	8.08	26 40.33	3 42.6
128	8	. .	. .	. .	. .	62.5	. .	. .	. .	. .	27 49.67	28.77	. .	.	1	39.56	50 39.46	8.84	12.89	28 18.44	38 31.2
129	6	. .	. .	. .	. .	37.	49.8	2.2	. .	. .	28 23.90	28.77	. .	.	2	44.43	42 2.46	8.79	11.67	28 52.67	29 52.9
130	6	. .	. .	. .	. .	45.	58.1	11.0	. .	. .	28 32.28	28.77	. .	.	2	47.27	40 24.63	8.77	11.43	29 1.05	28 14.8
131	7	. .	. .	. .	. .	. .	19.3	32.	. .	. .	29 53.44	28.77	. .	.	2	49.553	39 6.00	8.66	11.25	30 22.21	26 55.9
132	7	56.	8.5	21.3	34.2	. .	. .	. .	. .	. .	32 34.27	28.76	. .	.	6	36.29	17 38.57	8.43	8.32	33 3.03	5 25.3
133	9	. .	. .	. .	. .	. .	5.0	18.0	. .	. .	32 39.37	28.76	. .	.	6	41.39	14 42.73	8.42	7.92	33 8.13	2 29.1
134	9	51.5	4.9	. .	. .	. .	. .	. .	. .	. .	35 30.44	28.76	. .	.	2	44.95	41 44.39	8.19	11.63	35 59.20	29 34.2
135	6	. .	. .	. .	42.8	55.7	8.4	. .	. .	. .	35 42.87	28.76	−0.01	IV.	6	43.898	13 16.50	8.17	7.72	36 11.62	1 2.4
136	9	. .	. .	. .	26.4	39.3	52.	. .	. .	. .	37 26.37	28.76	. .	.	4	44.224	27 34.49	8.03	9.66	37 55.13	15 22.2
137	9	. .	. .	. .	. .	54.	6.9	. .	. .	. .	38 41.26	28.76	. .	.	6	40.96	14 57.66	7.92	7.96	39 10.02	2 43.5
138	9	. .	. .	. .	. .	. .	43.4	56.4	. .	. .	39 17.73	28.76	. .	.	5	37.259	25 46.32	7.87	9.42	39 46.49	31 13 33.6
139	6	. .	. .	. .	. .	. .	. .	. .	. .	. .	41	28.76	−0.01	.	7	37.786	10 52.90	7.73	7.40	41	30 58 38.0
140	6	. .	. .	. .	. .	. .	. .	12.9	. .	. .	42 34.27	28.76	. .	.	5	34.18	27 32.54	7.59	9.66	43 3.03	31 15 19.8
141	5	. .	. .	. .	. .	58.1	11.2	24.	. .	. .	43 45.36	28.76	. .	.	4	41.675	29 2.30	7.50	9.87	44 14.12	16 49.7
142	7	20.3	33.5	46.4	58.3	11.7	24.5	. .	. .	. .	45 58.89	28.76	. .	.	3	32.87	39 57.79	7.32	11.37	46 27.65	27 46.5
143	6	. .	23.4	36.0	48.4	. .	. .	. .	. .	. .	49 48.77	28.76	. .	.	6	36.365	17 35.99	7.01	8.32	50 17.53	5 21.3
144	10	. .	. .	. .	. .	. .	27.	39.5	. .	. .	50 1.09	28.76	. .	.	5	45.407	21 5.64	6.99	8.79	50 29.85	8 51.4
145	10	. .	. .	. .	. .	. .	54.5	7.4	. .	. .	50 28.80	28.76	. .	.	5	43.91	21 57.21	6.95	8.90	50 57.56	9 43.1
146	10	. .	. .	. .	. .	. .	. .	. .	16.8	. .	51 19.11	28.76	. .	.	3	45.742	32 33.56	6.89	10.35	51 47.87	20 20.8
147	9	. .	. .	49.3	1.4	15.0	. .	. .	. .	. .	53 1.89	28.76	. .	.	3	42.615	34 22.11	6.75	10.60	53 30.65	22 9.5
148	9	. .	. .	. .	. .	18.4	31.2	44.3	. .	. .	54 5.56	28.76	. .	.	4	38.552	30 49.84	6.66	10.11	54 34.32	31 18 36.6
149	8	. .	. .	41.8	54.3	. .	. .	. .	. .	. .	55 54.55	28.76	−0.01	.	7	45.84	6 15.46	6.52	6.78	56 23.30	30 53 58.8
150	8	. .	. .	. .	36.5	50.0	2.8	. .	. .	. .	56 36.87	28.76	+0.01	.	1	40.666	50 1.37	6.46	12.79	57 5.64	31 37 50.6
151	6.7	. .	. .	54.2	6.8	20.0	. .	. .	. .	. .	58 6.99	28.76	+0.01	.	1	37.472	51 51.38	6.34	13.05	20 58 35.76	39 40.8
152	8	. .	. .	19.2	31.5	45.0	. .	. .	. .	. .	20 59 31.89	28.76	. .	.	3	32.57	40 8.13	6.23	11.39	21 0 0.65	27 55.8
153	6	. .	. .	22.5	35.	48.5	1.5	. .	. .	. .	21 2 35.46	28.76	. .	.	5	39.988	24 12.48	5.98	9.20	3 4.22	11 57.7
154	10	. .	. .	. .	. .	. .	59.	11.6	. .	. .	3 33.12	28.76	. .	.	5	34.91	27 7.23	5.91	9.60	4 1.88	14 52.7
155	7	. .	. .	. .	59.5	12.8	. .	. .	. .	. .	21 4 59.72	+28.76	. .	.	4	32.006	34 35.38	− 5.80	−10.64	21 5 28.48	31 22 21.8

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848. h.	s.	s.	s.	s.	s.	° ′ ″	r.

REMARKS.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848. h. m.	° ′ ″				″	″	in.	°	°

ZONE 134. JULY 20. MAJ. $D_0 = -30° 47' 30''$—Continued.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″.
156	7	. .	. .	. .	. .	. .	56.	9.0	. .	. .	21 5 30.22	+28.76	+0.01	.	2	33.77	48 9.67	− 5.76	−12.56	21 5 58.99	31 35 58.0
157	8	. .	. .	13.5	26.	. .	. .	. .	. .	. .	7 26.16	28.76	+0.01	.	1	37.24	51 59.37	5.61	13.10	7 54.93	39 48.1
158	6	. .	. .	42.4	55.	8.0	. .	. .	. .	. .	7 55.12	28.76	. .	.	3	42.632	34 21.52	5.57	10.61	8 23.88	31 22 7.7
159	9	. .	. .	. .	. .	. .	. .	33.2	. .	. .	8 54.55	28.76	−0.01	.	7	44.405	7 4.53	5.50	6.86	9 23.30	30 54 46.9
160	8	. .	21.	34.1	. .	. .	. .	. .	. .	. .	10 46.84	28.76	. .	.	2	46.97	40 34.97	5.35	11.49	11 15.60	31 28 21.8
161	7	. .	. .	. .	. .	. .	16.	28.2	. .	. .	10 49.96	28.76	. .	.	6	38.04	16 38.28	5.35	− 8.15	11 18.72	31 4 21.8
162	.	. .	. .	. .	. .	. .	. .	. .	44.	. .	10 46.30	28.76	. .	.	.	.	. . .	5.35	. .	11 15.06	
163	8	. .	. .	21.	34.0	46.9	. .	. .	. .	. .	13 33.96	28.76	. .	.	3	33.815	39 25.24	5.15	−11.32	14 2.72	31 27 11.7
164	9	27.	. .	52.	5.	. .	. .	. .	. .	. .	17 5.16	28.76	. .	.	6	34.52	18 39.54	4.86	8.53	17 33.92	6 22.9
165	7.8	37.	50.	15.	28.1	. .	. .	. .	. .	. .	17 15.38	28.76	. .	.	6	31.625	20 19.26	4.85	8.53	17 44.14	8 2.6
166	8	. .	. .	. .	. .	. .	. .	41.5	60.9	. .	18 3.06	28.76	. .	.	2	44.72	41 52.47	4.79	11.67	18 31.82	29 38.9
167	7	. .	. .	46.5	59.4	. .	. .	. .	. .	. .	19 59.42	28.76	. .	.	6	38.99	16 5.56	4.64	8.08	20 28.18	3 48.3
168	7	. .	. .	. .	. .	. .	27.2	40.2	. .	. .	20 1.51	28.76	. .	.	4	41.723	29 0.65	4.64	9.86	20 30.27	16 45.2
169	9	. .	. .	. .	. .	. .	. .	47.	. .	. .	20 8.37	28.76	. .	.	4	46.915	26 1.44	4.63	9.45	20 37.13	13 45.5
170	10	. .	. .	. .	. .	. .	12.	25.	. .	. .	21 46.31	28.76	. .	.	4	39.58	30 14.31	4.51	10.04	22 15.07	17 58.9
171	10	. .	. .	. .	. .	. .	. .	. .	5.5	. .	22 7.82	28.76	. .	.	2	47.19	40 26.57	4.48	11.47	22 36.58	28 12.5
172	10	54.5	7.4	. .	. .	. .	. .	. .	. .	. .	26 33.11	28.76	. .	.	4	46.20	26 26.27	4.15	9.50	27 1.87	14 9.9
173	10	. .	. .	. .	53.4	6.3	. .	. .	. .	. .	26 53.42	28.76	. .	.	3	45.232	32 51 95	4.13	10.40	27 22.18	20 36.5
174	9	. .	. .	. .	. .	. .	50.	2.2	. .	. .	27 23.90	28.76	. .	.	3	40.122	35 47.82	4.09	10.82	27 52.66	23 32.7
175	9	. .	. .	. .	. .	. .	11.7	24.7	. .	. .	27 46.03	28.76	. .	.	5	37.000	25 55.24	4.06	9.43	28 14.79	31 13 38.7
176	7	. .	34.3	47.1	60.4	12.8	. .	. .	. .	. .	30 0.09	28.76	−0.01	.	7	37.518	11 2.13	3.89	7.39	30 28.84	30 58 43.4
177	9	. .	. .	16.	28.5	31.5	. .	. .	. .	. .	31 28.66	28.76	. .	.	4	34.242	33 18.34	3.78	10.46	31 57.42	31 21 2.6
178	9	44.	56.8	. .	. .	. .	. .	. .	. .	. .	33 22.42	28.76	−0.01	.	7	34.898	12 32.22	3.64	7.60	33 51.17	0 13.5
179	9	. .	. .	. .	. .	38.5	. .	. .	. .	. .	33 25.74	28.76	0.01	.	7	33.00	13 37.72	3.64	7.74	33 54.49	1 19.1
180	9	. .	. .	. .	. .	. .	1.5	14.5	. .	. .	33 35.86	28.76	−0.01	.	6	38.285	16 29.69	3.63	7.33	34 4.61	4 10.6
181	4	48.	0.5	13.3	26.	39.4	52.2	5.4	. .	. .	38 26.40	28.76	. .	.	2	34.565	47 42.28	3.28	12.50	38 55.16	35 28.1
182	9	. .	. .	. .	. .	. .	. .	8.4	. .	. .	41 29.76	28.76	. .	.	7	33.125	13 33.10	3.05	7.73	41 58.52	1 13.9
183	7	. .	. .	. .	. .	56.2	9.5	22.5	. .	. .	21 42 43.73	+28.76	. .	.	7	33.345	13 25.88	− 2.96	− 7.71	21 43 12.49	31 1 6.6

ZONE 135. JULY 24. MS. $D_0 = -22° 2' 40''$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	10	. .	. .	. .	. .	30.	42.5	54.	. .	. .	20 16 18.42	+28.33	−0.01	VII.	7	34.346	12 51.15	−11.61	− 8.81	20 16 46.74	22 15 51.6
2	10	. .	. .	. .	59.	11.	. .	. .	. .	. .	17 59.08	28.33	. .	V.	5	38.696	24 56.96	11.46	9.64	18 27.41	27 58.1
3	9	. .	. .	. .	. .	1.	13.2	. .	. .	. .	18 49.29	28.33	. .	IV.	4	44.056	27 40.29	11.39	9.84	19 17.62	30 41.5
4	8.9	. .	. .	. .	26.5	38.8	. .	. .	. .	. .	20 14.84	28.33	+0.01	VI.	1	40.602	50 3.45	11.26	11.42	20 43.18	53 6.1
5	9	. .	. .	. .	. .	9.5	22.5	34.	. .	. .	22 58.22	28.33	. .	VII.	3	39.082	36 23.56	11.04	10.44	23 26.55	39 25.0
6	9	. .	. .	. .	. .	. .	. .	52.	. .	. .	24 16.34	28.33	. .	VII.	2	46.090	41 5.03	10.93	10.77	24 44.67	44 6.7
7	10	. .	. .	. .	. .	. .	. .	44.	. .	. .	25 8.33	28.32	. .	VII.	2	49.882	38 54.41	10.87	10.62	25 36.65	41 55.9
8	10	. .	. .	39.	. .	3.	. .	. .	. .	. .	26 51.00	28.32	. .	IV.	3	37.495	37 18.47	10.71	10.50	27 19.32	40 19.7
9	9	. .	. .	16.	28.2	40.2	. .	. .	. .	. .	28 28.13	28.32	+0.01	V.	1	32.502	54 42.57	10.57	11.75	28 56.46	57 44.9
10	10	. .	. .	. .	33.	45.	. .	. .	. .	. .	29 33.10	28.32	+0.01	V.	2	33.995	47 27.48	10.47	11.28	30 1.43	50 29.2
11	9	. .	. .	7.5	19.	31.	. .	. .	. .	. .	31 19.25	28.32	−0.01	V.	7	46.235	6 1.84	10.33	8.33	31 47.56	9 0.5
12	10	. .	32.	44.	55.5	7.	. .	. .	. .	. .	33 55.56	28.32	. .	V.	4	45.620	26 46.38	10.12	9.77	34 23.88	29 46.3
13	10	. .	. .	. .	. .	. .	. .	18.5	. .	. .	34 42.81	28.32	+0.01	VII.	2	40.510	44 17.24	10.06	11.01	35 11.14	47 18.3
14	10	. .	. .	. .	8.	20.	. .	. .	. .	. .	36 8.08	28.32	+0.01	V.	2	39.685	44 45.90	9.94	11.05	36 36.41	47 46.9
15	9	. .	. .	. .	. .	29.5	41.	. .	. .	. .	37 17.40	28.32	. .	VI.	3	34.105	39 15.14	9.84	10.66	37 45.72	42 15.6
16	10	. .	. .	. .	. .	. .	. .	38.	. .	. .	38 2.29	28.32	. .	VII.	5	36.325	26 18.41	9.78	9.73	38 30.61	29 17.9
17	10	. .	. .	. .	. .	. .	40.	52.5	. .	. .	20 39 16.50	+28.32	. .	VII.	4	32.755	34 9.32	− 9.68	−10.29	20 39 44.82	22 37 9.3

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848. h.	s.	s.	s.	s.	s.	° ′ ″	r.
July 24, 19	+24.440	l 0.008	. .	− 0.387	− 0.104	0 0 2.73	40.019

INSTRUMENT READINGS.

	Date.	CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1848. h. m.	° ′ ″				″	″	in.	°	°
Zone 135	July 24, 20 16	298 44 0.	58.2	*46.	3.2	1.71	2.00	30.150	73.	68.
		. .	. .	. .	. .	. .	. .	30.138	73.	65.6
		. .	. .	. .	. .	. .	. .	30.110	72.	64.
	21 24	. .	. .	. .	. .	. .	. .	. .	. .	65.

REMARKS.

(134) 165. Transits over T.'s IV and V assumed to have been recorded over T.'s III and IV.

(135) 4. Transits over T.'s V and VI assumed to have been recorded over T.'s IV and V.

(135) 10. Micrometer reading assumed as 34ʳ.994 instead of 33ʳ.994.

* The original record for C is 46″. A comparison with the last reading indicates that it should have been 4″.6.

Zone 135. July 24. Ms. $D_0 = -22° 2' 40''$—Continued.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s,			r.	′ ″	″	″	h. m. s.	° ′ ″
18	10	. .	. .	. .	. .	51.5	3.5	. .	. .	. .	20 40 39.71	+28.32	. .	VI.	5	40.096	23 34.20	− 9.57	− 9.55	20 41 8.03	22 26 33.3
19	10	. .	. .	. .	. .	29.	41.	. .	. .	. .	42 17.20	28.32	. .	VI.	5	37.380	25 42.20	9.44	9.69	42 45.52	28 41.3
20	10	. .	. .	. .	12.5	24.5	. .	. .	. .	. .	44 12.56	28.32	. .	V.	4	43.040	28 15.26	9.28	9.88	44 40.88	31 14.4
21	10	. .	. .	29.	41.	52.5	. .	. .	. .	. .	45 40.83	28.32	. .	IV.	3	31.982	37 1.69	9.16	10.48	46 9.15	40 1.3
22	10	. .	. .	. .	. .	. .	32.5	44.8	. .	. .	46 8.89	28.32	. .	VII.	3	35.625	38 22.64	9.13	10.57	46 37.21	41 22.3
23	9	. .	. .	. .	43.5	55.2	. .	. .	. .	. .	47 43.42	28.32	. .	VI.	4	37.210	31 36.00	9.00	10.10	48 11.74	34 35.1
24	10	. .	. .	. .	2.	. .	. .	. .	. .	. .	51 2.04	28.32	+0.01	IV.	1	37.902	51 36.57	8.74	11.53	51 30.37	54 36.8
25	9.10	18.5	30.5	42.5	54.	. .	. .	. .	. .	. .	53 54.21	28.32	. .	I.	4	39.495	30 17.15	8.52	10.01	54 22.53	33 15.7
26	9	. .	. .	. .	. .	. .	41.	53.	. .	. .	54 17.28	28.32	−0.01	VII.	7	48.80	4 33.24	8.48	8.23	54 45.59	7 30.0
27	10	. .	. .	. .	54.5	6.	. .	. .	. .	. .	20 55 54.38	28.32	−0.01	V.	5	56.682	14 37.40	8.36	8.93	20 56 22.69	17 34.7
28	10	27.	39.	51.	. .	. .	. .	. .	. .	. .	21 3 2.78	28.32	. .	III.	4	44.852	27 12.84	7.80	9.81	21 3 31.10	30 10.4
29	9	. .	32.	44.5	. .	. .	. .	. .	. .	. .	4 56.08	28.32	+0.01	III.	1	46.455	46 41.93	7.67	11.20	5 24.41	49 40.8
30	10	. .	. .	. .	. .	. .	. .	23.5	. .	. .	4 47.83	28.32	. .	VII.	2	51.612	37 54.81	7.66	10.56	5 16.15	40 53.0
31	9	. .	. .	. .	. .	. .	22.	34.	. .	. .	5 58.26	28.32	. .	VI.	4	52.246	22 58.06	7.58	9.50	6 26.58	25 55.1
32	10	. .	. .	. .	. .	36.	47.6	. .	. .	. .	7 23.98	28.32	. .	VI.	3	51.900	29 2.15	7.48	9.93	7 52.30	31 59.6
33	10	. .	. .	. .	. .	. .	36.5	. .	. .	. .	8 12.77	28.32	−0.01	VI.	5	49.612	18 40.85	7.42	9.19	8 41.08	21 37.5
34	10	. .	. .	37.	49.	. .	. .	. .	. .	. .	9 48.92	28.32	. .	IV.	3	38.382	36 47.91	7.30	10.48	10 17.24	39 45.7
35	10	. .	. .	. .	. .	54.	6.	. .	. .	. .	10 42.18	28.32	. .	VI.	4	38.867	30 38.92	7.23	10.05	11 10.50	33 36.2
36	10	. .	. .	. .	. .	. .	23.	35.	. .	. .	13 59.23	28.32	+0.01	VI.	2	44.262	42 8.14	6.99	10.88	14 27.56	45 6.0
37	10	. .	. .	. .	. .	31.	43.	. .	. .	. .	15 19.20	28.32	. .	VI.	4	45.960	26 34.58	6.90	9.75	15 47.52	29 31.2
38	9.10	. .	49.	1.	13.	. .	. .	. .	. .	. .	17 12.86	28.32	. .	IV.	4	47.810	25 30.97	6.75	9.68	17 41.18	28 27.4
39	9.10	. .	47.5	59.5	. .	. .	. .	. .	. .	. .	20 11.28	28.33	. .	IV.	5	49.362	18 49.57	6.54	9.20	20 39.61	21 45.3
40	7	. .	. .	. .	. .	41.	. .	. .	. .	. .	20 29.18	28.33	. .	V.	4	49.602	24 29.22	6.51	9.61	20 57.51	27 25.3
41	10	. .	. .	. .	43.5	55.	. .	. .	. .	. .	24 43.32	28.33	. .	VI.	4	45.565	26 48.19	6.21	9.77	25 11.65	29 44.2
42	9	. .	47.	59.	11.	. .	. .	. .	. .	. .	30 10.86	28.33	. .	IV.	5	40.792	20 18.10	5.83	9.29	30 39.19	23 13.2
43	10	. .	. .	. .	. .	9.5	. .	33.	. .	. .	30 57.46	28.33	+0.01	VII.	1	40.182	50 17.78	5.77	11.47	31 25.80	53 15.0
44	10	. .	. .	. .	. .	44.5	56.5	8.5	. .	. .	32 32.72	28.33	. .	VI.	3	44.280	33 24.64	5.67	10.25	33 1.05	36 20.6
45	10	. .	. .	. .	. .	. .	. .	2.5	. .	. .	33 26.82	28.33	. .	VII.	3	41.094	35 14.24	5.61	10.38	33 55.15	38 10.2
46	10	49.	1.	12.6	. .	. .	. .	. .	. .	. .	36 24.67	28.33	. .	III.	3	39.105	30 38.53	5.40	10.08	36 53.00	33 34.0
47	10	. .	. .	. .	. .	23.5	35.5	. .	. .	. .	38 11.74	28.33	. .	VI.	6	35.610	18 1.88	5.28	9.15	38 40.07	20 56.3
48	10	. .	. .	. .	33.	45.	. .	. .	. .	. .	39 33.11	28.33	. .	VI.	6	33.720	19 6.99	5.19	9.22	40 1.44	22 1.4
49	10	53.	5.	17.	. .	. .	. .	. .	. .	. .	42 28.77	28.34	. .	III.	5	40.360	23 59.64	5.00	9.57	42 57.11	26 54.2
50	10	. .	. .	31.	43.	. .	. .	. .	. .	. .	44 42.94	28.34	. .	IV.	5	43.192	22 22.11	4.85	9.46	45 11.28	25 16.4
51	10	. .	. .	. .	36.	48.	. .	. .	. .	. .	21 47 36.09	+28.34	+0.01	V.	1	48.105	45 45.09	− 4.67	−11.14	21 48 4.44	22 48 40.9

Zone 136. August 4. Ms. $D_0 = -22° 2' 40'$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	9	. .	. .	39.	51.5	3.5	. .	. .	. .	. .	20 12 51.35	+26.54	. .	III.	5	42.460	22 47.30	−12.96	− 9.50	20 13 17.89	22 25 49.8
2	10	35.	. .	. .	. .	. .	. .	. .	. .	. .	16 10.64	26.54	−0.01	II.	6	44.470	12 56.68	12.65	8.82	16 37.17	15 58.2
3	10	. .	. .	. .	. .	. .	. .	55.	. .	. .	16 19.19	26.54	−0.01	VII.	7	46.515	5 51.96	12.64	8.35	16 45.72	8 53.0
4	9	. .	. .	39.	51.	3.	. .	. .	. .	. .	18 51.00	26.53	. .	IV.	4	43.952	27 9.42	12.41	9.80	19 17.53	30 11.6
5	8	. .	4.5	. .	28.	. .	. .	. .	. .	. .	20 16.26	26.43	+0.01	IV.	1	40.666	50 1.37	12.27	11.39	20 42.80	53 5.0
6	9	. .	. .	47.	59.	11.	. .	. .	. .	. .	23 59.00	26.52	. .	V.	3	39.206	36 19.51	12.04	10.43	23 25.52	39 22.0
7	9	. .	. .	. .	. .	30.2	42.	54.2	. .	. .	24 18.31	26.52	. .	VII.	2	46.151	41 2.94	11.93	10.77	24 44.83	44 5.6
8	8	. .	. .	18.2	29.5	42.	54.	. .	. .	. .	28 30.06	26.52	+0.01	VII.	1	32.705	54 35.34	11.56	11.71	28 56.59	57 38.6
9	10	. .	. .	. .	. .	. .	. .	32.	. .	. .	33 56.24	26.51	. .	VII.	5	45.561	21 0.25	11.08	9.37	34 22.75	24 0.7
10	9	43.5	55.	7.2	. .	. .	. .	. .	. .	. .	37 19.06	26.50	. .	III.	3	34.182	39 12.56	10.78	10.64	37 45.56	42 14.0
11	10	. .	. .	. .	. .	. .	1.5	. .	. .	. .	20 37 37.59	+26.50	+0.01	VII.	2	40.818	44 6.64	−10.76	−10.98	20 38 4.10	22 47 8.4

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848. h.	s.	s.	s.	s.	s.	° ′ ″	r.
Aug. 4, 19	+22.739	g 0.002	. .	− 0.387	− 0.104	0 0 4.18	40.054

INSTRUMENT READINGS.

	Date.	CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1848. h. m.	° ′ ″				″	″	in.	°	°
Zone 136	Aug. 4, 20	. .	. .	. .	. .	. .	. .	30.104	71.2	63.8
	20 12	298 35 0.	0.4	2.	3.6	1.79	1.59	30.018	77.	73.8
	20 40	. .	. .	. .	. .	. .	. .	30.020	76.8	73.2
	21 22	. .	. .	. .	. .	. .	. .	. .	. .	73.1
	21 58	. .	. .	. .	. .	. .	. .	30.004	76.	72.8

REMARKS.

(135) 18. Micrometer reading assumed as 41r.096 instead of 40r.096.

(135) 42. Micrometer reading assumed as 46r.792 instead of 40r.792.

(135) 46. Micrometer reading assumed as 49r.105 instead of 39r.105.

(136) 4. Micrometer reading assumed as 44r.952 instead of 43r.952.

(136) 5. Transits over T.'s III and V assumed to have been recorded over T's. II and IV.

(136) 6. Minutes of transit assumed as 22 instead of 23.

ZONE 136. AUGUST 4. MS. D₀=−22° 2′ 40″—Continued.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
12	10	. .	. .	. .	18.	30.	. .	. .	. .	. .	20 39 18.06	+26.50	. .	VI.	3	42.760	34 17.00	−10.61	−10.29	20 39 44.56	22 37 17.9
13	10	. .	. .	. .	41.	53.	. .	16.8	. .	. .	40 41.06	26.50	. .	VII.	5	41.005	23 37.19	10.49	9.56	41 7.56	26 37.2
14	10	38.5	. .	. .	. .	. .	. .	. .	. .	. .	43 14.30	26.49	. .	III.	4	42.192	28 44.47	10.27	9.91	43 40.79	31 44.6
15	10	. .	7.	. .	. .	. .	. .	. .	. .	. .	45 30.76	26.49	. .	III.	4	45.425	21 5.15	10.08	9.38	45 57.25	24 4.6
16	10	. .	. .	. .	. .	. .	6.	17.	. .	. .	45 41.70	26.49	. .	VII.	2	53.212	36 59.70	10.05	10.48	46 8.19	40 0.2
17	9	9.	. .	33.	. .	. .	. .	. .	. .	. .	47 44.85	26.49	. .	III.	3	47.490	31 34.14	9.89	10.10	48 11.34	34 34.1
18	9	. .	28.	40.	. .	. .	. .	. .	. .	. .	50 51.80	26.48	+0.01	III.	7	42.632	8 5.94	9.62	8.51	51 18.29	11 4.1
19	9	. .	32.	44.	55.2	. .	. .	. .	. .	. .	53 55.61	26.48	. .	IV.	4	39.555	30 15.34	9.36	10.01	54 22.09	33 14.7
20	10	. .	2.	. .	. .	. .	. .	. .	. .	. .	54 25.85	26.48	−0.01	II.	2	42.500	43 8.84	9.32	10.92	54 52.32	46 9.1
21	10	57.	. .	. .	. .	. .	. .	. .	. .	. .	57 12.80	26.48	. .	I.	3	44.440	33 18.98	9.09	10.22	57 39.28	36 18.3
22	9	. .	. .	38.	50.	. .	13.	. .	. .	. .	20 58 49.63	26.48	+0.01	III.	1	35.545	52 57.74	8.95	11.60	20 59 16.12	55 58.3
23	10	28.	40.	. .	. .	. .	. .	. .	. .	. .	21 3 3.77	26.47	. .	III.	4	44.812	27 14.21	8.60	9.81	21 3 30.24	30 12.6
24	10	. .	26.	. .	. .	. .	. .	. .	. .	. .	4 49.83	26.47	. .	II.	3	36.940	37 37.48	8.46	10.53	5 16.30	40 36.5
25	9	. .	. .	. .	57.	9.	21.	. .	. .	. .	4 57.08	26.47	+0.01	VI.	2	36.572	46 33.04	8.41	11.17	5 23.56	49 32.6
26	10	50.	22.5	. .	. .	. .	. .	. .	. .	. .	7 25.80	26.47	. .	II.	4	42.925	28 29.00	8.24	9.88	7 52.27	31 27.1
27	10	. .	. .	. .	. .	25.	37.	. .	. .	. .	8 13.12	26.47	. .	VI.	2	49.950	38 52.21	8.18	10.63	8 39.59	41 51.0
28	10	. .	. .	. .	. .	50.	12.	. .	. .	. .	9 50.04	26.46	. .	VI.	3	38.438	36 45.88	8.06	10.47	10 16.50	39 44.4
29	10	. .	. .	. .	. .	56.	7.	. .	. .	. .	10 43.66	26.46	. .	VI.	4	39.030	30 33.31	7.96	10.04	11 10.12	33 31.3
30	10	. .	57.2	9.	. .	. .	. .	. .	. .	. .	15 20.93	26.46	. .	III.	4	45.946	26 35.16	7.60	9.76	15 47.39	29 32.5
31	10	. .	19.	31.	. .	. .	. .	. .	. .	. .	16 42.84	26.46	. .	III.	3	40.375	35 39.24	7.49	10.39	17 9.30	38 37.1
32	9	. .	. .	. .	. .	. .	. .	50.	. .	. .	17 14.24	26.46	. .	VII.	5	37.800	25 27.59	7.45	9.68	17 40.70	28 24.7
33	9	. .	49.	. .	. .	. .	. .	. .	. .	. .	19 12.70	26.45	. .	II.	5	49.280	18 52.29	7.29	9.23	19 39.15	21 48.8
34	4	. .	. .	. .	45.	. .	. .	18.5	. .	. .	19 43.86	26.45	. .	VII.	4	49.71	24 25.27	7.25	9.61	20 10.31	27 22.1
35	9	. .	10.	22.	. .	. .	. .	. .	. .	. .	22 33.84	26.45	. .	II.	3	38.055	36 59.07	7.03	10.49	23 0.29	39 56.6
36	10	. .	17.	29.5	. .	. .	. .	. .	. .	. .	23 41.06	26.45	. .	III.	5	42.899	22 32.17	6.95	9.48	24 7.51	25 28.6
37	10	. .	. .	. .	42.	54.	. .	. .	. .	. .	24 42.06	26.45	. .	V.	3	42.038	34 41.96	6.87	10.33	25 8.51	37 39.2
38	10	. .	. .	. .	. .	27.5	. .	. .	. .	. .	26 15.64	26.45	. .	V.	2	47.170	40 28.05	6.74	10.74	26 42.09	43 25.5
39	10	. .	. .	. .	45.	57.	. .	. .	. .	. .	27 45.05	26.45	. .	V.	4	45.620	26 46.37	6.63	9.77	28 11.50	29 42.8
40	10	. .	. .	. .	. .	. .	53.	5.	. .	. .	28 29.16	26.45	+0.01	VII.	1	46.720	46 32.57	6.58	11.17	28 55.62	49 30.3
41	10	. .	. .	. .	. .	24.	36.	. .	. .	. .	30 12.20	26.44	. .	VI.	5	46.885	20 14.79	6.44	9.32	30 38.64	23 10.6
42	10	. .	10.5	22.	. .	. .	. .	. .	. .	. .	32 34.09	26.44	. .	III.	3	44.338	33 22.72	6.27	10.24	33 0.53	36 19.2
43	10	. .	. .	. .	31.5	. .	1.	. .	. .	. .	32 31.38	26.44	. .	IV.	5	51.630	17 31.44	6.28	9.13	32 57.82	20 26.8
44	10	. .	. .	. .	. .	. .	. .	1.2	. .	. .	36 25.46	26.44	. .	VII.	3	49.240	30 33.64	5.99	10.04	36 51.90	33 29.7
45	10	. .	. .	. .	. .	25.	37.	. .	. .	. .	38 13.21	26.44	. .	VI.	5	50.865	17 57.69	5.85	9.16	38 39.65	20 52.7
46	10	. .	. .	. .	. .	. .	. .	5.	. .	. .	42 29.24	26.44	. .	VII.	5	40.46	23 55.97	5.54	9.58	42 55.68	26 51.1
47	10	9.	21.	. .	. .	. .	. .	. .	. .	. .	44 44.73	26.44	. .	II.	5	43.142	22 23.72	5.39	9.47	45 11.17	25 18.6
48	10	. .	13.5	27.	38.	. .	. .	. .	. .	. .	47 38.07	26.43	+0.01	V.	2	38.134	45 39.30	5.18	11.11	48 4.51	48 35.6
49	10	. .	. .	. .	. .	35.	. .	. .	. .	. .	53 23.14	26.43	+0.01	V.	2	37.005	46 18.20	4.78	11.16	53 49.58	49 14.1
50	9	. .	. .	. .	. .	. .	45.	57.	. .	. .	56 21.22	26.43	. .	VI.	4	44.838	27 13.24	4.59	9.81	55 47.65	30 7.6
51	9	. .	. .	14.6	38.5	. .	. .	. .	. .	. .	21 58 26.51	+26.43	+0.01	IV.	1	31.492	55 17.37	− 4.45	−11.78	21 58 52.95	22 58 13.6

ZONE 137. AUGUST 7. MS. D₀=−19° 32′ 30″.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	9	. .	. .	. .	. .	. .	17.5	. .	. .	. .	18 26 54.12	+26.53	. .	VI.	4	49.748	24 24.12	−25.62	− 9.64	18 27 20.65	19 57 29.4
2	9	. .	. .	. .	. .	. .	9.5	. .	. .	. .	27 46.15	26.53	−0.01	VI.	5	48.883	19 5.97	25.54	9.35	28 12.67	52 10.9
3	9	. .	. .	. .	. .	. .	56.5	. .	. .	. .	28 33.19	26.53	−0.01	VI.	6	48.744	10 29.46	25.46	8.86	28 59.71	19 43 33.8
4	8	. .	. .	. .	32.5	44.5	. .	7.8	. .	. .	30 32.68	26.52	. .	IV.	2	49.838	38 56.18	25.27	10.48	30 59.20	20 12 1.9
5	10	. .	. .	. .	. .	. .	9.	. .	. .	. .	18 31 45.70	+26.52	−0.01	VII.	7	42.392	8 14.02	−25.15	− 8.75	18 32 12.21	19 41 17.9

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848. h.	s.	s.	s.	s.	s.	° ′ ″	r.
Aug. 7, 7	+22.907	g 0.030	. .	− 0.387	− 0.104	0 0 2.89	40.051

INSTRUMENT READINGS.

	Date.	CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1848. h. m.	° ′ ″				″	″	in.	°	°
Zone 137	Aug. 7, 18 26	301 5 0.	59.5	2.1	3.8	1.07	1.35	30.262	76.	66.3
	19 0	. .	. .	. .	. .	. .	. .	. .	. .	65.4
	19 3	. .	. .	. .	. .	. .	. .	. .	. .	65.
	19 20	. .	. .	. .	. .	. .	. .	30.262	74.	64.9
	19 45	. .	. .	. .	. .	. .	. .	. .	. .	63.6
	20 20	. .	. .	. .	. .	. .	. .	30.260	72.8	62.9
	20 40	. .	. .	. .	. .	. .	. .	. .	. .	62.
	21 40	. .	. .	. .	. .	. .	. .	30.258	71.2	60.5

REMARKS.

(136) 15. Micrometer thread assumed as 5 instead of 4.

(136) 28. Time of transit over T. IV assumed as 2ˢ.0 instead of 12ˢ.0, and transits over T.'s IV and V assumed to have been recorded over T.'s V and VI.

(136) 43. Time of transit over T. VI assumed to have been recorded 5ˢ too late.

(136) 50. Minutes assumed as 55 instead of 56.

(136) 51. Transit over T. V assumed to have been recorded over T. IV.

ZONE 137. AUGUST 7. Ms. D₀=−19° 32′ 30″—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
6	10	. .	. .	. .	. .	. .	. .	10.5	. .	. .	18 31 35.37	+26.52	. .	VII.	3	44.830	33 5.58	−25.16	−10.15	18 32 1.89	20 6 10.9
7	10	. .	. .	24.5	36.5	48.2	60.	. .	. .	. .	33 36.44	26.51	. .	III.	4	41.397	29 11.86	24.97	9.95	34 2.95	20 2 16.8
8	8	. .	19.5	31.5	42.	54.	6.	. .	. .	. .	36 42.63	26.50	−0.01	III.	6	45.399	12 24.78	24.66	9.00	37 9.12	19 45 28.4
9	9	. .	. .	7.5	19.5	. .	. .	. .	. .	. .	38 19.33	26.49	. .	IV.	4	42.665	28 28.21	24.51	9.89	38 45.82	20 1 32.6
10	10	. .	. .	. .	. .	1.0	. .	36.	. .	. .	39 49.37	26.49	−0.01	V.	6	36.072	17 46.06	24.36	9.30	40 15.85	19 50 49.7
11	9	. .	. .	. .	. .	. .	50.	2.	. .	. .	40 26.72	26.48	. .	VII.	3	37.112	37 31.44	24.30	10.41	40 53.20	20 10 36.2
12	10	. .	. .	. .	. .	1.	. .	. .	. .	. .	41 49.38	26.48	−0.01	V.	6	42.666	13 58.93	24.16	9.07	42 15.85	19 47 2.2
13	10	. .	. .	. .	. .	. .	. .	46.5	. .	. .	42 11.31	26.48	0.01	VII.	6	40.895	15 34.17	24.12	9.14	42 37.78	48 37.4
14	10	. .	. .	. .	49.	. .	. .	. .	. .	. .	43 49.03	26.48	−0.01	IV.	6	36.00	17 48.56	23.97	9.30	44 15.50	50 51.8
15	8.9	. .	. .	. .	. .	41.	53.	. .	. .	. .	44 29.48	26.47	. .	V.	5	37.638	25 33.41	23.90	9.72	44 55.95	19 58 37.0
16	10	. .	. .	. .	. .	40.	. .	. .	. .	. .	45 28.33	26.47	. .	V.	4	40.112	29 56.12	23.80	10.00	45 54.80	20 2 59.9
17	9	. .	. .	. .	. .	. .	. .	18.	. .	. .	45 42.81	26.47	−0.01	VII.	6	38.450	16 23.94	23.78	9.20	46 9.27	19 49 26.9
18	9	. .	. .	10.	22.	. .	. .	. .	. .	. .	47 21.88	26.46	−0.01	IV.	6	38.610	16 18.65	23.61	9.20	47 48.33	49 21.5
19	9	. .	7.	19.	. .	. .	. .	. .	. .	. .	48 30.52	26.46	. .	III.	5	45.535	21 1.37	23.51	9.49	48 56.98	19 54 4.4
20	10	. .	. .	. .	. .	. .	. .	10.	. .	. .	48 34.85	26.46	. .	VII.	4	43.442	28 1.21	23.50	9.86	49 1.31	20 1 4.6
21	9	. .	55.	66.	18.2	. .	. .	. .	. .	. .	51 18.29	26.45	−0.01	IV.	5	49.609	18 41.06	23.23	9.32	51 44.73	19 51 43.6
22	10	. .	. .	. .	. .	58.	10.	. .	. .	. .	51 46.45	26.45	. .	VI.	3	43.670	32 36.76	23.18	10.13	52 12.90	20 5 40.1
23	9	. .	. .	32.	. .	. .	. .	. .	. .	. .	53 43.74	26.44	−0.01	III.	6	49.498	10 3.58	22.99	8.83	54 10.17	19 43 5.4
24	10	. .	. .	. .	. .	. .	. .	22.	. .	. .	53 46.78	26.44	−0.01	VII.	6	53.700	7 38.62	22.98	8.70	54 13.21	40 40.3
25	10	. .	. .	. .	54.	. .	. .	. .	. .	. .	55 54.01	26.43	. .	IV.	5	44.950	21 21.55	22.78	9.51	56 20.44	54 23.8
26	9	. .	. .	. .	. .	52.5	. .	. .	. .	. .	56 40.89	26.43	−0.01	VI.	7	40.856	9 7.05	22.70	8.81	57 7.31	42 8.6
27	9	. .	. .	. .	20.	. .	. .	. .	. .	. .	58 20.11	26.43	−0.01	IV.	7	51.265	3 8.59	22.54	8.43	58 46.53	19 36 9.6
28	9	. .	. .	. .	. .	. .	19.	. .	. .	. .	58 55.58	26.42	. .	VI.	5	31.395	29 8.38	22.48	9.94	18 59 22.00	20 2 10.8
29	9	. .	. .	. .	. .	. .	. .	10.	. .	. .	18 58 34.86	26.43	. .	VII.	3	50.410	29 53.37	22.41	9.99	19 0 1.29	2 55.8
30	8	. .	. .	. .	. .	. .	54.	5.8	. .	. .	19 0 30.62	26.42	. .	VI.	3	51.652	29 10.70	22.32	9.94	0 57.04	20 2 13.0
31	9	. .	. .	. .	. .	. .	. .	0.	. .	. .	1 24.78	26.42	−0.01	VII.	7	46.492	5 52.78	22.23	8.59	1 51.19	19 38 53.6
32	10	. .	. .	. .	. .	. .	. .	54.	. .	. .	2 18.88	26.41	. .	VII.	2	53.555	36 47.92	22.14	10.37	2 45.29	20 9 50.4
33	10	. .	. .	. .	. .	. .	12.	24.	. .	. .	3 48.74	26.41	−0.01	VII.	6	49.779	11 2.59	22.00	8.80	4 15.14	19 44 3.4
34	8	. .	46.	58.	. .	22.	. .	. .	. .	. .	6 9.80	26.40	. .	III.	4	40.806	29 32.22	21.77	9.97	6 36.20	20 2 34.0
35	10	. .	. .	. .	30.	. .	. .	. .	. .	. .	8 30.01	26.40	. .	IV.	5	46.328	20 34.09	21.54	9.44	8 56.41	19 53 35.1
36	9	. .	. .	. .	32.	44.	. .	. .	. .	. .	9 32.15	26.39	. .	IV.	4	45.799	26 40.24	21.44	9.80	9 58.54	59 41.5
37	8	. .	. .	. .	44.5	. .	. .	. .	. .	. .	10 44.60	26.39	−0.01	IV.	7	47.719	5 10.73	21.32	8.54	11 10.98	19 38 10.6
38	9	. .	. .	9.5	21.	. .	. .	. .	. .	. .	12 21.06	26.38	+0.01	IV.	4	17.314	43 1.46	21.16	10.75	12 47.45	20 16 3.4
39	9	. .	. .	43.	54.5	. .	. .	. .	. .	. .	13 54.57	26.38	+0.01	IV.	2	45.954	41 9.96	21.01	10.66	14 20.96	20 14 11.6
40	10	. .	. .	. .	. .	. .	54.	. .	. .	. .	14 30.62	26.38	. .	VI.	4	49.696	24 25.91	20.95	9.66	14 57.00	19 57 26.5
41	9	. .	. .	. .	. .	. .	32.	44.	. .	. .	15 8.72	26.37	. .	VI.	4	45.124	27 3.39	20.88	9.83	15 35.09	20 0 4.1
42	9	. .	. .	. .	. .	. .	41.	. .	. .	. .	16 17.71	26.37	−0.01	VI.	7	44.300	7 8.40	20.77	8.69	16 44.07	19 40 7.9
43	10	. .	37.	. .	. .	. .	. .	. .	. .	. .	18 0.45	26.36	+0.01	IV.	2	43.316	42 40.84	20.61	10.75	18 26.82	20 15 42.2
44	9	. .	. .	19.	31.	. .	. .	. .	. .	. .	19 30.83	26.36	. .	IV.	4	42.553	28 32.07	20.46	9.90	19 57.19	20 1 32.4
45	9	. .	. .	. .	. .	38.5	. .	. .	. .	. .	20 23.85	26.36	. .	V.	5	41.253	23 28.87	20.37	9.62	20 50.21	19 56 28.9
46	9	. .	. .	. .	. .	. .	11.	23.	. .	. .	20 47.74	26.36	−0.01	VII.	6	34.610	18 36.22	20.33	9.30	21 14.09	51 35.9
47	9	. .	. .	. .	. .	. .	52.	3.5	. .	. .	22 28.50	26.35	0.01	VII.	7	41.305	8 51.45	20.17	8.76	22 54.84	41 50.4
48	10	. .	. .	. .	. .	51.	3.	. .	. .	. .	26 39.52	26.34	−0.01	VI.	6	38.715	16 14.93	19.76	9.16	27 5.85	49 13.8
49	9	39.5	. .	3.5	15.	. .	. .	. .	. .	. .	30 14.95	26.33	. .	I.	5	40.985	23 37.91	10.42	9.62	30 41.28	19 56 37.0
50	9	. .	. .	. .	. .	. .	. .	21.6	. .	. .	30 46.45	26.33	+0.01	VII.	1	43.620	50 37.17	19.36	11.23	30 12.79	20 23 37.8
51	9	. .	. .	. .	. .	. .	37.	48.5	. .	. .	32 13.43	26.32	+0.01	VI.	1	46.819	46 29.31	19.23	10.97	32 39.76	19 29.5
52	7	. .	46.5	58.9	9.5	. .	. .	. .	. .	. .	37 9.98	26.31	. .	III.	3	42.980	34 9.51	18.76	10.23	37 36.29	7 8.5
53	9	. .	. .	42.	53.5	. .	. .	. .	. .	. .	37 53.57	26.31	+0.01	III.	2	45.180	41 36.60	18.68	10.65	38 19.89	20 14 35.9
54	9	2.5	15.	. .	. .	. .	. .	. .	. .	. .	19 40 37.90	+26.30	−0.01	.	6	47.960	10 56.47	−18.42	− 8.86	19 41 4.19	19 43 53.8

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848.	h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848. h. m.	° ′ ″				″	″	in.	°	°
Zone 137	Aug. 7, 22 00	. . . .	. .	. .	. .	. .	. .	. .	. .	60.

REMARKS.

(137) 13. Micrometer reading assumed as 39ʳ.895 instead of 40ʳ.895.
(137) 22. Micrometer reading assumed as 45ʳ.670 instead of 43ʳ.670.
(137) 29. Minute of transit assumed as 59 instead of 58.
(137) 33. Micrometer reading assumed as 47ʳ.779 instead of 49ʳ.779.
(137) 50. Micrometer reading assumed as 39ʳ.620 instead of 43ʳ.620.

Zone 137. August 7. Ms. $D_0 = -19° 32′ 30″$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
55	9	. .	. .	. .	22.	34.	45.5	. .	. .	. .	19 41 22.23	+26.30	−0.01	V.	7	45.	6 44.38	−18.35	− 8.63	19 41 48.52	19 39 41.4
56	9	. .	. .	. .	39.	51.	. .	. .	. .	. .	42 39.15	26.29	. .	V.	3	47.448	31 35.60	18.23	10.07	43 5.44	20 4 33.9
57	9	. .	. .	. .	. .	. .	50.	2.	. .	. .	43 26.74	26.29	−0.01	VII.	6	45.495	12 21.27	18.16	8.96	43 53.02	19 45 18.4
58	9	. .	. .	. .	. .	15.	. .	. .	. .	. .	45 3.39	26.29	0.01	V.	7	40.85	9 7.33	18.00	8.78	45 29.67	42 4.1
59	8.9	. .	. .	. .	13.	24.5	36.	. .	. .	. .	46 12.89	26.28	−0.01	VI.	7	42.875	7 57.50	17.89	8.70	46 39.16	40 54.1
60	9	. .	. .	4.	16.	27.8	. .	. .	. .	. .	48 15.95	26.28	. .	V.	5	42.890	22 32.49	17.70	9.54	48 42.23	19 55 29.7
61	9	31.5	43.5	55.	. .	. .	. .	. .	. .	. .	50 6.74	26.27	. .	III.	4	44.860	27 12.57	17.52	9.83	50 33.01	20 0 9.9
62	9	. .	. .	. .	. .	. .	43.	54.5	. .	. .	51 19.46	26.27	+0.01	VII.	2	42.938	42 53.64	17.41	10.74	51 45.74	20 15 51.8
63	9	. .	41.5	52.8	. .	. .	16.	. .	. .	. .	57 4.56	26.26	. .	VI.	5	43.80	22 1.06	16.86	9.50	57 30.82	19 54 57.4
64	9	. .	. .	. .	. .	. .	34.6	46.	. .	. .	19 58 11.02	26.25	. .	VII.	4	44.732	27 16.77	16.76	9.83	19 58 37.27	20 0 13.4
65	9	. .	57.	9.	21.	. .	. .	. .	. .	. .	20 0 20.69	26.25	−0.01	IV.	5	49.750	18 36.20	16.56	9.31	20 0 46.93	19 51 32.1
66	8.9	. .	. .	. .	. .	28.	40.	. .	. .	. .	1 16.52	26.25	−0.01	V.	6	39.040	16 3.82	16.47	9.14	1 42.76	19 48 59.4
67	9	. .	. .	. .	. .	. .	30.	41.8	. .	. .	8 6.58	26.23	+0.01	VI.	2	36.845	52 8.11	15.84	11.34	8 32.82	20 25 5.3
68	9	. .	. .	. .	. .	38.	. .	. .	. .	. .	9 26.34	26.23	. .	VI.	3	38.739	36 35.59	15.72	10.38	9 52.57	9 31.7
69	9	. .	. .	. .	. .	36.3	. .	. .	. .	. .	10 24.64	26.22	+0.01	V.	2	41.100	43 57.15	15.63	10.84	10 50.87	16 53.6
70	9	. .	. .	. .	. .	32.	. .	. .	. .	. .	11 20.34	26.22	. .	V.	3	43.307	33 58.24	15.55	10.23	11 46.56	6 54.0
71	9	. .	. .	. .	. .	. .	13.	. .	. .	. .	11 49.56	26.22	. .	V.	3	43.610	33 47.81	15.49	10.21	12 15.78	6 43.5
72	9	. .	56.	7.6	19.	. .	. .	. .	. .	. .	14 19.23	26.21	+0.01	III.	2	43.930	42 19.66	15.28	10.73	14 45.45	15 15.6
73	10	. .	. .	28.5	40.2	. .	. .	. .	. .	. .	14 40.16	26.21	0.01	IV.	1	40.868	49 54.41	15.24	11.21	15 6.38	22 50.9
74	10	. .	. .	. .	39.	. .	. .	. .	. .	. .	15 39.00	26.21	+0.01	IV.	2	45.383	41 29.63	15.20	10.70	16 5.22	20 14 25.5
75	8.9	. .	53.8	. .	16.7	. .	. .	. .	. .	. .	16 16.92	26.21	−0.01	IV.	7	47.50	5 18.28	15.10	8.52	16 43.12	19 38 11.9
76	9	. .	. .	. .	. .	. .	20.	. .	. .	. .	17 56.58	26.21	. .	VI.	4	41.310	29 14.77	14.95	9.95	18 22.79	20 2 9.7
77	10	. .	. .	. .	. .	44.	55.6	. .	. .	. .	19 32.24	26.20	. .	VI.	3	36.390	37 56.44	14.81	10.47	19 58.44	10 51.7
78	10	. .	. .	. .	. .	58.5	. .	. .	. .	. .	20 46.84	26.20	+0.01	V.	2	44.505	41 59.86	14.69	10.81	21 13.05	20 14 55.4
79	10	. .	. .	. .	. .	. .	. .	17.	. .	. .	21 41.84	26.20	. .	VII.	5	40.344	23 59.99	14.61	9.63	22 8.04	19 56 54.2
80	10	. .	. .	. .	17.	. .	. .	. .	. .	. .	23 17.05	26.19	−0.01	IV.	6	42.820	13 53.63	14.46	9.02	23 43.23	46 47.1
81	10	. .	. .	. .	. .	. .	22.	. .	. .	. .	23 58.66	26.19	0.01	VI.	6	39.310	15 54.44	14.41	9.13	24 24.84	48 48.0
82	10	. .	. .	. .	6.	. .	. .	. .	. .	. .	25 6.05	26.19	−0.01	IV.	6	40.882	15 0.39	14.31	9.10	25 32.23	47 53.8
83	9	. .	. .	. .	. .	. .	. .	58.5	. .	. .	25 23.33	26.19	. .	VII.	5	44.51	21 36.48	14.27	9.51	25 49.52	19 54 30.3
84	9	. .	. .	. .	. .	49.5	. .	. .	. .	. .	27 37.85	26.18	+0.01	V.	1	44.310	47 55.81	14.09	11.07	28 4.04	20 20 51.0
85	9	. .	. .	. .	. .	. .	40.6	52.4	. .	. .	29 17.26	26.18	+0.01	VII.	1	42.125	49 10.89	13.93	11.16	29 43.45	20 22 6.0
86	9	. .	49.5	1.	. .	. .	. .	. .	. .	. .	30 12.76	26.18	−0.01	III.	6	40.490	15 13.87	13.85	9.11	30 38.93	19 48 6.8
87	9	19.5	31.2	43.	. .	. .	. .	. .	. .	. .	33 54.65	26.17	. .	I.	4	42.670	28 27.81	13.53	9.89	34 20.82	20 1 21.2
88	10	. .	. .	. .	23.5	. .	. .	. .	. .	. .	34 23.47	26.17	. .	IV.	4	43.110	28 12.87	13.48	9.88	34 49.64	20 1 6.2
89	9	. .	. .	. .	. .	. .	16.4	28.2	. .	. .	34 53.04	26.17	. .	VI.	5	47.475	19 54.47	13.44	9.39	35 19.21	19 52 47.3
90	9	1.	. .	24.5	36.	. .	. .	. .	. .	. .	37 36.10	26.16	. .	I.	4	46.890	26 2.44	13.21	9.75	38 2.26	58 55.4
91	8.9	37.5	49.6	60.	. .	. .	. .	. .	. .	. .	39 12.39	26.16	−0.01	III.	6	39.830	15 36.61	13.07	9.14	39 38.54	19 48 28.8
92	10	. .	. .	47.	. .	. .	. .	. .	. .	. .	40 58.64	26.16	. .	III.	2	47.670	40 10.83	12.92	10.61	41 24.80	20 13 4.4
93	10	. .	. .	. .	4.5	. .	. .	. .	. .	. .	42 4.48	26.15	. .	IV.	3	39.925	35 54.77	12.82	10.35	42 30.63	8 47.9
94	9	. .	. .	. .	14.	26.	. .	. .	. .	. .	43 14.17	26.15	. .	V.	3	34.005	39 18.67	12.73	10.55	43 40.32	20 12 12.0
95	8.9	11.6	23.5	35.5	46.8	. .	. .	. .	. .	. .	53 46.88	26.13	−0.01	IV.	6	36.820	17 20.31	11.83	9.23	54 13.00	19 50 11.4
96	9	. .	. .	. .	. .	. .	32.	44.	. .	. .	54 8.73	26.13	. .	VI.	5	44.872	21 24.13	11.81	9.49	54 34.86	19 54 15.4
97	10	16.	28.	. .	. .	. .	. .	. .	. .	. .	57 51.32	26.12	+0.01	II.	1	48.810	45 20.72	11.50	10.92	58 17.45	20 18 13.1
98	10	. .	. .	. .	. .	28.8	. .	. .	. .	. .	20 58 17.14	26.12	. .	V.	3	46.460	32 9.64	11.46	10.12	20 58 43.26	5 1.2
99	10	. .	. .	. .	. .	28.	. .	. .	. .	. .	21 9 16.34	26.11	. .	VI.	3	41.578	34 57.73	10.58	10.31	21 9 42.45	7 48.6
100	10	53.	. .	. .	. .	. .	. .	. .	. .	. .	13 28.19	26.10	. .	I.	3	38.252	36 52.17	10.24	10.41	13 54.29	9 42.8
101	10	51.6	3.	15.	. .	. .	. .	. .	. .	. .	14 26.63	26.10	+0.01	III.	2	37.160	46 12.87	10.16	11.00	14 52.74	19 4.0
102	10	. .	. .	. .	. .	26.	. .	49.	. .	. .	15 14.12	26.10	. .	VII.	2	43.140	42 46.68	10.09	10.78	15 40.22	20 15 37.6
103	10	. .	57.	9.	. .	. .	. .	. .	. .	. .	21 18 20.52	+26.09	. .	IV.	4	49.006	24 49.78	− 9.86	− 9.66	21 18 46.61	19 57 39.3

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848. h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848. h. m.	° ′ ″				″	″	in.	°	°

REMARKS.

(137) 63. Transit at 16ˢ assumed as over T. V instead of T. VI.

(137) 67. Micrometer reading assumed as 26ʳ.845 instead of 36ʳ.845.

(137) 103. Transit over T. II assumed as at 57ˢ instead of 37ˢ.

ZONE 137. AUGUST 7. MS. $D_0 = -19° 32' 30''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
104	9	. .	. .	. .	. .	22.	33.8	. .	. .	. .	21 18 10.44	+26.09	−0.01	VI.	6	50.672	9 23.05	− 9.88	− 8.74	21 18 36.52	19 42 11.7
105	9	. .	49.	1.	12.8	. .	. .	. .	. .	. .	20 12.62	26.09	. .	IV.	2	50.82	38 22.34	9.71	10.51	20 38.71	20 11 12.6
106	8.9	. .	. .	. .	. .	19.5	31.	42.8	. .	. .	21 7.72	26.09	−0.01	VII.	6	40.452	15 14.98	9.64	9.10	21 33.80	19 48 3.7
107	9	. .	. .	. .	. .	44.5	56.5	8.5	. .	. .	22 33.11	26.09	. .	VII.	5	45.742	20 54.04	9.53	9.44	22 59.20	53 43.0
108	9	. .	15.5	27.	. .	. .	. .	. .	. .	. .	25 38.76	26.08	−0.01	IV.	6	34.192	18 50.84	9.31	9.30	26 4.83	51 39.4
109	9	. .	. .	. .	. .	40.6	52.5	3.6	. .	. .	26 28.84	26.08	. .	VII.	5	44.192	21 47.44	9.25	9.48	26 54.92	19 54 36.2
110	7	. .	51.5	2.8	13.8	. .	. .	. .	. .	. .	28 14.38	26.08	. .	IV.	3	40.775	35 25.49	9.12	10.34	28 40.46	20 8 15.0
111	9	. .	. .	. .	. .	. .	11.	22.8	. .	. .	28 47.62	26.08	. .	VII.	3	45.00	32 59.72	9.07	10.17	29 13.70	20 5 49.0
112	9	. .	18.	30.	41.8	. .	. .	. .	. .	. .	30 41.61	26.08	. .	V.	5	46.072	20 42.88	8.93	9.42	31 7.69	19 53 31.2
113	9	48.	0.	12.	23.6	. .	. .	. .	. .	. .	34 23.47	26.07	+0.01	I.	1	48.50	45 31.28	8.67	10.95	34 49.55	20 18 20.9
114	9	. .	. .	. .	11.	23.	. .	. .	. .	. .	35 11.16	26.07	. .	VI.	2	49.912	38 53.52	8.60	10.53	35 37.23	20 11 42.6
115	9	0.0	12.	23.8	. .	. .	. .	. .	. .	. .	37 35.29	26.07	−0.01	III.	6	46.415	11 49.78	8.43	8.89	38 1.35	19 44 37.1
116	9	. .	29.5	41.5	52.5	. .	. .	. .	. .	. .	39 52.85	26.06	. .	IV.	3	44.150	33 29.23	8.26	10.20	40 18.91	20 6 17.7
117	9	. .	. .	. .	. .	. .	. .	29.	. .	. .	43 53.91	26.06	. .	VII.	2	46.632	40 46.39	7.98	10.66	44 19.97	13 35.0
118	9	57.	9.	. .	. .	. .	. .	. .	. .	. .	46 32.33	26.06	+0.01	II.	1	44.240	47 58.14	7.79	11.10	46 58.40	20 47.0
119	9	. .	. .	. .	49.	1.5	. .	. .	. .	. .	47 49.41	26.06	. .	V.	3	42.635	34 21.40	7.70	10.26	48 15.47	7 9.4
120	9	. .	. .	. .	. .	31.6	43.	55.	. .	. .	48 19.79	26.06	. .	VII.	3	45.040	32 58.34	7.67	10.17	48 45.85	5 46.2
121	9	. .	. .	. .	. .	52.5	. .	. .	. .	. .	49 40.84	26.05	. .	V.	3	45.045	32 58.37	7.57	10.17	50 6.89	5 46.1
122	9	. .	. .	. .	. .	. .	45.6	. .	. .	. .	50 22.18	26.05	. .	VI.	4	41.060	29 23.39	7.52	9.96	50 48.23	2 10.9
123	9	54.5	6.	18.	30.	. .	. .	. .	. .	. .	52 29.68	26.05	. .	IV.	4	41.558	29 6.34	7.38	9.94	52 55.73	20 1 53.7
124	9	. .	46.8	58.	. .	. .	. .	. .	. .	. .	56 9.92	26.05	−0.01	III.	6	40.338	15 19.11	7.14	9.10	56 35.96	19 48 5.4
125	9	. .	0.0	12.	23.8	. .	. .	. .	. .	. .	21 57 12.02	+26.05	−0.01	IV.	7	45.089	6 41.34	− 7.05	− 8.57	21 57 38.06	19 39 27.0

ZONE 138. AUGUST 14. MAJ. $D_0 = -23° 52' 50'$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	6	. .	. .	. .	56.4	8.4	. .	. .	. .	. .	19 5 56.37	+27.83	. .	.	4	35.688	32 28.55	−17.21	−10.20	19 6 24.20	24 25 46.0
2	8	. .	. .	. .	. .	. .	34.2	46.4	. .	. .	9 10.14	27.82	−0.01	.	7	29.325	15 44.36	17.01	8.91	9 37.95	9 0.3
3	7	30.5	42.2	54.5	6.3	18.3	30.2	. .	. .	. .	11 6.38	27.81	. .	IV.	4	30.762	35 18.22	16.85	10.43	11 34.19	28 35.5
4	8	. .	. .	. .	. .	28.3	41.	53.2	. .	. .	12 16.65	27.81	+0.01	.	2	33.042	48 34.74	16.82	11.48	12 44.47	41 53.0
5	8	. .	. .	. .	. .	. .	. .	56.8	. .	. .	12 20.54	27.81	+0.01	12.	2	36.738	46 26.53	16.82	11.31	12 48.36	39 44.7
6	8	. .	. .	. .	. .	. .	13.4	25.4	. .	. .	13 49.19	27.81	. .	.	3	38.595	36 40.58	16.73	10.55	14 17.00	29 57.9
7	4	. .	. .	. .	40.	. .	. .	. .	. .	. .	15 40.05	27.80	+0.01	IV.	1	33.12	54 21.30	16.62	11.90	16 7.86	47 39.8
8	7	. .	23.	34.8	. .	. .	. .	. .	. .	. .	15 47.00	27.80	+0.01	.	2	32.738	48 45.22	16.61	11.49	16 14.81	42 3.3
9	4	. .	. .	. .	. .	. .	. .	32.7	. .	. .	15 56.44	27.80	. .	12.	5	44.335	21 41.83	16.60	9.37	16 24.24	14 57.8
10	8	. .	. .	. .	. .	. .	. .	60.5	. .	. .	17 24.25	27.80	. .	.	4	45.076	27 5.15	16.52	9.77	17 52.05	20 21.4
11	9	51.	3.3	15.2	26.8	. .	. .	. .	. .	. .	19 27.20	27.79	. .	.	3	36.902	38 13.35	16.40	10.65	19 54.99	31 30.4
12	9	. .	. .	. .	. .	10.4	22.2	34.3	. .	. .	19 58.15	27.79	. .	.	3	37.022	37 34.73	16.36	10.61	20 25.94	30 51.7
13	8	. .	. .	. .	. .	34.3	46.4	58.2	. .	. .	21 22.18	27.78	. .	.	5	43.485	22 12.02	16.28	9.41	21 49.96	15 27.7
14	8	. .	. .	. .	. .	. .	. .	. .	32.4	. .	21 38.27	27.78	. .	.	4	38.761	30 42.68	16.26	10.08	22 6.05	23 59.0
15	5	. .	. .	. .	. .	14.4	26.3	38.3	. .	. .	25 2.22	27.77	−0.01	.	6	36.65	17 26.17	16.07	9.07	25 29.98	10 41.3
16	9	. .	. .	. .	. .	34.2	46.2	. .	. .	. .	26 22.06	27.77	+0.01	.	2	33.025	48 35.30	15.99	11.48	26 49.84	41 52.8
17	9	. .	. .	. .	. .	. .	. .	24.4	. .	. .	26 48.14	27.77	. .	.	5	40.765	23 45.44	15.96	9.52	27 15.91	17 0.9
18	9	24.2	35.2	47.4	59.4	11.8	. .	. .	. .	. .	28 59.69	27.76	. .	.	4	34.36	33 14.28	15.81	10.29	29 27.45	26 30.4
19	9	. .	. .	. .	. .	55.	7.2	19.4	. .	. .	29 43.05	27.76	. .	.	3	37.243	37 27.12	15.79	10.60	30 10.81	30 43.5
20	10	. .	. .	16.4	28.4	40.4	52.5	. .	. .	. .	31 28.41	27.75	. .	.	5	42.523	22 45.16	15.69	9.45	31 56.16	16 0.3
21	6.7	. .	. .	. .	4.5	16.8	29.3	41.3	. .	. .	33 4.84	27.75	+0.01	.	1	40.477	50 7.87	15.59	11.58	33 32.60	43 25.0
22	8	. .	14.4	26.0	38.2	. .	. .	. .	. .	. .	36 38.25	27.74	−0.01	.	7	35.010	12 28.52	15.39	8.63	37 5.98	5 42.5
23	10	. .	. .	. .	. .	. .	56.4	. .	. .	. .	19 39 32.19	+27.73	. .	.	3	36.98	37 36.09	−15.23	−10.61	19 39 59.92	24 30 51.9

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848. h.	s.	s.	s.	s.	s.	° ′ ″	r.
Aug. 14, 19	+23.845	l 0.013	. .	− 0.429	− 0.192	0 0 3.31	40.054

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean			
	1848. h. m.	° ′ ″				″	″	in.	°	°
Zone 138	Aug. 14, 19 20	296 45 0.	1.9	2.9	1.4	1.55	1.55	30.204	77.8	73.8
	19 40	. .	. .	. .	. .	. .	. .	30.200	77.5	73.4
	20 0	. .	. .	. .	. .	. .	. .		. .	72.9
	20 20	. .	. .	. .	. .	. .	. .	30.202	77.2	72.8
	20 38	296 44 56.5	57.4	59.2	58.8	57.98	57.98	. .	. .	72.1

REMARKS.

(137) 125. Transits over T.'s III–V assumed to have been recorded over T.'s II–IV.

(138) 11. Micrometer reading assumed as 35r.902 instead of 36r.902.

ZONE 138. AUGUST 14. MAJ. $D_0 = -23° 52' 50''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	″	″	″	h. m. s.	° ′ ″
24	9	24.5	37.2	48.3	60.5	. .	. .	. .	. .	. .	19 43 0.73	+27.72	. .	.	5	36.31	26 19.17	−15.03	− 9.61	19 43 28.45	24 19 33.8
25	9	. .	. .	. .	. .	. .	46.	57.5	. .	. .	43 21.56	27.72	. .	.	5	43.265	24 37.27	15.02	9.57	43 49.28	17 51.9
26	8	. .	. .	. .	50.5	2.2	14.5	. .	. .	. .	44 50.35	27.71	. .	.	4	48.23	25 16.50	14.94	9.64	45 18.06	18 31.1
27	9	. .	. .	. .	. .	. .	6.2	18.	. .	. .	45 41.91	27.71	. .	.	5	39.575	24 26.59	14.89	9.58	46 9.62	17 41.1
28	8	. .	. .	. .	. .	23.2	35.5	47.3	. .	. .	49 11.24	27.70	−0.01	.	7	37.31	11 9.29	14.69	8.54	49 38.93	4 22.5
29	7	. .	. .	40.4	52.4	4.2	. .	. .	. .	. .	50 52.33	27.70	. .	.	4	42.948	28 18.46	14.60	9.88	51 20.03	21 32.9
30	9	. .	. .	. .	. .	0.7	. .	24.0	. .	. .	53 48.23	27.69	−0.01	.	7	38.27	10 36.19	14.44	8.50	54 15.91	3 49.1
31	9	. .	. .	. .	. .	. .	24.5	. .	. .	. .	55 0.34	27.69	. .	.	4	38.776	30 42.05	14.38	10.08	55 28.03	23 56.5
32	6	38.2	50.	2.4	14.4	26.3	. .	. .	. .	. .	58 14.34	27.68	. .	.	5	38.10	25 17.51	14.18	9.64	58 42.02	18 31.3
33	9	. .	. .	. .	. .	11.5	23.4	35.2	. .	. .	57 59.22	27.68	. .	.	3	40.595	35 31.66	14.22	10.45	19 58 26.90	28 46.3
34	9	. .	. .	. .	. .	. .	. .	. .	47.5	. .	19 59 53.39	27.67	. .	.	3	43.23	34 0.32	14.12	10.34	20 0 21.06	27 14.8
35	8	. .	. .	. .	17.5	29.6	41.8	. .	. .	. .	20 1 27.56	27.67	. .	.	3	42.954	34 10.43	14.04	10.36	1 55.23	27 24.8
36	9	. .	. .	. .	. .	. .	26.3	38.1	. .	. .	2 1.94	27.67	+0.01	.	2	36.46	46 36.89	14.01	11.34	2 29.62	39 52.2
37	9	. .	. .	. .	. .	. .	. .	. .	. .	40.5?	2 33.97	27.67	0.01	.	1	41.00	49 48.95	13.98	11.58	3 1.65	43 4.5
38	9	. .	. .	33.2	44.5	. .	. .	. .	. .	. .	5 44.85	27.66	0.01	.	1	42.655	48 52.85	13.81	11.51	6 12.52	42 8.2
39	8	. .	. .	. .	. .	22.	34.2	46.3	. .	. .	6 9.99	27.66	0.01	.	2	38.275	45 34.48	13.79	11.27	6 37.66	38 49.5
40	8	5.5	17.5	29.4	41.5	. .	. .	. .	. .	. .	8 41.61	27.65	+0.01	.	1	40.052	50 22.51	13.66	11.65	9 9.27	43 37.8
41	5.6	. .	. .	19.2	31.	43.2	55.4	. .	. .	. .	9 31.17	27.65	. .	.	4	43.120	28 12.53	13.62	9.88	9 58.82	21 26.0
42	.	17.3	30.0	41.4	53.4	5.7	. .	. .	. .	. .	11 53.63	27.64	−0.01	.	6	38.33	16 28.29	13.50	8.95	12 21.26	9 40.7
43	8	. .	5.5	17.7	29.4	41.7	54.3	. .	. .	. .	14 29.71	27.64	+0.01	.	2	38.967	45 10.64	13.37	11.24	14 57.36	38 25.2
44	9	. .	. .	. .	. .	43.5	55.6	. .	. .	. .	15 19.26	27.63	+0.01	.	1	39.20	50 51.83	13.32	11.68	15 46.90	44 6.8
45	9	12.	23.	. .	. .	. .	. .	. .	. .	. .	18 47.66	27.63	. .	.	5	40.687	23 48.28	13.16	9.51	19 15.29	17 1.0
46	8	18.	29.8	. .	. .	. .	18.	30.5	. .	. .	19 54.04	27.62	−0.01	.	5	48.37	19 23.74	13.10	9.17	20 21.65	12 36.0
47	6	. .	. .	10.	. .	. .	46.7	58.5	. .	. .	19 22.28	27.62	. .	.	3	41.28	35 8.09	13.62	10.43	19 49.90	28 21.6
48	10	. .	63.2	15.2	27.	. .	. .	. .	. .	. .	25 27.18	27.61	. .	.	4	37.90	31 12.34	12.84	10.12	25 54.79	24 25.3
49	9	. .	. .	. .	57.4	9.3	21.4	33.	. .	. .	27 57.20	27.61	−0.01	.	6	38.228	16 31.81	12.72	8.95	28 24.80	9 43.5
50	4	. .	. .	. .	. .	. .	. .	. .	38.4	. .	28 44.37	27.60	+0.01	.	1	38.061	51 31.10	12.68	11.73	29 11.98	44 45.5
51	9	. .	. .	. .	. .	. .	. .	16.8	34.5	. .	29 40.47	27.60	+0.01	.	2	43.31	42 40.77	12.63	11.03	30 8.08	35 54.4
52	5	. .	. .	. .	. .	. .	. .	24.2	. .	. .	30 47.95	27.59	. .	.	4	47.189	25 52.36	12.58	9.68	31 15.54	19 4.6
53	5	. .	. .	. .	. .	. .	25.	37.	. .	. .	31 0.76	27.59	+0.01	.	2	40.94	44 37.13	12.58	11.10	31 28.36	37 50.8
54	7	. .	58.2	10.3	22.4	34.5	. .	. .	. .	. .	35 22.40	27.58	−0.01	.	7	44.382	7 5.68	12.38	8.22	35 49.97	0 16.3
55	8	. .	21.5	33.2	44.2	. .	. .	. .	. .	. .	35 45.01	27.58	. .	.	5	39.403	24 32.63	12.36	9.55	36 12.59	17 44.5
56	8	. .	. .	. .	1.0	13.2	. .	. .	. .	. .	36 1.07	27.58	. .	.	4	37.214	31 35.97	12.35	10.15	36 28.65	24 48.5
57	9	. .	. .	. .	. .	8.	19.	32.	. .	. .	36 55.53	27.58	. .	.	5	34.005	27 4.09	12.31	9.77	37 23.11	20 16.2
58	7	. .	. .	. .	. .	11.9	24.2	36.2	. .	. .	37 59.97	27.58	. .	.	5	42.612	22 42.09	12.26	9.43	38 27.55	15 53.8
59	8	. .	. .	. .	. .	. .	. .	10.2	. .	. .	38 33.90	27.58	−0.01	.	7	42.801	8 0.15	12.23	8.28	39 1.47	24 1 10.7
60	9	. .	. .	. .	. .	. .	. .	29.8	. .	. .	20 38 53.50	+27.57	−0.01	.	7	45.180	6 37.93	−12.22	− 8.16	20 39 21.06	23 59 48.3

ZONE 139. AUGUST 16. MAJ. $D_0 = -25° 11' 0''$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	6	32.2	44.2	56.2	8.3	. .	. .	. .	. .	. .	17 42 8.53	+28.99	. .	.	4	36.198	32 10.98	−15.83	−10.17	17 42 37.52	25 43 36.0
2	7	. .	. .	. .	49.8	2.0	14.	. .	. .	. .	42 49.79	28.99	. .	.	6	36.392	17 35.06	15.78	9.02	43 18.78	28 59.9
4	8	. .	. .	. .	. .	. .	58.	10.2	. .	. .	43 33.52	28.99	. .	.	2	37.022	46 17.64	15.71	11.32	44 2.51	57 44.7
4	8	. .	. .	. .	. .	. .	. .	67.3	. .	. .	44 30.67	28.98	. .	.	2	40.917	44 3.47	15.63	11.14	44 59.65	55 30.2
5	7	. .	64.9	17.2	28.5	41.2	. .	. .	. .	. .	46 29.04	28.98	. .	.	5	34.923	27 6.95	15.42	9.77	46 58.02	25 38 32.1
6	8	. .	14.2	26.4	. .	. .	. .	. .	. .	. .	48 38.60	28.97	. .	.	1	35.875	52 46.40	15.26	11.87	49 7.57	26 4 13.5
7	8	. .	. .	56.1	8.	20.3	. .	. .	. .	. .	49 8.13	28.97	. .	.	3	40.065	35 49.95	15.21	10.51	49 37.10	25 47 15.7
8	7	. .	. .	17.2	. .	41.5	. .	. .	. .	. .	17 49 29.35	+26.97	. .	.	3	38.865	36 31.28	−15.17	−10.52	17 49 58.32	25 47 57.0

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848. h.	s.	s.	s.	s.	s.	° ′ ″	r.
Aug 16, 16	+24.640	g 0.000	. .	− 0.429	− 0.192	0 0 2.78	40.051

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848. h. m.	° ′ ″				″	″	in.	°	°
Zone 139	Aug. 16, 17 42	*295 27 2.2	3.9	6.1	7.8	5.02	5.00	30.076	80.9	78.5
		. .	. .	. .	. .	. .	. .	. .	. .	77.2
	18 25	. .	. .	. .	. .	. .	. .	30.080	. .	76.5
	18 45	2.3	4.7	6.4	7.2	5.17	5.15	30.086	80.	75.9
	19	. .	. .	. .	. .	. .	. .	. .	. .	75.3
	19 20	2.3	4.7	6.4	7.2	5.17	5.15	30.080	79.7	75.2

REMARKS.

(138) 25. Micrometer reading assumed as $39^r.265$ instead of $43^r.365$.

(138) 35. Transits over T.'s IV–VI assumed as $27^s.5$, $39^s.6$, and $51^s.8$ instead of $27^s.5$, $29^s.6$, and $41^s.8$.

(138) 44. Transits over T.'s VI and VII assumed to have been recorded over T.'s V and VI.

(138) 53. Micrometer reading assumed as $39^r.94$ instead of $40^r.94$.

(138) 57. Micrometer reading assumed as $35^r.005$ instead of $34^r.005$.

* The minutes of the reading marked as questionable, but on examination they appear correct.

ZONE 139. AUGUST 16. MAJ. $D_0 = -25°\ 11'\ 0''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
9	10	. .	. .	. .	54.5	6.3	. .	. .	. .	. .	17 51 54.32	+28.96	0.00	.	5	39.000	24 46.51	−14.96	− 9.59	17 52 23.28	25 36 11.1
10	6	. .	. .	23.0	34.4	47.2	. .	. .	. .	. .	53 34.86	28.95	. .	.	2	42.465	43 10.16	14.81	11.06	54 3.81	54 36.0
11	8	. .	. .	. .	. .	23.4	. .	. .	. .	. .	54 11.24	28.95	. .	.	4	42.932	28 19.00	14.75	10.01	54 40.19	25 39 43.8
12	9	. .	. .	. .	. .	. .	. .	57.2	. .	. .	54 20.52	28.95	. .	.	1	40.120	50 19.88	14.74	11.65	54 49.47	26 1 46.3
13	7	. .	. .	. .	. .	. .	27.2	39.	. .	. .	55 2.59	28.94	. .	.	5	38.61	24 59.94	14.68	9.60	55 31.53	25 36 24.2
14	9	. .	. .	. .	. .	. .	41.	. .	. .	. .	56 16.65	28.94	. .	.	6	31.804	20 12.97	14.56	9.22	56 45.59	31 36.8
15	8	. .	. .	. .	. .	. .	12.	24.1	. .	. .	56 47.56	28.94	. .	.	6	36.42	17 34.09	14.52	9.01	57 16.50	28 57.6
16	7	. .	. .	. .	. .	1.	13.	25.2	. .	. .	57 48.68	28.93	. .	.	5	41.322	23 26.52	14.43	9.48	58 17.61	34 50.4
17	7	. .	. .	. .	. .	. .	16.2	. .	. .	. .	58 51.82	28.93	. .	.	5	39.81	24 18.61	14.34	9.55	59 20.75	35 42.5
18	.	. .	. .	. .	. .	. .	. .	. .	30.	. .	58 35.26	28.93	. .	.	4	36.95	32 18.88	14.36	10.19	59 4.19	43 43.4
19	6	. .	. .	. .	. .	. .	. .	45.	. .	. .	17 59 8.35	28.93	. .	.	6	35.652	18 0.54	14.31	9.04	17 59 37.28	25 29 33.9
20	6	. .	. .	. .	. .	. .	70.2	. .	. .	. .	18 0 45.66	28.92	. .	.	1	37.502	51 50.35	14.16	11.76	18 1 14.58	26 3 16.3
21	5	. .	. .	. .	. .	. .	. .	55.2	. .	. .	1 18.58	28.92	. .	.	4	29.83	35 50.33	14.11	10.47	1 47.50	25 47 14.9
22	7	. .	59.4	11.2	23.3	. .	. .	. .	. .	. .	4 23.48	28.91	. .	.	7	40.37	9 23.89	13.83	8.35	4 52.39	28 46.1
23	8	. .	. .	12.4	24.6	37.2	49.4	. .	. .	. .	5 24.78	28.91	. .	.	3	35.878	38 14.18	13.73	10.67	5 53.69	49 38.6
24	8	. .	. .	. .	. .	24.	35.6	47.6	. .	. .	6 11.33	28.90	. .	.	4	33.429	33 46.35	13.66	10.29	6 40.23	45 10.3
25	.	. .	. .	. .	. .	. .	. .	27.5	. .	. .	6 50.86	28.90	. .	.	5	40.088	24 8.75	13.60	9.53	7 19.76	35 31.9
26	7	. .	. .	. .	. .	. .	. .	27.5	. .	. .	7 50.84	28.90	. .	.	6	46.022	12 3.33	13.51	8.57	8 19.74	23 25.4
27	5	. .	. .	. .	. .	7.9	20.4	32.2	. .	. .	8 55.79	28.89	. .	.	5	43.594	22 8.26	13.41	9.37	9 24.68	33 31.0
28	8	. .	. .	. .	. .	. .	. .	59.5	. .	. .	9 22.86	28.89	. .	.	5	41.902	23 6.54	13.36	9.45	9 51.75	34 29.4
29	8	. .	. .	45.5	57.4	9.9	. .	. .	. .	. .	10 57.64	28.89	. .	.	5	46.49	20 28.50	13.23	9.24	11 26.53	31 51.0
30	8	. .	. .	. .	45.2	. .	9.3	. .	. .	. .	11 45.10	28.88	. .	.	6	35.654	18 0.47	13.15	9.04	12 13.98	29 22.7
31	9	. .	. .	. .	. .	. .	46.2	58.2	. .	. .	12 21.71	28.88	. .	.	7	31.402	14 32.68	13.10	8.76	12 50.59	25 54.5
32	9	. .	. .	. .	. .	. .	33.2	45.2	. .	. .	13 8.70	28.88	. .	.	6	37.405	17 0.04	13.02	8.96	13 37.58	25 28 22.0
33	8	. .	. .	. .	. .	. .	. .	. .	31.5	. .	13 36.89	28.88	. .	.	1	38.487	51 16.42	12.98	11.73	14 5.77	26 2 41.1
34	9	. .	. .	. .	. .	. .	36.2	. .	. .	. .	16 11.70	28.87	. .	.	2	44.692	41 53.31	12.74	10.95	16 40.57	25 53 17.0
35	3	37.2	50.0	1.4	13.4	26.2	38.4	50.5	. .	. .	18 13.87	28.86	. .	.	6	34.548	18 38.58	12.56	9.10	18 42.73	30 0.2
36	8	. .	. .	. .	. .	. .	. .	. .	56.2	. .	18 1.69	28.86	. .	.	7	38.52	10 27.61	12.57	8.44	18 30.55	21 48.6
37	7	. .	. .	. .	. .	. .	2.3	14.3	. .	. .	37.82	28.86	. .	.	7	40.14	9 31.81	12.43	8.36	20 6.68	20 52.6
38	8	. .	. .	. .	. .	. .	. .	. .	. .	5.	20 57.88	28.85	. .	.	5	30.37	29 43.79	12.30	9.98	21 26.73	41 6.1
39	.	. .	. .	. .	. .	. .	. .	10.8	. .	. .	20 34.17	28.85	. .	.	5	29.66	27 15.73	12.34	9.81	21 3.02	38 37.9
40	7	. .	. .	. .	. .	7.	19.3	31.2	. .	. .	21 54.75	28.85	. .	.	3	39.832	35 57.97	12.21	10.47	22 23.60	47 20.6
41	6	. .	. .	48.2	0.2	. .	. .	. .	. .	. .	24 0.28	28.84	. .	.	5	34.012	21 53.83	12.02	9.35	24 29.12	33 15.2
42	7	. .	. .	. .	. .	35.4	47.4	. .	. .	. .	24 23.18	28.84	. .	.	6	35.792	17 55.72	11.98	9.04	24 52.02	29 16.7
43	8	. .	. .	. .	52.2	. .	. .	. .	. .	. .	26 52.18	28.83	. .	.	4	31.558	34 50.81	11.75	10.38	27 21.01	46 12.9
44	8	. .	. .	. .	. .	37.4	50.	. .	. .	. .	27 25.42	28.83	. .	.	4	41.009	29 25.24	11.70	9.96	27 54.25	40 46.9
45	8	. .	. .	. .	30.8	43.	55.4	. .	. .	. .	28 30.91	28.82	. .	.	5	45.13	21 15.34	11.60	9.30	28 59.73	32 36.2
46	8	. .	. .	51.2	3.2	. .	. .	40.	. .	. .	30 3.31	28.82	. .	.	4	46.36	26 20.92	11.46	9.71	30 32.13	37 42.1
47	.	. .	. .	. .	. .	. .	. .	44.2	. .	. .	30 7.56	28.82	. .	.	4	45.75	26 41.63	11.45	9.74	30 36.38	38 2.8
48	9	. .	. .	56.3	8.2	20.5	. .	. .	. .	. .	33 8.34	28.81	. .	.	5	35.417	26 49.94	11.17	9.75	33 37.15	38 10.9
49	8	22.	34.3	46.7	58.8	. .	. .	. .	. .	. .	34 58.78	28.80	. .	.	2	39.388	44 56.15	10.99	11.22	35 27.58	56 18.4
50	8	. .	. .	. .	. .	. .	. .	34.2	. .	. .	34 57.55	28.80	. .	.	6	32.938	19 34.04	10.99	9.17	35 26.35	30 54.2
51	8	. .	. .	. .	35.	47.	. .	. .	. .	. .	37 34.96	28.79	. .	.	6	37.664	10 57.10	10.74	8.47	38 3.75	23 16.3
52	9	. .	31.3	43.2	55.4	. .	. .	. .	. .	. .	39 55.48	28.78	. .	.	3	41.100	35 14.29	10.52	10.43	40 24.26	46 35.2
53	9	. .	. .	. .	. .	. .	63.2	15.1	. .	. .	40 38.68	28.78	. .	.	7	41.82	8 33.81	10.45	8.29	41 7.46	19 52.6
54	9	. .	. .	. .	. .	50.3	3.0	15.0	. .	. .	41 38.42	28.78	. .	.	7	38.56	10 26.20	10.35	8.42	42 7.20	21 45.0
55	10	. .	. .	. .	. .	. .	44.2	57.	. .	. .	42 20.10	28.77	. .	.	6	32.01	20 5.89	10.29	9.20	42 48.87	31 25.4
56	8	. .	62 3	14.1	26.3	38.4	. .	. .	. .	. .	47 26.36	28.76	. .	.	5	33.422	27 58.65	9.80	9.84	47 55.12	39 18.3
57	9	. .	. .	. .	. .	24.5	36.3	. .	. .	. .	18 48 12.14	+28.75	. .	.	5	39.795	24 19.10	− 9.72	− 9.57	18 48 40.89	25 35 38.4

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848.	h. m.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.		CIRCLE.						Barom.	Attached Thermom.	External Thermom.
			A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848.	h. m.	° ′ ″				″	″	in.	°	°

REMARKS.

(139) 18. Micrometer reading assumed as $35^r.95$ instead of $36^r.95$.

(139) 39. Micrometer reading assumed as $39^r.66$ instead of $29^r.66$.

(139) 41. Micrometer reading assumed as $44^r.012$ instead of $34^r.012$.

(139) 44. Differs 6′ in declination from Argelander 308, 64.

(139) 51. Hor. thread assumed as 7 insteadof 6.

ZONE 139. AUGUST 16. MAJ. $D_0 = -25° 11' 0''$—Continued.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
58	9	. .	31.	43.2	55.2	7.	. .	. .	. .	. .	18 49 55.19	+28.75	. .	.	5	36.260	26 20.90	− 9.56	− 9.71	18 50 23.94	25 37 40.2
59	9	. .	51.	3.4	. .	. .	. .	. .	. .	. .	51 15.50	28.74	. .	.	2	40.642	44 12.91	9.43	11.17	51 44.24	55 33.5
60	8	. .	16.2	28.4	40.4	. .	. .	. .	. .	. .	52 40.53	28.74	. .	.	2	43.628	42 30.09	9.29	11.02	53 9.27	53 50.4
61	10	. .	. .	. .	. .	. .	. .	35.2	. .	. .	52 58.58	28.73	. .	.	3	44.73	33 8.95	9.26	10.24	53 27.31	44 28.4
62	8	28.	40.	52.0	4.3	. .	. .	. .	. .	. .	55 4.34	28.73	. .	.	6	39.922	15 33.46	9.05	8.78	55 33.07	26 51.3
63	9	. .	. .	. .	47.2	59.2	12.0	. .	. .	. .	56 47.24	28.72	. .	.	2	38.738	45 18.53	8.88	11.25	57 15.96	56 38.7
64	8	. .	. .	. .	. .	53.5	. .	. .	. .	. .	57 41.39	28.72	. .	.	6	36.938	17 16.25	8.80	8.97	58 10.11	28 34.0
65	7	. .	. .	. .	. .	. .	35.7	47.2	. .	. .	58 10.88	28.72	. .	.	2	40.192	44 28.45	8.75	11.18	58 39.60	55 48.4
66	8	. .	. .	. .	. .	. .	. .	. .	. .	31.	18 58 23.82	28.71	. .	.	3	34.60	38 58.19	8.73	10.72	18 58 52.53	25 50 17.6
67	9	. .	. .	. .	18.9	31.	. .	. .	. .	. .	19 1 18.89	28.71	. .	.	1	38.15	51 28.03	8.44	11.77	19 1 47.60	26 2 48.2
68	.	. .	. .	. .	20.	32.8	. .	. .	. .	. .	1 20.32	28.71	. .	.	2	42.72	43 1.37	8.44	11.06	1 49.03	25 54 20.9
69	9	. .	. .	48.3	0.4	13.	. .	. .	. .	. .	3 0.56	28.70	. .	.	2	41.90	43 29.61	8.27	11.11	3 29.26	54 49.0
70	9	. .	. .	. .	39.3	51.3	4.	. .	. .	. .	3 39.32	28.70	. .	.	3	40.60	35 31.51	8.21	10.45	4 8.02	46 50.2
71	8	. .	. .	. .	49.3	. .	. .	. .	. .	. .	4 49.29	28.69	. .	.	5	39.79	24 19.30	8.09	9.55	5 17.98	35 36.9
72	4	. .	27.3	39.5	51.3	3.7	. .	. .	. .	. .	5 51.56	28.69	. .	.	6	33.282	19 22.19	8.00	9.15	6 20.25	30 39.3
73	9	. .	. .	. .	42.	54.	. .	. .	. .	. .	6 41.92	28.69	. .	.	5	39.495	24 29.46	7.91	9.56	7 10.61	35 46.9
74	8	. .	. .	. .	43.	55.7	. .	. .	. .	. .	6 43.28	28.69	. .	.	5	39.198	24 39.70	7.91	9.58	7 11.97	35 57.2
75	9	. .	. .	. .	. .	. .	22.4	35.0	. .	. .	7 58.16	28.68	. .	.	3	34.72	38 53.94	7.78	10.72	8 26.84	50 12.4
76	8	. .	. .	. .	. .	29.3	41.4	. .	. .	. .	9 17.11	28.68	. .	.	6	30.913	20 43.79	7.65	9.25	9 45.79	32 0.7
77	8	41.	53.2	5.4	17.2	. .	. .	. .	. .	. .	11 17.52	28.67	. .	.	3	38.075	36 58.49	7.45	10.57	11 46.19	48 16.5
78	9	. .	. .	. .	24.2	. .	. .	. .	. .	. .	11 24.20	28.67	. .	.	3	31.947	40 29.58	7.44	10.85	11 52.87	51 47.9
79	8	. .	. .	. .	. .	. .	. .	. .	. .	24.5	11 17.33	28.67	. .	.	3	37.913	37 4.07	7.45	10.57	11 46.00	48 22.1
80	7	. .	. .	. .	29.3	42.	. .	. .	. .	. .	13 29.56	28.66	. .	.	3	43.55	33 49.90	7.23	10.30	13 58.22	45 7.4
81	8	. .	. .	15.	27.2	39.3	. .	. .	. .	. .	19 14 27.17	+28.66	0.00	.	4	45.842	26 38.75	− 7.14	− 9.69	19 14 55.83	25 37 55.6

ZONE 140. AUGUST 16. MAJ. $D_0 = -23° 55' 50''$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	10	. .	. .	48.5	0.2	. .	. .	. .	. .	. .	20 43 0.35	+28.34	+0.01	IV.	2	35.971	46 53.86	− 9.84	− 5.80	20 43 28.70	24 42 59.5
2	6	. .	. .	. .	44.3	56.	9.0	. .	. .	. .	43 44.39	28 34	. .	.	5	39.549	24 27.60	9.79	3.13	44 12.73	20 30.5
3	8	. .	. .	. .	. .	56.	7.4	. .	. .	. .	44 43.53	28.34	+0.01	.	1	32.843	54 30.84	9.71	6.61	45 11.88	50 37.2
4	9	. .	. .	. .	. .	4.2	. .	. .	. .	. .	44 52.17	28.34	. .	.	5	30.448	29 41.07	9.70	3.97	45 20.51	25 44.7
5	8	. .	. .	51.3	2.8	. .	. .	. .	. .	. .	47 3.06	28.33	. .	.	4	31.547	34 51.18	9.52	4.52	47 31.39	30 55.2
6	8	. .	. .	. .	48.	0.5	. .	. .	. .	. .	47 48.28	28.33	−0.01	.	6	35.512	18 5.36	9.46	2.76	48 16.60	14 7.6
7	8	. .	. .	. .	. .	. .	. .	38.4	. .	. .	48 2.14	28.33	. .	.	4	41.62	29 4.19	9.45	3.90	48 30.47	25 7.5
8	9	. .	5.2	17.2	29.2	. .	. .	. .	. .	. .	49 29.25	28.32	. .	.	4	37.532	31 25.01	9.33	4.15	49 57.57	27 28.5
9	9	. .	65.2	17.4	29.3	. .	. .	. .	. .	. .	52 29.35	28.31	. .	.	5	35.264	26 55.21	9.10	3.67	52 57.66	22 58.0
10	9	. .	19.4	31.3	43.6	55.5	. .	. .	. .	. .	55 43.50	28.31	−0.01	.	6	38.392	16 26.16	8.85	2.59	56 11.80	12 27.6
11	9	. .	. .	. .	. .	58.7	. .	. .	. .	. .	56 46.67	28.30	+0.01	.	1	38.773	51 6.54	8.77	6.29	57 14.98	24 47 11.6
12	.	. .	. .	. .	. .	. .	. .	3.4	. .	. .	57 27.14	28.30	. .	.	.	. .	. . .	8.72	. .	57 55.44	
13	9	. .	. .	7.3	19.2	31.4	. .	. .	. .	. .	20 59 19.29	28.30	+0.01	.	1	36.716	52 17.43	8.57	6.38	20 59 47.60	24 48 22.4
14	8	. .	. .	. .	. .	13.4	25.3	37.4	. .	. .	21 0 1.25	28.30	−0.01	.	6	35.933	17 50.86	8.52	2.71	21 0 29.54	13 52.1
15	8	. .	. .	. .	18.3	30.5	. .	. .	. .	. .	1 18.38	28.29	. .	.	5	36.69	26 6.08	8.42	3.58	1 46.67	22 8.1
16	9	. .	. .	14.5	26.4	. .	. .	. .	. .	. .	2 26.46	28.29	+0.01	.	2	41.130	43 56.13	8.34	5.51	2 54.76	40 0.0
17	8	. .	. .	39.2	50.4	. .	. .	. .	. .	. .	2 50.80	28.29	0.01	.	1	44.483	47 49.88	8.31	5.93	3 19.10	43 54.1
18	9	. .	. .	. .	. .	. .	. .	37.7	. .	. .	4 1.42	28.29	+0.01	.	1	46.778	46 30.56	8.22	5.78	4 29.72	42 34.6
19	8	. .	. .	. .	. .	. .	. .	10.3	28.5	. .	5 34.26	28.28	−0.01	.	6	42.932	13 49.77	8.09	2.29	6 2.53	9 50.2
20	9	. .	. .	. .	24.5	36.3	48.6	. .	. .	. .	7 24.47	28.28	−0.01	.	6	39.677	15 41.90	7.09	2.49	7 52.74	11 42.4
21	8	. .	. .	. .	. .	. .	. .	24.2	42.2	. .	21 7 48.06	+28.28	. .	.	3	40.257	35 43.33	− 7.93	− 4.62	21 8 16.34	24 31 45.9

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848.	h.	s.	s.	s.	s.	s.	° ′ ″	r.

REMARKS.

INSTRUMENT READINGS.

	Date.	CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1848. h. m.	° ′ ″				″	″	in.	°	°
Zone 140	Aug. 16, 20 43	292 42 2.1	5.2	6.3	5.2	4.72	4.70	30.078	79.2	73.9
	21 0	. .	. .	. .	. .	. .	. .	30.078	78.8	73.5
	21 40	. .	. .	. .	. .	. .	. .	30.072	78.5	73.1

ZONE 140. AUGUST 16. MAJ. $D_0 = -23° 55' 50''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
22	8	..	..	..	..	..	..	..	18.2	..	21 8 24.10	+28.28	+0.01	.	2	42.53	43 7.91	− 7.89	− 5.42	21 8 52.39	24 39 11.2
23	9	..	..	..	..	..	0.5	12.4	..	..	9 36.24	28.27	..	.	4	39.921	30 2.61	7.80	4.02	10 4.51	26 4.4
24	8	..	..	..	..	..	.	49.4	..	..	11 13.14	28.27	..	.	4	43.670	27 53.58	7.68	3.77	11 41.41	23 55.0
25	9	..	..	..	..	..	32.3	44.2	..	..	13 8.08	28.26	−0.01	.	7	43.922	7 21.41	7.55	1.62	13 36.33	3 20.6
26	7	32.3	44.2	56.4	8.3	..	..	..	..	..	15 8.40	28.26	..	.	5	46.555	20 26.27	7.40	3.01	15 36.66	16 26.7
27	9	..	..	..	19.7	..	..	..	..	..	15 19.71	28.26	..	.	5	43.202	22 21.76	7.39	3.19	15 47.97	18 22.3
28	8	..	..	..	24.2	36.2	..	..	..	..	16 24.24	28.26	−0.01	.	6	37.299	17 3.81	7.31	2.63	16 52.49	13 3.8
29	7	..	..	..	41.5	53.7	..	..	..	..	16 41.57	28.26	..	.	4	36.715	31 53.16	7.29	4.21	17 9.83	27 54.7
30	8	..	55.2	7.4	19.2	31.3	..	..	..	..	18 19.32	28.25	..	.	6	32.482	19 49.75	7.17	2.92	18 47.57	15 49.8
31	9	..	..	..	23.4	35.2	47.4	..	..	..	19 23.31	28.25	..	.	6	31.962	20 7.65	7.09	2.95	19 51.56	16 7.7
32	9	..	..	..	..	28.2	40.	52.2	..	..	20 15.98	28.25	..	.	4	38.688	30 45.17	7.03	4.09	20 44.23	26 46.3
33	8	..	..	20.2	31 5	44.2	..	..	..	..	23 31.96	28.24	+0.01	.	1	36.381	52 28.97	6.81	6.44	24 0.21	48 32.2
34	7	36.4	48.7	0.8	12.5	..	..	..	..	..	26 12.68	28.23	−0.01	.	7	37.332	11 8.53	6.62	2.01	26 40.90	7 7.2
35	9	..	6.	18.2	..	..	..	..	..	..	28 30.16	28.23	−0.01	.	6	33.666	19 8.94	6.45	2.83	28 58.38	15 8.2
36	8	..	..	..	..	51.3	3.2	15.5	..	..	28 39.17	28.23	..	.	3	37.055	25 53.48	6.44	3.57	29 7.40	21 53.2
37	8	..	15.4	27.5	39.5	..	..	..	..	..	31 39.53	28.22	..	.	3	34.560	38 59.57	6.25	4.98	32 7.75	35 0.8
38	9	..	..	..	52.2	..	..	..	..	..	31 52.17	28.22	..	.	4	34.560	33 7.39	6.22	4.35	32 20.39	29 8.0
39	8	..	54.4	6.8	18.5	..	..	..	..	..	34 18.66	28.22	+0.01	.	1	34.828	53 22.46	6.07	6.45	34 46.89	49 25.0
40	9	53.2	5.5	17.4	..	..	..	..	..	..	38 29.52	28.21	..	.	5	37.313	25 44.59	5.78	3.55	38 57.73	21 43.9
41	9	..	..	..	..	7.	19.	31.	..	..	38 54.85	28.21	..	.	4	35.357	32 39.94	5.76	4.29	39 23.06	28 40.0
42	10	..	..	..	..	..	20.	31.4	..	..	39 55.50	28.21	..	.	5	40.41	23 57.82	5.70	3.36	40 23.71	19 56.9
43	10	..	..	..	..	29.3	..	..	..	..	21 41 4.80	+28.20	..	.	3	41.075	35 15.12	− 5.62	− 4.57	21 41 33.00	24 31 15.3

ZONE 141. AUGUST 18. MAJ. $D_0 = -18° 55' 20''$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	8	..	..	..	14.2	..	38.2	..	..	..	19 15 14.59	+27.70	−0.01	.	6	37.55	16 55.17	−27.28	− 9.28	19 15 42.28	19 12 51.7
2	9	..	..	..	..	..	25.5	..	..	..	16 2.20	27.70	..	.	5	39.272	24 37.04	27.04	9.70	16 29.90	20 33.8
3	8	..	..	..	..	..	62.2	..	..	..	16 38.86	27.70	..	.	4	36.807	31 49.99	26.96	10.10	17 6.56	27 47.0
4	10	..	52.5	..	..	..	..	..	..	..	18 15.81	27.69	..	.	4	32.857	34 5.96	26.74	10.23	18 43.50	30 2.9
5	8	..	..	36.4	47.8	59.5	..	..	..	..	18 47.89	27.69	+0.01	.	2	43.572	42 32.02	26.67	10.69	19 15.59	38 29.4
6	8	..	..	1.2	12.5	..	..	..	..	..	20 12.75	27.68	−0.01	.	7	43.242	7 44.95	26.48	8.79	20 40.42	3 40.2
7	10	..	..	..	..	..	..	57.	..	..	20 22.03	27.68	..	.	3	36.50	37 52.54	26.46	10.43	20 49.71	33 49.4
8	8	..	..	..	..	..	17.4	..	..	..	20 53.98	27.68	+0.01	.	2	38.28	45 34.31	26.39	10.70	21 21.67	41 31.4
9	6	..	..	15.3	27.3	39.2	..	..	..	..	22 27.26	27.68	+0.01	.	2	37.718	45 53.67	26.18	10.71	22 54.95	41 50.6
10	8	..	34.4	46.	57.3	..	..	..	..	..	23 57.55	27.67	..	.	3	33.828	39 34.79	25.99	10.52	24 25.22	35 31.3
11	9	..	..	..	..	..	55.5	6.3	..	..	24 31.76	27.67	−0.01	.	6	41.198	14 49.41	25.91	9.16	24 59.42	10 44.5
12	7	..	..	..	..	55.2	7.0	..	..	..	25 43.72	27.66	0.01	.	7	40.26	9 27.68	25.75	8.88	26 11.37	5 22.3
13	9	..	..	47.	..	..	..	..	..	..	26 58.67	27.66	0.01	.	6	35.77	17 56.48	25.58	9.33	27 26.32	13 51.5
14	5	..	..	..	..	25.	36.5	..	..	..	27 13.34	27.66	−0.01	.	7	30.823	14 52.75	25.55	9.16	27 40.99	10 47.5
15	9	..	..	..	..	..	..	..	19.	..	27 26.78	27.66	..	.	3	34.56	38 59.10	25.52	10.50	27 54.44	34 55.1
16	9	..	..	36.2	48.	59.5	..	..	..	..	29 47.96	27.65	..	.	3	38.376	36 48.13	25.21	10.38	30 15.61	32 43.7
17	8	..	..	..	..	44.2	56.	7.9	..	..	30 32.71	27.65	..	.	3	36.015	38 9.46	25.11	10.45	31 0.36	34 5.0
18	9	24.2	36.4	48.	59.5	..	..	..	..	..	33 59.52	27.63	..	.	4	36.84	31 48.85	24.65	10.10	34 27.15	27 43.6
19	10	..	..	9.7	20.5	..	..	..	..	..	34 20.91	27.63	..	.	5	35.352	26 52.17	24.60	9.82	34 48.54	22 46.6
20	9	..	..	56.2	7.4	19.4	..	..	..	..	36 7.71	27.62	−0.01	.	6	37.89	16 43.45	24.37	9.27	36 35.32	12 37.1
21	9	58.8	10.2	..	..	..	..	..	..	..	38 33.70	27.62	..	.	3	35.098	38 40.95	24.04	10.48	39 1.32	34 35.5
22	9	..	..	..	..	..	..	35.4	..	..	39 12.16	27.61	−0.01	.	6	41.795	14 28.73	23.96	9.14	39 39.76	10 21.8
23	8	..	..	45.	56.5	..	..	..	..	..	19 40 56.63	+27.61	−0.01	.	6	47.854	11 0.22	−23.74	− 8.97	19 41 24.23	19 6 52.9

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848.	h.	s.	s.	s.	s.	s.	° ′ ″	r.
Aug. 18,	0	+23.806	g 0.023	..	− 0.429	− 0.192	0 0 4.35	40.057

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848. h. m.	° ′ ″				″	″	in.	°	°
Zone 141	Aug. 18, 19	..	..	..	..	..	..	29.924	77.8	70.2
	19 15	301 42 0.8	1.5	1.8	2.9	1.76	1.75			
	20	..	..	..	..	..	..	29.930	76.0	68.8
	20 20	..	..	..	..	..	..	29.932	76.	68.0
	20 40	..	..	..	..	..	..	29.932	75.5	67.7
	21 5	4.7	3.5	5.4	9.4	5.77	5.75	..	..	67.4
	21 49	..	..	..	..	..	..	29.924	74.5	66.8

REMARKS.

(140) 36. Hor. thread assumed as 5 instead of 3.

(140) 43. Transit over T. VI assumed to have been recorded over T. V.

(141) 22. Transit over T. VI assumed to have been recorded over T. VII.

ZONE 141. AUGUST 18. MAJ. D₀ = −18° 55′ 20″—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
24	7	. .	60.4	12.1	23.5	. .	. .	. .	. .	. .	19 42 23.65	+27.60	. .	.	2	48.97	39 26.07	−23.55	−10.52	19 42 51.25	19 35 20.1
25	5	. .	. .	. .	. .	12.3	24.	35.3	. .	. .	43 0.56	27.60	. .	. .	5	40.99	23 37.96	23.47	9.65	43 28.16	19 31.1
26	8	. .	56.4	8.2	19.7	. .	. .	. .	. .	. .	45 19.74	27.59	. .	.	5	41.33	23 26.24	23.16	9.64	45 47.33	19 19.0
27	9	. .	. .	. .	51.2	2.7	. .	. .	. .	. .	45 51.20	27.59	−0.01	.	6	43.45	13 31.93	23.09	9.09	46 18.78	9 24.1
28	8	. .	. .	. .	. .	57.7	9.4	21.3	. .	. .	46 46.17	27.59	. .	.	6	31.932	20 8.68	22.97	9.46	47 13.76	16 1.1
29	10	. .	. .	. .	. .	. .	35.2	. .	. .	. .	48 11.94	27.58	−0.01	.	6	34.75	18 31.61	22.79	9.36	48 39.51	14 23.8
30	9	. .	. .	39.	50.4	2.4	. .	. .	. .	. .	52 50.60	27.56	. .	.	4	31.748	34 44.26	22.18	10.26	53 18.16	30 36.7
31	10	. .	. .	. .	. .	. .	. .	6.4	. .	. .	53 31.42	27.56	. .	.	3	39.342	36 14.64	22.10	10.35	53 58.98	32 7.1
32	9	. .	30.2	41.4	53.4	. .	. .	. .	. .	. .	55 53.31	27.55	−0.01	.	6	44.70	15 41.19	21.79	9.19	56 20.85	11 32.1
33	8	. .	. .	. .	54.6	5.8	17.7	29.3	. .	. .	56 54.40	27.55	0.01	.	7	36.110	11 50.63	21.66	9.01	57 21.94	7 41.3
34	6	30.	41.4	53.6	4.7	16.6	. .	. .	. .	. .	19 59 4.92	27.54	0.01	.	6	35.292	18 12.94	21.38	9.35	19 59 32.45	14 3.7
35	8	. .	. .	. .	. .	51.	. .	. .	. .	. .	20 3 39.44	27.53	−0.01	.	7	34.73	12 38.16	20.80	9.03	20 4 6.96	8 28.0
36	8	. .	. .	. .	. .	. .	. .	17.7	. .	. .	3 42.72	27.53	. .	.	3	39.24	36 18.36	20.79	10.36	4 10.25	32 9.5
37	8	. .	. .	. .	34.0	46.	. .	. .	. .	. .	5 34.20	27.52	+0.01	.	2	41.678	43 37.26	20.55	10.76	6 1.73	39 28.6
38	8	. .	. .	. .	34.6	46.7	58.1	. .	. .	. .	6 34.82	27.52	. .	.	4	46.89	26 2.66	20.42	9.77	7 2.34	21 52.8
39	8	. .	. .	0.4	11.6	23.5	. .	. .	. .	. .	8 11.82	27.51	+0.01	.	2	43.43	42 36.91	20.22	10.71	8 39.34	38 27.8
40	8	. .	. .	. .	20.1	. .	. .	. .	. .	. .	9 20.13	27.51	+0.01	.	1	42.112	49 11.55	20.08	11.07	9 47.65	45 2.7
41	5	. .	53.	4.	16.	27.	. .	51.	. .	. .	10 15.88	27.51	. .	.	3	34.26	39 9.91	19.95	10.52	10 43.39	35 0.4
42	9	. .	53.2	4.3	16.1	. .	. .	. .	. .	. .	10 16.18	27.51	. .	.	3	32.67	40 4.68	19.95	10.57	10 43.69	35 55.2
43	8	. .	. .	. .	. .	. .	23.0	34.3	. .	. .	11 59.50	27.50	−0.01	.	6	38.177	16 33.57	19.74	9.25	12 26.99	12 22.6
44	9	. .	. .	. .	. .	. .	39.4	51.	. .	. .	13 16.05	27.50	−0.01	.	7	32.588	13 51.86	19.58	9.10	13 43.54	9 40.5
45	10	. .	63.	. .	26.2	38.3	. .	. .	. .	. .	15 26.39	27.49	. .	.	6	33.270	19 22.60	19.31	9.41	15 53.88	15 11.3
46	8	40.7	52.4	3.5	15.5	. .	. .	. .	. .	. .	17 15.52	27.48	+0.01	.	2	43.697	42 27.71	19.08	10.70	17 43.01	38 17.5
47	9	. .	. .	. .	. .	. .	7.4	19.2	. .	. .	17 44.14	27.48	. .	.	5	40.982	23 38.13	19.02	9.64	18 11.62	19 26.8
48	8	63.6	15.2	. .	. .	. .	. .	. .	. .	. .	20 38.60	27.47	. .	.	3	33.905	39 22.14	18.65	10.53	21 6.07	35 11.3
49	6	. .	. .	. .	48.4	0.9	11.8	. .	. .	. .	20 48.80	27.47	−0.01	.	7	41.14	8 57.36	18.63	8.83	21 16.26	4 44.8
50	7	. .	. .	. .	. .	1.0	12.	. .	. .	. .	48.11	27.47	−0.01	.	7	41.442	8 46.95	18.63	8.82	21 15.57	4 34.4
51	9	. .	. .	. .	. .	. .	. .	39.7	. .	. .	24 4.65	27.46	+0.01	.	1	37.357	51 55.13	18.22	11.24	24 32.12	47 44.6
52	9	. .	. .	. .	. .	50.2	1.	13.4	. .	. .	38.21	27.46	+0.01	. .	3	32.615	40 6.56	18.00	10.57	27 5.68	35 55.1
53	8	. .	22.	34.2	. .	. .	. .	. .	. .	. .	28 45.55	27.45	. .	.	5	43.90	21 57.72	17.64	9.55	29 13.00	17 44.9
54	8	. .	45.2	8.6	. .	. .	. .	. .	. .	. .	30 8.52	27.44	. .	.	5	42.045	23 1.62	17.47	9.61	29 35.96	18 48.7
55	8	. .	. .	. .	. .	. .	. .	0.0	. .	. .	29 24.95	27.44	−0.01	11.	6	42.447	14 6.01	17.56	9.11	29 52.38	9 52.7
56	8	. .	. .	. .	32.0	. .	. .	. .	. .	. .	31 32.08	27.44	−0.01	.	7	41.58	8 42.20	17.30	8.82	31 59.51	4 28.3
57	8	11.3	23.	. .	46.2	58.0	. .	. .	. .	. .	31 46.29	27.44	. .	.	5	43.209	22 21.52	17.28	9.57	32 13.73	18 8.4
58	8	. .	. .	. .	. .	. .	. .	16.3	. .	. .	32 41.33	27.44	. .	.	3	33.697	39 29.30	17.16	10.54	33 8.77	35 17.0
59	8	. .	. .	. .	. .	. .	. .	. .	5.7	. .	33 13.56	27.43	−0.01	.	7	36.260	11 45.47	17.10	8.99	33 40.98	7 31.6
60	8	. .	. .	. .	. .	. .	. .	8.	. .	. .	34 32.95	27.43	−0.01	.	6	42.495	14 4.83	16.94	9.11	35 0.37	9 50.9
61	9	. .	. .	. .	. .	. .	. .	7.3	. .	. .	35 32.33	27.43	. .	.	3	34.209	39 11.45	16.82	10.52	35 59.76	34 58.8
62	9	. .	. .	. .	. .	. .	. .	3.2	. .	. .	36 28.24	27.42	. .	.	3	32.937	39 55.27	16.71	10.56	36 55.66	35 42.5
63	.	. .	. .	. .	. .	. .	. .	. .	. .	4.9	36 44.80	27.42	+0.01	.	2	35.98	46 53.84	16.67	10.94	37 12.23	42 41.4
64	.	. .	. .	. .	. .	. .	. .	39.	. .	. .	37 4.02	27.42	+0.01	.	2	39.338	44 57.66	−16.63	−10.84	37 31.45	19 40 45.1
65	.	. .	. .	. .	. .	. .	. .	30.7	. .	. .	55.69	27.42	. .	.	.	. . .	. . .	. .	. .	(38) 23.11	
66	6	. .	. .	. .	. .	22.2	34.	. .	. .	. .	39 10.58	27.41	+0.01	.	1	36.062	52 39.96	−16.38	−11.27	39 38.00	19 48 27.6
67	7	. .	. .	. .	19.5	31.0	43.0	. .	. .	. .	43 19.54	27.40	. .	.	5	43.140	22 23.90	15.84	9.57	43 46.94	18 9.3
68	.	. .	. .	. .	. .	43.0	54.3	. .	. .	. .	44 31.14	27.40	+0.01	.	2	39.552	44 50.48	15.74	10.84	44 58.55	40 37.1
69	.	. .	. .	. .	5.0	. .	. .	. .	. .	. .	45 5.01	27.39	. .	.	3	66.66	37 47.22	15.67	10.45	45 32.40	33 33.3
70	7	. .	. .	. .	. .	. .	. .	7.2	. .	. .	45 32.19	27.39	. .	.	4	41.38	29 12.46	15.61	9.96	45 59.58	24 58.0
71	5	. .	. .	. .	. .	. .	. .	21.0	. .	. .	45 45.98	27.39	. .	.	5	37.209	25 48.20	15.59	9.76	46 13.37	21 33.6
72	9	. .	. .	62.2	13.7	25.3	. .	. .	. .	. .	20 48 13.75	+27.39	. .	.	5	37.517	25 37.59	−15.29	− 9.75	20 48 41.14	19 21 22.6

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848. h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848. h. m.	° ′ ″				″	″	in.	°	°

REMARKS.

(141) 32. Micrometer reading assumed as 39ʳ.70 instead of 44ʳ.70.
(141) 50. Minutes assumed as 20.
(141) 51. Minutes assumed as 25 instead of 24.
(141) 52. Minutes assumed as 27.
(141) 54. Transit at 8ˢ.6 assumed to have been over T. IV instead of T. III, and minutes as 29 instead of 30.
(141) 69. Micrometer reading assumed as 36ʳ.66 instead of 66ʳ.66.

ZONE 141. AUGUST 18. MAJ. $D_0 = -18° 55' 20''$—Continued.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
73	9	. .	13.	24.2	36.	. .	. .	15.5	. .	. .	20 49 36.03	+27.38	. .	.	6	30.66	20 52.51	−15.13	− 9.48	20 50 3.41	19 16 37.1
74	8	. .	. .	. .	3.6	15.	. .	. .	. .	. .	50 3.48	27.38	. .	.	4	33.59	33 40.81	15.07	10.21	50 30.86	29 26.1
75	6	. .	. .	. .	. .	. .	. .	11.3	. .	. .	50 36.34	27.38	+0.01	.	3	30.96	41 3.58	15.01	10.62	51 3.73	36 49.2
76	10	. .	. .	. .	. .	. .	. .	. .	. .	12.	51 7.81	27.38	+0.01	.	3	31.701	40 37.35	14.95	10.60	51 35.20	36 22.9
77	9	. .	. .	. .	. .	. .	51.1	2.4	. .	. .	52 27.58	27.38	. .	.	4	32.58	34 15.50	14.79	10.24	52 54.96	30 0.5
78	6	. .	. .	. .	45.	57.2	. .	. .	. .	. .	53 45.30	27.38	+0.01	.	2	33.110	48 32.40	14.64	11.04	54 12.69	44 18.1
79	8	41.	53.2	4.4	. .	. .	. .	. .	. .	. .	55 16.12	27.37	−0.01	.	7	37.33	11 8.60	14.46	8.96	55 43.48	6 52.0
80	7	. .	. .	58.3	9.4	. .	. .	. .	. .	. .	58 9.68	27.36	. .	.	5	43.32	22 17.70	14.13	9.57	58 37.04	18 1.4
81	5	. .	. .	20.	31.	43.	. .	. .	. .	. .	58 31.33	27.36	+0.01	.	2	38.66	45 21.22	14.08	10.86	58 58.70	41 6.2
82	9	. .	. .	. .	. .	. .	27.	. .	. .	. .	59 3.62	27.36	. .	.	3	33.85	39 23.93	14.02	10.53	59 30.98	35 8.5
83	.	. .	. .	. .	. .	. .	27.6	. .	. .	. .	59 4.24	27.36	. .	.	3	40.15	35 46.92	14.02	10.32	20 59 31.60	31 31.3
84	8	. .	. .	. .	. .	. .	. .	. .	47.5	. .	20 59 55.28	27.36	. .	11.	5	40.25	24 2.98	13.92	9.66	21 0 22.64	19 46.6
85	8	. .	. .	. .	. .	. .	49.3	61.	. .	. .	21 1 26.00	27.35	−0.01	.	7	42.403	8 13.86	13.75	8.77	1 53.34	3 56.4
86	8	. .	. .	. .	. .	. .	. .	. .	55.5	. .	2 3.19	27.35	+0.01	.	2	46.607	40 47.47	13.68	10.61	2 30.55	36 31.8
87	9	. .	. .	. .	. .	29.0	40.2	. .	. .	. .	*9 17.15	27.33	. .	.	5	42.062	23 1.02	12.89	9.60	9 44.48	18 43.5
88	8	. .	60.4	12.0	23.5	. .	47.2	. .	. .	. .	11 23.66	27.33	. .	.	3	36.029	38 8.97	12.59	10.47	11 50.99	33 52.0
89	8	. .	. .	. .	. .	. .	47.	. .	. .	. .	12 23.66	27.33	. .	.	4	36.834	31 49.06	12.48	10.12	12 50.99	27 31.7
90	7	. .	. .	. .	50.	2.3	14.2	. .	. .	. .	13 50.52	27.32	. .	.	5	36.132	26 25.30	12.32	9.79	14 17.84	22 7.4
91	9	. .	40.2	51.7	3.2	15.3	. .	. .	. .	. .	16 3.43	27.32	. .	.	3	32.92	39 56.07	12.07	10.57	16 30.75	35 38.7
92	8	. .	. .	. .	. .	. .	13.4	25.	. .	. .	16 50.05	27.31	−0.01	.	6	35.438	18 7.92	11.98	9.32	17 17.35	13 49.2
93	8	. .	. .	. .	9.2	21.3	33.2	. .	. .	. .	18 9.56	27.31	+0.01	.	2	36.701	46 28.70	11.83	10.94	18 36.88	42 11.5
94	9	. .	. .	. .	. .	. .	. .	14.	. .	. .	19 38.98	27.31	. .	.	5	41.552	23 18.39	11.66	9.61	20 6.29	18 59.7
95	9	. .	. .	. .	. .	18.0	29 4	41.3	. .	. .	21 6.20	27.30	+0.01	.	1	36.82	52 13.82	11.49	11.28	21 33.51	47 56.6
96	8	. .	5.3	17.2	28.4	. .	. .	. .	. .	. .	23 28.62	27.30	+0.01	.	2	38.512	45 26.31	11.23	10.89	23 55.93	41 8.4
97	8	. .	. .	. .	. .	. .	21.2	33.	. .	. .	23 57.95	27.30	. .	.	6	34.478	18 40.99	11.19	9.36	24 25.25	14 21.5
98	8	. .	. .	. .	. .	34.	45.2	56.	. .	. .	24 21.77	27.30	−0.01	.	6	35.513	18 5.33	11.13	9.32	24 49.06	13 45.8
99	9	. .	18.2	29.9	41.3	. .	. .	. .	. .	. .	26 41.43	27.29	. .	.	4	39.095	30 31.18	10.88	10.05	27 8.72	26 12.1
100	8	. .	. .	. .	33.	44.6	. .	. .	. .	. .	27 33.06	27.29	−0.01	.	7	42.93	7 55.70	10.79	8.76	28 0.34	3 35.2
101	8	. .	. .	. .	. .	. .	. .	27.	. .	. .	27 51.98	27.29	. .	.	5	40.49	23 55.18	10.75	9.68	28 19.27	19 35.6
102	7	. .	. .	. .	. .	. .	31.	43.	. .	. .	28 7.83	27.29	. .	.	4	41.79	28 58.34	10.71	9.95	28 35.12	24 39.0
103	8	. .	. .	. .	51.4	3.4	15.2	. .	. .	. .	29 51.69	27.28	. .	.	5	37.673	25 32.22	10.53	9.75	30 18.97	21 12.5
104	9	. .	. .	. .	. .	. .	. .	11.5	. .	. .	30 36.44	27.28	−0.01	.	7	38.068	10 42.98	10.44	8.91	31 3.71	6 22.3
105	.	. .	. .	. .	. .	. .	. .	15.7	. .	. .	30 40.64	27.28	0.01	.	7	39.672	9 47.72	10.42	8.86	31 7.91	5 27.0
106	8	. .	. .	. .	. .	. .	. .	57.	. .	. .	31 21.94	27.28	−0.01	.	7	38.12	10 41.39	10.36	8.91	31 49.21	6 20.7
107	.	. .	. .	. .	. .	. .	. .	. .	. .	. .	33	27.27	. .	.	3	35.072	38 41.94	10.20	10.50	33	34 22.6
108	5	. .	. .	. .	. .	0.4	12.2	23.2	. .	. .	33 48.63	27.27	. .	.	3	57.759	37 9.35	10.11	10.43	34 15.90	32 49.9
109	8	. .	. .	. .	. .	. .	. .	. .	39.2	. .	34 47.01	27.27	. .	.	5	46.125	20 41.08	9.99	9.46	35 14.28	16 20.5
110	9	. .	. .	. .	33.4	45.5	. .	. .	. .	. .	36 33.67	27.27	. .	.	5	47.115	20 6.97	9.78	9.43	37 0.94	15 46.2
111	9	59.2	12.	. .	4.1	. .	. .	. .	. .	. .	38 34.59	27.27	+0.01	.	1	42.49	48 58.53	9.58	11.09	39 1.87	44 39.2
112	9	. .	. .	. .	. .	. .	16.2	28.4	. .	. .	38 53.13	27.26	. .	.	3	40.983	35 18.22	9.53	10.31	39 20.39	30 58.1
113	6	. .	. .	21.2	33.2	44.7	. .	. .	. .	. .	40 33.11	27.26	−0.01	.	7	40.692	9 12.79	9.36	8.82	41 0.36	4 51.0
114	9	. .	. .	. .	. .	. .	. .	21.5	. .	. .	40 46.48	27.26	. .	.	5	38.107	25 17.06	9.34	9.73	41 13.74	20 56.1
115	8	. .	. .	. .	. .	. .	. .	. .	4.2	. .	41 11.94	27.26	. .	.	4	43.394	28 3.09	9.29	9.90	41 39.20	23 42.3
116	5	. .	. .	. .	53.9	5.2	. .	. .	. .	. .	42 53.74	27.26	. .	.	5	41.24	23 29.34	9.11	9.62	43 21.00	19 8.1
117	8	. .	. .	. .	. .	. .	. .	. .	33.5	. .	42 41.26	27.26	. .	.	3	38.38	36 47.98	9.14	10.40	43 8.52	32 27.5
118	9	48.5	0.2	11.4	. .	. .	. .	. .	. .	. .	48 23.37	27.24	. .	.	4	40.35	29 47.92	8.54	9.99	48 50.61	25 26.4
119	8	. .	. .	21.	. .	. .	. .	. .	. .	. .	47 32.59	27.25	+0.01	.	3	31.425	40 47.56	8.63	10.61	47 59.85	36 26.8
120	8	. .	. .	. .	. .	53.	. .	16.4	. .	. .	21 49 41.39	+27.24	. .	.	6	30.012	20 40.38	− 8.41	− 9.45	21 50 8.63	19 16 18.2

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848.	h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.	CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1848. h. m.	° ′ ″				″	″	in.	°	°

REMARKS.

(141) 87. *This may be 5 minutes.
(141) 108. Micrometer reading assumed as $37^r.759$ instead of $57^r.759$.
(141) 111. Transit over T. IV assumed to have been at $34^s.1$ instead of $4^s.1$.
(141) 120. Micrometer reading assumed as $31^r.012$ instead of $30^r.012$.

ZONE 142. AUGUST 24. MS. $D_0 = -19° 35' 30''$.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
1	8	31.	43.	55.	6.	18.	30.	41.5	. .	. .	22 39 6.36	+23.02	+0.01	III.	1	44.562	47 47.13	−10.61	− 7.06	22 39 29.39	20 23 34.8
2	11	45.	57.	9.	21.	. .	. .	. .	. .	. .	43 20.56	23.02	. .	IV.	2	48.170	39 53.63	10.42	6.59	43 43.58	20 15 40.6
3	9	. .	. .	. .	. .	22.5	34.5	46.	. .	. .	44 10.92	23.02	. .	VII.	2	42.590	14 1.34	10.38	5.04	44 33.94	19 49 46.8
4	8.9	. .	. .	. .	39.	51.	2.5	13.5	. .	. .	45 38.92	23.01	. .	VII.	5	43.200	22 21.60	10.32	5.52	46 1.93	19 58 7.4
5	10	. .	. .	. .	. .	. .	. .	56.	. .	. .	46 20.84	23.01	. .	VII.	4	39.060	30 32.16	10.29	6.01	46 43.85	20 6 18.5
6	10	. .	22.	33.5	. .	. .	. .	. .	. .	. .	48 45.27	23.01	. .	IV.	2	38.798	45 16.47	10.17	6.92	49 8.28	20 21 3.6
7	10	. .	. .	. .	. .	. .	2.	. .	. .	. .	49 38.60	23.01	−0.01	VII.	7	38.500	10 28.07	10.14	4.61	50 1.60	19 46 12.8
8	9	57.	. .	20.	31.6	43.5	. .	. .	. .	. .	22 52 31.83	23.00	. .	IV.	3	44.875	33 4.25	10.01	6.16	22 52 54.83	20 8 50.4
9	8	. .	. .	28.6	40.2	51.8	. .	. .	. .	. .	23 9 40.19	22.99	−0.01	IV.	7	47.028	5 34.54	9.38	4.48	23 9 3.17	19 41 18.4
10	8	. .	. .	0.0	12.	23.5	35.2	. .	. .	. .	10 11.79	22.99	−0.01	IV.	7	50.152	3 46.93	9.32	4.73	10 34.77	19 39 31.0
11	10	55.	6.8	18.6	30.2	. .	. .	. .	. .	. .	12 30.23	22.99	. .	IV.	4	44.458	27 26.44	9.25	5.82	12 53.22	20 3 11.5
12	10	. .	. .	. .	. .	40.	. .	. .	. .	. .	14 28.34	22.99	+0.01	V.	1	32.570	54 40.23	9.18	7.56	14 51.34	20 30 27.0
13	10	. .	. .	. .	. .	. .	. .	3.	. .	. .	15 27.86	22.99	. .	VII.	5	47.408	19 56.65	9.14	5.37	15 50.85	19 55 41.2
14	10	. .	29.	40.8	52.5	. .	. .	. .	. .	. .	17 52.47	22.98	. .	IV.	3	40.00	35 52.18	9.10	6.35	18 15.45	20 11 37.6
15	10	. .	23.5	. .	46.7	. .	. .	. .	. .	. .	23 22 46.82	+22.98	. .	IV.	2	42.396	43 12.54	− 8.92	− 6.82	23 23 9.80	20 18 58.3

ZONE 143. AUGUST 29. MAJ. $D_0 = -20° 10' 20''$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0
1	8	. .	. .	. .	. .	. .	62.2	14.2	. .	. .	23 19 38.81	+22.88	. .	VII.	5	44.347	21 42.09	− 8.76	− 9.46	23 20 1.69	20 32 20.3
2	9	14.4	26.4	38.3	49.9	. .	. .	. .	. .	. .	21 49.90	22.88	. .	IV.	1	42.11	49 11.62	8.71	11.22	22 12.78	59 51.6
3	7	. .	. .	. .	46.4	58.4	. .	. .	. .	. .	22 46.60	22.88	. .	V.	6	42.015	8 27.21	8.68	8.68	23 9.48	19 4.6
4	8	16.2	28.	39.8	51.2	. .	. .	. .	. .	. .	24 51.44	22.88	. .	.	2	40.551	44 16.09	8.62	10.91	25 14.32	54 55.6
5	8	. .	0.1	11.7	23.1	35.0	. .	. .	. .	. .	25 23.36	22.87	. .	VII., V.	2	37.454	46 2.39	8.61	11.02	25 46.23	56 42.0
6	8	. .	. .	. .	. .	. .	47.2	59.4	. .	. .	26 23.84	22.87	. .	VII., II.	1	41.918	49 17.94	8.58	11.22	26 46.71	59 57.7
7	8	. .	. .	24.8	36.	48.0	. .	. .	. .	. .	29 36.31	22.87	. .	IV.	6	38.557	16 20.48	8.49	9.13	29 59.18	26 58.1
8	.	. .	11.2	23.0	34.2	. .	. .	. .	. .	. .	23 32 34.53	+22.87	. .	.	5	39.043	24 45.03	− 8.42	− 9.66	23 32 57.40	20 35 23.1

ZONE 144. AUGUST 30. MS. $D_0 = -20° 32' 30''$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0
1	9	. .	. .	. .	. .	. .	2.	13.5	. .	. .	20 7 38.22	+22.64	+0.01	VII.	1	39.749	50 32.72	−13.45	− 9.22	20 8 0.87	21 23 25.4
2	8.9	. .	54.5	. .	17.	29.5	. .	. .	. .	. .	10 17.66	22.63	0.01	II.	1	36.975	52 8.41	13.19	9.33	10 40.30	25 0.9
3	10	. .	. .	. .	. .	. .	. .	5.	. .	. .	10 29.60	22.63	0.01	VII.	1	40.770	49 57.55	13.18	9.20	10 52.24	22 49.9
4	9	. .	. .	. .	. .	. .	1.5	13.5	. .	. .	11 38.00	22.63	+0.01	VII.	2	41.580	43 40.40	13.07	8.81	12 0.64	16 32.3
5	10	. .	. .	. .	16.5	. .	. .	. .	. .	. .	13 16.58	22.62	−0.01	IV.	7	40.470	9 20.44	12.92	6.79	13 39.19	42 10.2
6	9	. .	12.5	24.5	36.5	. .	. .	. .	. .	. .	14 24.50	22.61	. .	V.	4	44.182	27 35.92	12.79	7.83	14 47.11	0 26.5
7	9	. .	. .	. .	. .	. .	37.	48.8	. .	. .	15 13.36	22.61	+0.01	VII.	1	39.325	50 47.33	12.73	9.24	15 35.98	23 39.3
8	9.10	9.	20.5	32.5	. .	56.5	. .	. .	. .	. .	16 44.38	22.60	0.01	VI.	2	39.502	44 52.12	12.58	8.88	18 6.99	17 43.6
9	8.9	. .	31.	42.8	53.8	. .	. .	. .	. .	. .	19 54.32	22.59	0.01	II.	1	39.003	50 58.55	12.29	9.25	20 16.92	23 50.1
10	8.9	. .	12.	24.	36.	. .	. .	. .	. .	. .	21 35.77	22.59	0.01	II.	3	33.245	39 44.77	12.13	8.57	21 58.37	12 35.5
11	9	45.	56.8	8.5	. .	. .	. .	. .	. .	. .	24 20.35	22.57	+0.01	III.	1	38.150	51 28.01	11.88	9.31	24 42.93	24 19.2
12	9	. .	. .	. .	. .	2.5	13.8	25.5	. .	. .	24 50.37	22.57	. .	F. W.	.	40.060	29 57.92	11.83	8.00	25 12.94	2 47.8
13	9	. .	. .	10.5	22.5	. .	. .	. .	. .	. .	27 22.36	22.56	. .	IV.	4	34.332	33 15.24	11.60	8.17	27 44.92	6 5.0
14	9.10	. .	. .	. .	. .	7.5	19.8	31.5	. .	. .	27 56.04	22.56	. .	VII.	4	36.292	32 7.50	11.55	8.09	28 18.60	4 57.1
15	9	. .	. .	21.5	32.5	45.4	. .	. .	. .	. .	30 33.12	22.55	+0.01	V.	1	31.994	55 0.06	11.31	9.53	30 55.67	27 50.9
16	10	52.5	. .	17.	. .	. .	. .	. .	. .	. .	32 28.31	22.54	0.01	III.	2	34.545	47 42.95	11.14	9.05	32 50.86	20 33.1
17	10	33.	44.8	. .	. .	. .	. .	. .	. .	. .	34 8.43	22.53	+0.01	II.	2	34.204	47 54.61	11.00	9.06	34 30.97	20 44.7
18	10	. .	. .	. .	. .	. .	. .	39.	. .	. .	20 34 3.58	+22.53	−0.01	VII.	7	34.518	12 45.24	−11.01	− 7.00	20 34 26.10	20 45 33.2

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848.	h.	s.	s.	s.	s.	s.	° ′ ″	r.
Aug. 24,	20	+19.786	g 0.018	. .	− 0.429	− 0.192	0 0 3.13	40.052
29,	21	+19.686	l 0.002	. .	− 0.429	− 0.192	0 0 3.48	40.064
30,	19	+18.913	g 0.015	. .	− 0.429	− 0.192	0 0 3.99	40.060

INSTRUMENT READINGS.

	Date.			CIRCLE.						Barom.	Attached Thermom.	External Thermom.
				A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848.	h.	m.	° ′ ″				″	″	in.	°	°
Zone 142	Aug. 24,	22	39	300 5 54.8	59.5	1.	2.	59.32	59.32	30.250	70.	60.4
		23	22	. .	. .	. .	. .	. .	. .	30.226	77.	59.3
Zone 143	Aug. 29,	23	19	300 27 3.5	5.2	7.5	8.3	6.14	6.12			
Zone 144	Aug. 30,	20	7	300 5 3.8	5.6	9.9	11.	7.55	7.58	29.892	75.2	69.8
		20	40	. .	. .	. .	. .	. .	. .	29.892	75.2	69.5
		21	0	. .	. .	. .	. .	. .	. .	. .	. .	69.4
		21	40	. .	. .	. .	. .	. .	. .	29.882	75.	68.9
		22	0	. .	. .	. .	. .	. .	. .	29.882	73.	68.1

REMARKS.

(142) 3. Transit over T. V assumed to have been at 22ˢ.5 instead of 12ˢ.5, and horizontal thread assumed as 6 instead of 2.

(142) 9. Minutes of transit assumed as 8 instead of 9.

(143) 3. Micrometer thread assumed as 7 instead of 6.

(144) 6. Transits over T.'s III–V assumed to have been recorded over T.'s II–IV.

(144) 8. Minutes of transit assumed as 17 instead of 16.

ZONE 144. AUGUST 30. Ms. $D_0 = -20° 32' 30''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
19	8.9	. .	. .	35.	46.8	. .	. .	. .	. .	. .	20 35 46.76	+22.52	+0.01	IV.	1	35.370	53 3.80	−10.84	− 9.39	20 36 9.30	21 25 54.0
20	10	. .	. .	. .	. .	. .	. .	50.	. .	. .	36 14.65	22.52	. .	VII.	3	40.980	35 18.19	10.80	8.31	36 37.17	8 7.3
21	10	. .	. .	. .	. .	. .	. .	54.	. .	. .	37 18.64	22.52	. .	VII.	4	35.942	32 19.56	10.70	8.12	37 41.16	5 8.4
22	10	57.	. .	21.	. .	. .	. .	. .	. .	. .	39 32.56	22.51	+0.01	III.	2	35.390	47 13.85	10.51	9.04	39 55.08	21 20 3.4
23	10	. .	. .	36.	. .	. .	. .	. .	. .	. .	42 47.80	22.50	−0.01	III.	5	47.300	20 0.57	10.22	7.43	43 10.29	20 52 48.2
24	10	53.	. .	. .	. .	. .	. .	. .	. .	. .	48 28.43	22.48	. .	I.	3	38.764	36 34.52	9.72	8.37	48 50.91	21 9 22.6
25	10	10.	. .	. .	. .	. .	. .	. .	. .	. .	49 45.36	22.47	−0.01	I.	5	46.175	20 39.13	9.61	7.41	50 7.82	20 53 26.2
26	9	. .	2.8	14.5	26.	. .	. .	. .	. .	. .	50 26.19	22.47	. .	IV.	4	42.310	28 40.43	9.56	7.91	50 48.66	21 1 27.9
27	9	. .	. .	. .	. .	9.2	21.	. .	. .	. .	50 45.63	22.47	. .	VII.	4	39.202	30 27.26	9.53	7.99	51 8.10	21 3 14.8
28	9.10	45.	57.	. .	. .	. .	. .	. .	. .	. .	53 20.44	22.46	. .	III.	5	41.832	23 8.93	9.31	7.59	53 42.90	20 55 55.8
29	10	. .	. .	. .	. .	48.	. .	. .	. .	. .	53 36.27	22.46	. .	V.	4	42.580	28 31.11	9.28	7.90	53 58.73	21 1 18.3
30	9.10	. .	. .	. .	. .	. .	18.2	30.	. .	. .	54 54.58	22.45	+0.01	VII.	1	44.980	47 32.52	9.17	9.04	55 17.04	21 20 20.7
31	10	. .	. .	. .	17.	29.2	41.	. .	. .	. .	56 17.38	22.45	−0.01	V.	7	39.890	9 40.39	9.05	6.82	56 39.82	20 42 26.3
32	9	. .	. .	34.	46.2	. .	. .	. .	. .	. .	57 46.03	22.44	0.01	IV.	6	42.720	13 57.08	8.93	7.07	58 8.46	46 43.1
33	9.10	. .	. .	. .	. .	. .	28.	. .	. .	. .	58 4.53	22.44	0.01	VI.	7	44.224	17 11.02	8.90	7.00	58 26.96	39 56.9
34	10	. .	. .	. .	. .	. .	. .	29.	. .	. .	20 58 53.56	22.44	0.01	VII.	7	47.210	5 28.04	8.83	6.59	20 59 15.99	38 13.5
35	9	. .	. .	. .	19.8	32.	43.8	. .	. .	. .	21 0 20.16	22.43	−0.01	V.	6	40.642	15 8.63	8.72	7.13	21 0 42.58	47 54.5
36	9	. .	44.5	. .	8.	19.8	. .	. .	. .	. .	3 8.02	22.42	. .	II.	5	40.530	23 53.70	8.49	7.64	3 30.44	56 39.8
37	10	. .	40.	. .	3.5	. .	. .	. .	. .	. .	6 3.49	22.41	−0.01	III.	7	40.060	9 34.55	8.24	6.79	6 25.89	42 19.6
38	10	. .	. .	51.8	3.5	15.	. .	. .	. .	. .	6 3.51	22.41	0.01	VI.	7	41.115	8 58.12	8.24	6.75	6 25.91	41 43.1
39	10	. .	23.8	35.8	. .	. .	. .	. .	. .	. .	7 47.42	22.40	−0.01	II.	6	44.870	15 0.70	8.10	7.11	8 9.81	47 45.9
40	8.9	58.	10.	22.	33.5	. .	. .	. .	. .	. .	9 33.54	22.39	. .	I.	5	38.566	25 1.23	7.96	7.72	9 55.93	57 46.9
41	10	. .	. .	. .	. .	25.	37.	. .	. .	. .	10 13.42	22.39	−0.01	VI.	7	36.920	11 22.63	7.90	6.91	10 35.80	20 44 7.4
42	9.10	. .	. .	57.	8.5	. .	. .	. .	. .	. .	12 8.60	22.38	. .	IV.	1	33.050	54 23.71	7.76	9.52	12 30.98	21 27 11.0
43	10	. .	. .	. .	. .	. .	. .	34.5	. .	. .	12 59.13	22.38	+0.01	VII.	2	38.745	45 18.29	7.69	8.93	13 21.52	18 4.9
44	10	34.5	. .	. .	. .	. .	. .	. .	. .	. .	16 9.93	22.37	. .	I.	3	44.555	33 15.05	7.44	8.18	16 32.30	6 0.7
45	10	. .	. .	. .	28.5	. .	. .	. .	. .	. .	16 28.46	22.37	. .	IV.	4	41.550	29 6.61	7.42	7.94	16 50.83	1 51.0
46	10	. .	. .	23.	. .	. .	. .	. .	. .	. .	17 34.76	22.37	. .	III.	4	37.376	31 30.38	7.33	8.08	17 57.13	21 4 15.8
47	9.10	. .	. .	27.	. .	. .	. .	. .	. .	. .	18 38.80	22.36	. .	III.	6	33.77	19 5.36	7.25	7.37	19 1.16	20 51 50.0
48	10	. .	. .	. .	. .	. .	. .	14.6	. .	. .	18 39.21	22.36	. .	VII.	7	43.428	22 13.75	7.25	7.55	19 1.57	20 54 58.6
49	10	. .	20.8	. .	44.	. .	. .	. .	. .	. .	22 44.20	22.35	. .	IV.	2	46.65	40 45.99	6.93	8.65	23 6.55	21 13 31.6
50	.	. .	. .	. .	. .	. .	9.	. .	. .	. .	23 45.43	22.34	. .	F.W.	.	40.060	29 57.84	6.86	8.00	24 7.77	2 42.7
51	9.10	27.	39.5	. .	. .	. .	. .	. .	. .	. .	26 2.74	22.33	. .	.	3	43.520	33 50.83	6.69	8.22	26 25.07	21 6 35.7
52	9	. .	. .	. .	. .	. .	. .	40.	. .	. .	26 4.61	22.33	. .	VII.	5	43.520	22 10.58	6.68	7.55	26 26.94	20 54 54.8
53	10	. .	. .	. .	. .	. .	. .	34.5	. .	. .	26 59.14	22.33	. .	VII.	3	45.142	32 54.82	6.61	8.17	27 21.47	21 5 39.6
54	9.10	. .	. .	. .	. .	. .	11.	23.5	. .	. .	28 47.77	22.32	. .	VII.	3	44.27	33 24.86	6.48	8.19	29 10.09	21 6 9.5
55	9.10	36.	48.	59.8	11.5	. .	. .	. .	. .	. .	31 11.48	22.32	. .	IV.	5	45.10	21 16.38	6.30	7.49	31 33.80	20 54 0.2
56	10	. .	. .	. .	. .	0.5	. .	. .	. .	. .	32 48.77	22.31	+0.01	V.	2	45.490	41 25.92	6 19	8.70	33 11.09	21 14 10.8
57	9.10	. .	. .	0.	12.	24.5	. .	. .	. .	. .	34 12.16	22.31	. .	V.	3	45.170	32 54.07	6.09	8.17	34 34.47	21 5 38.3
58	10	43.5	55.	. .	. .	. .	. .	. .	. .	. .	36 18.62	22.30	−0.01	II.	6	40.062	15 28.54	5.94	7.14	36 40.91	20 48 11.6
59	10	47.5	59.5	. .	. .	. .	. .	. .	. .	. .	38 22.96	22.29	. .	III.	2	47.413	40 19.69	5.80	8.62	38 45.25	21 13 4.1
60	10	42.	54.	. .	. .	. .	. .	. .	. .	. .	40 17.40	22.29	−0.01	III.	5	50.878	17 57.33	5.66	7.29	40 39.68	20 50 40.3
61	9	. .	. .	. .	. .	18.	30.	. .	. .	. .	41 6.33	22.28	. .	VI.	2	51.750	37 50.20	5.61	8.47	41 28.61	21 10 34.3
62	8.9	. .	. .	. .	. .	. .	29.	. .	. .	. .	42 5.36	22.28	+0.01	VI.	2	44.040	42 15.79	5.54	8.74	42 27.65	21 15 0.1
63	9.10	. .	. .	. .	. .	19.5	. .	. .	. .	. .	44 7.82	22.27	−0.01	V.	6	48.415	10 40.88	5.40	6.87	44 30.08	20 43 23.2
64	8.9	. .	. .	. .	. .	14.	. .	38.	. .	. .	45 2.44	22.27	−0.01	VII.	6	49.910	10 23.62	5.34	6.77	45 24.70	20 43 5.7
65	9	. .	. .	. .	. .	. .	16.	28.	. .	. .	46 52.52	22.26	. .	VII.	3	41.41	35 3.38	5.22	8.30	47 14.78	21 7 47.9
66	10	. .	. .	. .	. .	. .	. .	27.	. .	. .	47 51.67	22.26	. .	VII.	2	44.952	41 44.25	5.15	8.70	48 13.93	21 14 28.1
67	9	. .	13.8	25.5	37.	. .	. .	. .	. .	. .	21 50 37.20	+22.25	−0.01	IV.	6	48.750	10 29.35	− 4.97	− 6.69	21 50 59.44	20 43 11.0

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848. h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848. h. m.	° ′ ″				″	″	in.	°	°

REMARKS.

(144) 33. Assuming micrometer thread 7.

(144) 39. Micrometer reading assumed as 40r.870 instead of 44r.870.

(144) 64. Micrometer reading assumed as 48r.910 instead of 49r.910.

ZONE 144. AUGUST 30. Ms. $D_0 = -20° 32′ 30″$—Continued.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
68	10	37.	. .	. .	. .	. .	. .	. .	. .	. .	21 52 12.44	+22.25	. .	I.	3	48.540	30 57.77	− 4.87	− 8.04	21 52 34.69	21 3 40.7
69	10	55.	. .	. .	. .	. .	. .	. .	. .	. .	55 30.32	22.24	−0.01	II.	5	52.065	17 15.37	4.67	7.26	55 52.55	20 49 57.3
70	9	. .	21.5	33.5	44.5	. .	. .	. .	. .	. .	21 55 44.96	+22.24	+0.01	IV.	3	40.585	35 32.03	− 4.65	− 8.36	21 56 7.21	21 8 15.0

ZONE 145. AUGUST 30. Ms. $D_0 = -20° 32′ 30″$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	10	. .	. .	. .	. .	58.	. .	. .	. .	. .	22 40 46.26	+22.12	. .	V.	4	39.505	30 23.92	− 7.73	− 4.00	22 41 8.38	21 3 5.6
2	9	. .	. .	. .	. .	. .	12.5	24.5	. .	. .	41 29.03	22.11	. .	VII.	4	36.845	31 48.45	7.67	4.10	41 51.14	21 4 30.2
3	10	35.	. .	. .	. .	. .	. .	. .	. .	. .	44 10.34	22.11	. .	I.	6	33.940	18 59.29	7.58	3.31	44 32.45	20 51 40.2
4	10	33.5	. .	. .	. .	. .	. .	. .	. .	. .	45 8.88	22.10	. .	I.	6	34.832	18 28.56	7.54	3.30	45 30.98	20 51 9.4
5	10	. .	. .	. .	36.	. .	. .	. .	. .	. .	45 35.98	22.10	. .	VI.	3	36.970	37 36.46	7.50	4.46	45 58.08	21 10 18.4
6	8.9	. .	. .	. .	5.	16.8	28.5	. .	. .	. .	47 5.01	22.10	. .	IV.	5	40.235	24 3.97	7.45	3.64	47 27.11	20 56 45.1
7	10	. .	. .	. .	. .	. .	. .	4.	. .	. .	47 28.62	22.10	+0.01	VII.	1	46.950	46 59.12	7.43	5.03	47 50.73	21 19 41.6
8	9	. .	. .	0.	12.	24.	. .	. .	. .	. .	49 12.00	22.09	. .	IV.	3	47.262	31 42.03	7.36	4.09	49 34.09	4 23.5
9	10	. .	. .	. .	. .	15.5	. .	. .	. .	. .	54 3.77	22.08	. .	V.	2	45.370	41 30.06	7.18	4.72	54 25.85	14 12.0
10	10	. .	. .	. .	. .	. .	26.5	38.5	. .	. .	55 2.96	22.08	+0.01	VII.	2	27.500	51 45.42	7.14	5.40	55 25.05	24 28.0
11	10	. .	. .	. .	0.	. .	. .	. .	. .	. .	57 0.04	22.08	. .	IV.	1	33.820	53 57.18	7.06	5.52	57 22.12	21 26 39.8
12	9.10	. .	. .	22.5	. .	45.8	. .	. .	. .	. .	58 34.23	22.07	−0.01	V.	7	43.153	7 48.01	7.01	2.60	22 58 56.29	20 40 27.6
13	10	. .	. .	. .	. .	53.5	. .	. .	. .	. .	22 59 41.77	22.07	+0.01	V.	1	38.425	51 18.53	6.96	5.36	23 0 3.85	21 24 0.8
14	9	40.5	52.5	4.3	. .	27.5	. .	. .	. .	. .	23 6 15.92	22.06	−0.01	V.	6	36.900	17 17.54	6.74	3.20	6 37.97	20 49 57.5
15	10	. .	56.5	8.	19.6	. .	. .	. .	. .	. .	8 19.80	22.06	. .	IV.	6	32.700	19 42.23	6.67	3.38	8 41.86	52 22.3
16	9	34.	46.	57.5	. .	. .	. .	. .	. .	. .	12 9.36	22.05	−0.01	III.	6	35.80	17 55.42	6.55	3.24	12 31.40	20 50 35.2
17	10	41.8	53.8	5.5	. .	. .	. .	. .	. .	. .	13 17.28	22.05	. .	III.	3	42.655	34 20.71	6.51	4.27	13 39.33	21 7 1.5
18	4	. .	. .	31.5	43.5	55.2	6.3	. .	. .	. .	14 43.26	22.05	. .	III.	6	28.090	22 21.01	6.47	3.52	15 5.31	20 55 1.0
19	9.10	. .	57.5	9.5	. .	. .	. .	. .	. .	. .	16 21.16	22.04	. .	III.	3	32.855	39 58.29	6.42	4.63	16 43.20	21 12 39.3
20	10	. .	. .	. .	. .	. .	59.	10.8	. .	. .	16 35.43	22.04	. .	VII.	4	33.040	33 59.52	6.41	4.25	16 57.47	6 40.2
21	10	39.	51.	. .	. .	. .	. .	. .	. .	. .	20 14.52	22.04	. .	III.	2	40.862	44 39.80	6.30	4.94	20 36.56	17 21.0
22	10	. .	. .	. .	. .	44.	. .	. .	. .	. .	21 32.27	22.04	. .	V.	3	41.830	34 49.12	6.27	4.31	21 54.31	21 7 29.7
23	10	. .	. .	. .	. .	. .	. .	26.5	. .	. .	21 51.12	22.04	. .	VII.	4	45.200	27 0.64	6.25	3.81	22 13.16	20 59 40.7
24	9.10	17.5	29.5	41.	. .	. .	. .	. .	. .	. .	24 52.88	22.03	. .	III.	5	43.760	22 2.52	6.18	3.49	25 14.91	54 42.2
25	10	. .	. .	. .	24.5	. .	48.	. .	. .	. .	25 24.48	22.03	. .	VI.	5	40.480	23 55.43	6.17	3.62	25 46.51	56 35.2
26	10	. .	. .	. .	. .	36.5	49.	. .	. .	. .	26 25.11	22.03	. .	VII.	4	45.040	27 6.15	6.15	3.82	26 47.14	20 59 46.1
27	10	52.	. .	. .	. .	. .	. .	. .	. .	. .	29 27.42	22.02	+0.01	I.	1	43.355	48 28.50	6.07	5.18	29 49.45	21 21 9.8
28	10	33.	44.5	. .	. .	. .	. .	. .	. .	. .	33 8.26	22.02	. .	III.	2	49.530	44 56.00	5.99	4.98	33 30.28	21 17 37.0
29	10	. .	. .	. .	. .	. .	. .	48.5	. .	. .	33 13.11	22.02	. .	VII.	5	44.400	21 40.26	5.99	3.46	33 35.13	20 54 19.7
30	9.10	0.5	. .	24.	. .	. .	. .	. .	. .	. .	35 35.84	22.01	. .	III.	3	44.122	33 30.17	5.94	4.21	35 57.85	21 6 10.3
31	9.10	. .	. .	. .	. .	47.5	59.3	. .	. .	. .	36 35.82	22.01	−0.01	VI.	6	45.332	12 27.00	5.91	2.89	36 57.82	20 45 5.8
32	9.10	43.	55.	. .	. .	. .	. .	. .	. .	. .	41 18.52	22.01	. .	II.	2	41.31	43 49.83	5.82	4.51	41 40.53	21 16 30.2
33	8.9	. .	3.	15.	. .	. .	. .	. .	. .	. .	42 26.65	22.00	. .	IV.	4	38.045	31 7.34	5.80	4.06	42 48.65	3 47.2
34	9.10	56.8	. .	20.5	. .	. .	. .	. .	. .	. .	23 45 32.21	+22.00	+0.01	III.	1	43.828	48 12.42	− 5.75	− 5.16	23 45 54.22	21 20 53.3

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848. h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.	CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1848. h. m.	° ′ ″				″	″	in.	°	°
Zone 145	Aug. 30, 22 40	300 5 6.5	3.8	7.6	6.6	6.09	6.12	29.884	74.	68.
	23 00	. .	. .	. .	. .	. .	. .	29.880	73.8	67.3
	23 45	. .	. .	. .	. .	. .	. .	29.884	73.5	67.2

REMARKS.

(144) 70. Hor. thread assumed as 3 instead of 1.

(145) 2. Transits over T.'s VI and VII assumed as $52^s.5$ and $4^s.5$ instead of $12^s.5$ and $24^s.5$, to agree with Arg. 248, 54, and 262, 23.

(145) 7. Micrometer reading assumed as $45^r.950$ instead of $46^r.950$.

(145) 21. Micrometer reading assumed as $39^r.862$ instead of $40^r.862$.

(145) 28. Micrometer thread assumed as 1 instead of 2.

Zone 146. September 1. Ms. $D_0 = -20° 9′ 50″$.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
1	9	. .	. .	. .	. .	. .	42.5	54.5	. .	. .	19 13 19.10	+22.14	. .	VII.	5	37.739	25 29.71	−20.65	− 9.75	19 13 41.24	20 35 50.1
2	9	. .	. .	. .	. .	53.	. .	. .	. .	. .	14 41.33	22.14	−0.01	VI.	6	34.045	18 55.80	20.51	9.38	15 3.46	29 13.7
3	9	. .	. .	. .	. .	. .	45.5	57.5	. .	. .	16 22.12	22.13	−0.01	VII.	6	38.572	16 19.73	20.34	9.24	16 44.24	26 39.3
4	9	. .	. .	. .	39.5	52.5	. .	. .	. .	. .	16 40.15	22.12	. .	VI.	3	32.650	40 5.27	20.31	10.60	17 2.28	50 26.2
5	9	. .	. .	. .	. .	. .	. .	54.5	. .	. .	17 19.25	22.12	+0.01	VII.	2	43.660	42 28.76	20.21	10.75	17 41.38	52 49.7
6	9	. .	. .	. .	. .	. .	45.5	57.5	. .	. .	18 22.10	22.12	. .	VII.	4	41.110	29 21.53	20.13	9.97	18 44.22	39 41.6
7	9	. .	. .	. .	. .	. .	17.8	29.8	. .	. .	21 54.40	22.10	. .	VII.	3	45.952	32 26.92	19.78	10.14	23 16.50	42 46.8
8	9	27.6	39.5	51.2	2.5	. .	. .	. .	. .	. .	27 2.80	22.07	−0.01	V.	6	43.985	13 13.48	19.26	9.06	27 24.86	23 31.8
9	9	. .	. .	. .	59.5	11.5	. .	. .	. .	. .	27 59.63	22.07	. .	V.	3	47.818	31 22.86	19.16	10.08	28 21.70	41 42.1
10	9	. .	. .	. .	20.5	. .	. .	. .	. .	. .	29 20.47	22.06	. .	IV.	4	43.188	28 10.19	19.03	9.91	29 42.53	38 29.1
11	9	. .	. .	. .	. .	. .	14.	. .	. .	. .	29 50.58	22.06	−0.01	VI.	6	43.672	13 24.18	18.98	9.06	30 12.63	23 42.2
12	9	. .	. .	. .	. .	2.5	14.5	. .	. .	. .	30 50.96	22.05	−0.01	VI.	6	47.920	10 57.85	18.88	8.93	31 13.00	21 15.7
13	9	. .	. .	. .	0.5	. .	. .	. .	. .	. .	32 0.47	22.05	. .	IV.	3	47.383	31 37.86	18.76	10.10	32 22.52	41 56.7
14	9	. .	. .	. .	. .	. .	41.5	53.5	. .	. .	32 18.12	22.05	−0.01	VII.	6	40.048	15 28.89	18.73	9.17	32 40.16	25 46.8
15	9	. .	. .	. .	37.5	0.5	. .	. .	. .	. .	33 37.66	22.04	. .	V.	5	42.522	22 45.17	18.60	9.60	33 59.70	33 3.4
16	9	. .	. .	. .	. .	. .	. .	48.	. .	. .	34 12.69	22.03	. .	VII.	5	46.300	20 34.81	18.54	9.47	34 34.72	30 52.8
17	9	. .	. .	. .	16.5	. .	. .	. .	. .	. .	37 16.48	22.02	. .	V.	5	34.840	27 9.78	18.23	9.83	37 38.50	37 27.8
18	8.9	. .	. .	. .	. .	9.5	22.5	. .	. .	. .	37 58.64	22.02	−0.01	VI.	7	49.355	4 14.28	18.16	8.55	38 20.65	20 14 31.0
19	9	. .	. .	. .	. .	. .	30.	. .	. .	. .	39 6.37	22.01	+0.01	VI.	1	35.600	52 55.77	18.05	11.34	39 28.39	21 3 15.2
20	9	. .	. .	. .	. .	14.	. .	. .	. .	. .	42 2.30	22.00	+0.01	V.	2	43.852	42 22.35	17.76	10.73	42 24.31	20 52 40.8
21	9.10	. .	. .	. .	2.5	. .	26.5	. .	. .	. .	43 2.74	21.99	. .	VI.	4	44.640	27 20.06	17.64	9.86	43 24.73	37 37.6
22	9	. .	. .	. .	. .	. .	25.	37.	. .	. .	46 1.60	21.98	. .	VII.	3	43.043	34 7.13	17.37	10.25	46 23.58	44 24.8
23	9	. .	. .	. .	. .	. .	14.5	26.5	. .	. .	46 51.08	21.98	+0.01	VII.	2	43.043	42 50.01	17.29	10.75	47 13.07	53 8.0
24	9	. .	. .	. .	. .	. .	. .	25.5	. .	. .	47 50.21	21.97	0.01	VII.	1	43.66	48 18.00	17.20	11.08	48 12.19	20 58 36.3
25	9	. .	. .	. .	. .	. .	56.5	7.	. .	. .	49 32.29	21.96	+0.01	VII.	1	40.343	50 12.26	17.03	11.20	49 54.26	21 0 30.5
26	8.9	. .	. .	12.5	24.6	36.	. .	. .	. .	. .	51 24.45	21.95	−0.01	V.	7	47.075	5 32.90	16.84	8.61	51 46.39	20 15 48.4
27	9	. .	14.5	26.5	37.8	. .	. .	. .	. .	. .	55 38.02	21.93	+0.01	IV.	1	46.035	46 56.42	16.44	10.98	55 59.96	57 13.8
28	9	. .	. .	30.6	42.5	. .	. .	. .	. .	. .	56 42.39	21.93	+0.01	IV.	1	45.438	47 16.98	16.33	11.00	57 4.33	57 34.3
29	9	. .	. .	. .	. .	36.6	. .	57.5	. .	. .	19 57 23.56	21.92	. .	VII.	5	40.800	23 44.27	16.26	9.65	19 57 45.48	20 34 0.2
30	8.9	50.5	. .	13.8	. .	. .	. .	. .	. .	. .	20 0 25.64	21.91	+0.01	III.	1	38.575	51 13.37	15.97	11.27	20 0 47.56	21 1 30.6
31	9	. .	. .	. .	. .	16.5	. .	. .	. .	. .	2 4.79	21.90	. .	.	3	46.80	31 57.92	15.82	10.12	2 26.69	20 42 13.9
32	9	. .	. .	. .	. .	. .	6.	18.8	. .	. .	2 43.00	21.90	. .	F. W.	.	40.050	29 58.18	15.76	10.00	3 4.90	40 13.9
33	9	. .	55.6	7.	. .	. .	. .	. .	. .	. .	4 18.86	21.89	−0.01	II.	6	49.890	9 49.99	15.62	8.83	4 40.74	20 4.4
34	9	. .	. .	. .	. .	16.5	28.	40.	. .	. .	5 4.66	21.89	. .	VII.	3	48.350	31 4.31	15.55	10.08	5 26.55	41 19.9
35	9	36.	48.5	59.5	. .	. .	. .	. .	. .	. .	7 11.47	21.88	+0.01	III.	5	50.099	18 24.16	15.36	9.34	7 33.34	28 38.9
36	9	. .	. .	. .	. .	. .	49.5	. .	. .	. .	7 26.03	21.88	. .	VI.	5	43.060	22 26.56	15.34	9.58	7 47.91	32 41.5
37	9	. .	. .	. .	. .	. .	35.	47.	. .	. .	8 11.62	21.87	−0.01	VII.	6	41.092	14 52.92	15.24	9.13	8 33.48	25 7.3
38	8.9	. .	7.5	18.	. .	. .	. .	. .	. .	. .	10 30.32	21.86	0.01	I.	6	45.410	12 24.19	15.02	8.98	10 52.17	22 38.2
39	9	. .	. .	39.5	. .	. .	. .	. .	. .	. .	10 51.28	21.86	0.01	III.	6	45.600	12 17.85	14.99	8.98	11 13.13	22 31.8
40	9	. .	. .	. .	. .	36.6	48.5	. .	. .	. .	11 25.00	21.86	−0.01	VI.	6	40.562	15 11.31	14.94	9.15	11 46.85	25 25.4
41	9.10	. .	55.	. .	. .	. .	. .	. .	. .	. .	13 18.48	21.85	. .	II.	4	36.620	31 56.33	14.77	10.12	13 40.33	42 11.2
42	9.10	. .	25.	. .	. .	. .	. .	. .	. .	. .	14 48.49	21.85	. .	II.	4	35.710	32 27.68	14.63	10.15	15 10.34	42 42.5
43	9	. .	31.6	43.5	. .	. .	. .	. .	. .	. .	15 55.15	21.84	. .	II.	5	37.275	25 45.83	14.53	9.76	16 16.99	36 0.1
44	9	28.	40.5	52.5	. .	. .	. .	. .	. .	. .	18 3.76	21.83	−0.01	III.	7	39.165	10 5.38	14.34	8.86	18 25.58	20 18.6
45	9	. .	. .	49.	. .	. .	. .	. .	. .	. .	19 0.71	21.82	. .	III.	3	37.170	37 29.65	14.24	10.45	19 22.53	47 44.3
46	9	. .	. .	. .	. .	. .	. .	53.5	. .	. .	19 18.26	21.82	+0.01	VII.	2	46.439	40 53.03	14.21	10.65	19 40.09	51 7.9
47	9	44.	56.	8.	. .	. .	. .	. .	. .	. .	21 19.52	21.81	. .	III.	3	39.166	36 20.90	14.03	10.39	21 41.33	46 35.3
48	9	. .	. .	. .	. .	. .	54.5	6.	. .	. .	21 30.86	21.81	−0.01	VII.	6	40.990	14 56.44	14.01	9.14	21 52.66	25 9.6
49	9	. .	. .	. .	. .	. .	. .	55.	. .	. .	20 22 19.64	+21.81	−0.01	VII.	7	43.350	7 41.00	−13.95	− 8.72	20 22 41.44	20 17 53.7

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848. h.	s.	s.	s.	s.	s.	° ′ ″	r.
Sept. 1, 20	. .	. .	. .	− 0.429	− 0.192	0 0 3.48	40.050

REMARKS.

(146) 7. Minutes of transit assumed as 22 instead of 21.

(146) 15. Time of transit over T. V assumed as 50ˢ.5 instead of 0ˢ.5.

INSTRUMENT READINGS.

	Date.	CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1848. h. m.	° ′ ″				″	″	in.	°	°
Zone 146	Sept. 1, 19 13	300 27 35.	40.8	44.6	44.8	41.47	41.30	29.950	78.	71.7
	19 40	. .	. .	. .	. .	. .	. .	29.956	77.8	71.1
	20 0	. .	. .	. .	. .	. .	. .	29.964	77.2	70.8
	20 40	. .	. .	. .	. .	. .	. .	29.966	76.6	69.8
	21 00	. .	. .	. .	. .	. .	. .	. .	. .	70.3
	21 20	. .	. .	. .	. .	. .	. .	29.970	76.2	68.9
	21 20	. .	. .	. .	. .	. .	. .	29.972	76.	68.3
	21 40	. .	. .	. .	. .	. .	. .	. .	. .	67.6

Zone 146. Septemeer 1. Ms. D$_0$ = −20° 9′ 50″—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
50	9	. .	. .	. .	. .	. .	57.	. .	. .	. .	20 23 33.55	+21.80	−0.01	VI.	6	35.690	17 59.13	−13.83	− 9.31	20 23 55.34	20 28 12.3
51	9	. .	. .	. .	. .	. .	. .	38.	. .	. .	26 2.72	21.79	. .	VII.	4	41.015	29 24.81	13.61	9.97	26 24.51	39 38.3
52	9	. .	. .	31.	43.	. .	. .	. .	. .	. .	27 42.92	21.78	−0.01	IV.	7	38.470	10 29.33	13.47	8.88	28 4.69	20 41.7
53	9	. .	. .	. .	. .	. .	46.	58.	. .	. .	28 22.62	21.78	−0.01	VII.	7	36.133	11 49.61	13.40	8.95	28 44.39	22 2.0
54	9	51.	2.5	. .	. .	. .	. .	. .	. .	. .	30 26.14	21.77	. .	II.	4	45.833	26 38.97	13.23	9.81	30 47.91	36 52.0
55	9	30.	42.	54.	. .	. .	. .	. .	. .	. .	34 5.52	21.75	. .	III.	3	41.032	35 16.61	12.87	10.32	34 27.27	45 29.8
56	10	. .	19.5	31.5	. .	. .	. .	. .	. .	. .	46 43.07	21.70	−0.01	III.	6	44.390	12 59.53	11.84	9.03	47 4.76	23 10.4
57	10	. .	. .	. .	53.	. .	. .	. .	. .	. .	47 52.98	21.69	. .	IV.	4	47.172	25 52.95	11.75	9.77	48 14.67	36 4.5
58	10	. .	. .	. .	. .	51.	. .	. .	. .	. .	48 39.30	21.69	. .	V.	4	45.95	26 35.02	11.69	9.80	49 0.99	36 46.5
59	10	. .	. .	. .	. .	. .	. .	35.	. .	. .	48 59.72	21.69	. .	VII.	4	42.700	28 26.76	11.65	9.92	49 21.41	38 38.3
60	10	. .	. .	. .	. .	. .	. .	21.	. .	. .	49 45.70	21.69	+0.01	VII.	1	42.580	48 55.20	11.59	11.13	50 7.40	59 7.9
61	10	. .	. .	. .	. .	. .	30.	. .	. .	. .	51 6.52	21.68	. .	VI.	5	41.605	23 16.67	11.48	9.62	51 28.20	33 27.8
62	10	. .	. .	. .	. .	. .	22.5	34.5	. .	. .	51 59.11	21.68	. .	VII.	5	47.702	19 46.51	11.41	9.42	52 20.79	29 57.3
63	10	. .	. .	. .	21.	33.	45.8	. .	. .	. .	53 21.51	21.67	+0.01	VI.	1	49.408	45 0.13	11.30	10.90	53 43.19	55 12.3
64	7.8	55.6	7.6	19.	30.6	. .	. .	. .	. .	. .	55 30.80	21.66	−0.01	IV.	6	38.198	16 32.85	11.14	9.24	55 52.45	26 43.2
65	9	. .	. .	. .	. .	30.6	. .	54.5	. .	. .	56 19.06	21.66	. .	VII.	4	36.200	32 10.67	11.07	10.13	56 40.72	42 21.9
66	9	. .	. .	. .	. .	59.	11.5	. .	. .	. .	57 47.62	21.65	. .	VI.	3	39.078	36 23.85	10.95	10.39	58 9.27	46 35.2
67	9	. .	. .	. .	. .	. .	19.	31.	. .	. .	20 58 55.60	21.65	. .	VII.	4	43.54	27 57.83	10.87	9.90	20 59 17.25	38 8.6
68	9	. .	. .	. .	. .	33.	44.8	. .	. .	. .	21 0 21.27	21.64	. .	VI.	3	37.100	37 31.98	10.75	10.46	21 0 42.91	47 43.2
69	9	. .	45.6	57.6	. .	. .	. .	. .	. .	. .	3 9.22	21.63	+0.01	II.	2	36.928	46 20.79	10.53	11.00	3 30.86	56 32.3
70	9	. .	41.5	. .	53.5	. .	16.8	. .	. .	. .	4 53.32	21.63	. .	II.	4	36.485	32 0.99	10.39	10.14	5 14.95	42 11.5
71	9	. .	41.	53.	4.5	. .	. .	. .	. .	. .	6 4.56	21.62	. .	IV.	4	38.152	31 3.66	10.30	10.09	6 26.18	41 14.0
72	9	13.	25.	37.	. .	. .	. .	. .	. .	. .	7 48.52	21.62	. .	I.	3	37.25	37 26.68	10.16	10.46	8 10.14	47 37.3
73	9	. .	4.	. .	27.6	. .	. .	. .	. .	. .	8 27.51	21.61	−0.01	IV.	6	41.118	14 52.26	10.11	9.12	8 49.11	25 1.5
74	10	27.6	. .	. .	. .	. .	. .	. .	. .	. .	10 2.77	21.60	−0.01	I.	6	47.310	11 18.73	10.01	8.91	10 24.36	21 27.6
75	9	. .	. .	2.5	14.5	. .	. .	. .	. .	. .	10 14.35	21.60	. .	IV.	3	43.51	33 51.27	10.00	10.25	10 35.95	44 1.5
76	9	. .	. .	14.	25.5	. .	. .	. .	. .	. .	11 25.66	21.60	−0.01	IV.	6	37.392	17 0.61	9.92	9.25	11 47.25	27 9.8
77	9	. .	9.5	20.5	. .	. .	. .	. .	. .	. .	12 32.58	21.59	. .	III.	6	34.710	19 7.42	9.84	9.37	12 54.17	29 16.6
78	9	. .	. .	. .	14.5	. .	. .	. .	. .	. .	13 14.46	21.59	. .	V.	4	40.701	23 51.36	9.78	9.64	13 36.05	34 0.8
79	9	. .	8.5	20.	. .	. .	. .	. .	. .	. .	14 31.82	21.58	−0.01	III.	7	40.152	9 31.38	9.69	8.79	14 53.39	19 39.9
80	9	. .	. .	. .	23.5	. .	. .	. .	. .	. .	15 23.57	21.58	−0.01	IV.	7	39.455	9 55.41	9.62	8.81	15 45.14	20 3.8
81	9	. .	17.5	. .	. .	. .	. .	. .	. .	. .	18 41.07	21.57	+0.01	II.	2	39.59	44 49.09	9.39	10.92	19 2.65	54 59.4
82	9	. .	. .	28.5	40.	. .	3.5	. .	. .	. .	18 40.04	21.57	. .	VI.	2	45.85	41 13.44	9.39	10.68	19 1.61	51 23.5
83	9	9.5	21.5	. .	. .	. .	. .	. .	. .	. .	20 44.80	21.56	−0.01	II.	6	40.928	14 58.71	9.24	9.13	21 6.35	25 7.1
84	9	40.	52.	4.	. .	. .	. .	. .	. .	. .	24 15.52	21.55	+0.01	IV.	1	46.590	46 37.30	8.99	11.01	24 37.08	56 47.3
85	8	. .	41.	53.	. .	. .	. .	. .	. .	. .	26 4.61	21.54	. .	III.	3	41.840	34 48.77	8.87	10.30	26 26.15	44 57.9
86	8.9	. .	. .	. .	6.5	19.	. .	. .	. .	. .	26 6.91	21.54	+0.01	V.	2	40.182	44 28.77	8.87	10.90	26 28.46	54 38.5
87	10	. .	. .	. .	. .	. .	49.5	. .	. .	. .	27 26.02	21.53	. .	VI.	5	40.635	23 50.09	8.78	9.64	27 47.55	33 58.5
88	10	. .	. .	. .	57.5	9.	. .	. .	. .	. .	28 57.48	21.52	−0.01	V.	7	44.188	7 12.35	8.67	8.67	29 19.00	17 19.7
89	9	. .	. .	. .	. .	. .	28.	40.	. .	. .	30 4.62	21.52	−0.01	VII.	7	43.30	7 42.72	8.59	8.70	30 26.13	17 50.0
90	8.9	. .	37.5	49.5	1.5	. .	. .	. .	. .	. .	33 1.23	21.51	. .	II.	5	49.00	19 1.94	8.40	9.37	33 22.74	29 9.7
91	8.9	53.	5.	17.	. .	. .	52.5	. .	. .	. .	34 28.59	21.51	−0.01	I.	7	52.96	2 9.97	8.28	8.40	34 50.09	12 16.6
92	9	. .	. .	. .	18.	30.	42.	. .	. .	. .	35 18.25	21.50	. .	VI.	4	44.302	27 31.70	8.25	9.87	35 39.75	37 39.8
93	9	. .	. .	. .	. .	31.5	43.	. .	. .	. .	36 19.62	21.50	. .	VI.	3	36.775	37 43.18	8.18	10.47	36 41.12	47 51.8
94	9	. .	. .	46.	58.	. .	. .	. .	. .	. .	38 57.94	21.49	−0.01	IV.	7	46.212	6 2.65	8.01	8.60	39 19.42	16 9.3
95	9	43.	55.	7.	. .	. .	. .	. .	. .	. .	40 18.52	21.49	+0.01	III.	1	47.285	46 13.34	7.92	10.99	40 40.02	56 22.3
96	9	38.	50.	2.	. .	. .	. .	. .	. .	. .	42 13.52	21.48	+0.01	I.	2	42.64	43 3.89	7.80	10.80	42 35.01	53 12.5
97	10	. .	. .	. .	. .	. .	. .	25.	. .	. .	41 49.67	21.48	−0.01	VII.	6	42.145	14 16.66	7.83	9.09	42 11.14	24 23.6
98	9	. .	. .	. .	. .	. .	. .	9.	. .	. .	21 42 33.70	+21.48	. .	VII.	5	42.145	22 57.97	− 7.78	− 9.59	21 42 55.18	20 33 5.3

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848. h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848. h. m.	° ′ ″				″	″	in.	°	°
Zone 146	Sept. 1, 22	. . . .	. . .	. .	. .	. .	. .	. .	. .	69.

REMARKS.

(146) 70. Transit at $41^s.5$ assumed to have been over T. III instead of T. II.

(146) 77. Micrometer reading assumed as $33^r.710$ instead of $34^r.710$.

(146) 78. Micrometer thread assumed as 5 instead of 4.

ZONE 146. SEPTEMBER 1. Ms. D_0=—20° 9′ 50″—Continued.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s,			r.	′ ″	″	″	h. m. s.	° ′ ″
99	9	. .	. .	. .	52.5	. .	. .	. .	. .	. .	21 43 52.51	+21.47	. .	IV.	5	45.000	21 19.82	− 7.70	− 9.49	21 44 13.98	20 31 27.0
100	9	. .	40.5	. .	3.5	. .	. .	. .	. .	. .	45 3.73	21.47	. .	IV.	3	44.130	32 55.46	7.62	10.17	45 25.20	43 3.2
101	10	. .	. .	. .	. .	. .	60.5	. .	. .	. .	47 37.10	21.46	−0.01	VI.	6	48.585	10 34.94	7.46	8.87	47 58.55	20 41.3
102	10	. .	. .	. .	. .	. .	10.	. .	. .	. .	47 46.58	21.46	0.01	VI.	6	46.622	11 42.56	7.45	8.93	48 8.03	21 48.9
103	9	35.	47.5	. .	. .	. .	. .	. .	. .	. .	50 10.50	21.45	−0.01	III.	7	40.805	9 8.88	7.30	8.77	50 31.94	19 15.0
104	9	. .	. .	. .	. .	38.5	49.6	. .	. .	. .	50 26.43	21.45	. .	VII.	3	44.885	33 3.68	7.29	10.21	50 47.88	43 11.2
105	10	56.	. .	20.	. .	. .	. .	. .	. .	. .	54 31.52	21.44	. .	III.	2	48.293	39 49.37	7.04	10.61	54 52.96	49 57.0
106	10	38.6	50.6	0.2	. .	. .	. .	. .	. .	. .	57 13.28	21.43	. .	III.	5	47.332	19 59.47	6.88	9.42	57 34.71	30 5.8
107	9	. .	24.6	36.6	48.5	. .	. .	. .	. .	. .	21 58 48.31	+21.42	−0.01	IV.	7	43.215	7 45.89	− 6.80	− 8.70	21 59 9.72	20 17 51.4
ZONE 147. SEPTEMBER 1. Ms. D_0=−18° 54′ 50′.																					
1	8	. .	. .	. .	. .	54.	6.	17.6	. .	. .	23? 8 42.53	+21.20	. .	VII.	1	47.120	46 18.83	− 6.47	− 8.96	23 9 3.73	19 41 24.3
2	8	. .	. .	2.5	14.	26.	. .	. .	. .	. .	9 14.16	21.20	. .	V.	1	50.259	44 30.89	6.45	8.87	9 35.36	39 36.2
3	9	. .	. .	. .	12.	24.	36.	. .	. .	. .	11 12.35	21.19	. .	VI.	4	44.546	27 23.31	6.40	7.86	11 33.54	22 27.6
4	9	. .	. .	30.	42.	53.8	. .	. .	. .	. .	12 41.94	21.19	. .	V.	4	45.790	26 40.53	6.35	7.81	13 3.13	21 44.7
5	8.9	. .	29.5	41.5	52.8	. .	. .	. .	. .	. .	15 52.90	21.18	. .	I.	3	40.552	35 32.96	6.27	8.33	16 14.08	30 37.6
6	10	22.	. .	. .	. .	. .	. .	. .	. .	. .	18 57.04	21.18	. .	I.	2	40.353	44 22.69	6.17	8.84	19 18.22	39 27.7
7	10	16.6	. .	40.	. .	. .	. .	. .	. .	. .	20 51.62	21.18	. .	III.	2	45.612	41 21.72	6.12	8.67	21 12.80	36 26.5
8	10	. .	. .	. .	34.	46.	. .	. .	. .	. .	21 34.20	21.18	. .	V.	4	48.155	25 19.07	6.10	7.74	21 55.38	20 22.9
9	10	. .	. .	. .	24.	36.5	48.5	. .	. .	. .	22 24.67	21.17	. .	VI.	3	40.67	35 29.00	6.08	8.33	22 45.84	30 33.4
10	10	. .	. .	. .	22.	. .	. .	. .	. .	. .	25 21.99	21.17	. .	IV.	5	37.86	25 25.78	6.01	7.74	25 43.16	20 29.5
11	9.10	. .	. .	. .	1.5	13.	. .	. .	. .	. .	26 1.41	21.17	. .	V.	4	42.25	28 42.48	5.97	7.93	27 22.58	23 46.4
12	10	13.	25.	. .	. .	. .	. .	. .	. .	. .	31 48.20	21.16	. .	III.	2	40.762	44 8.79	5.86	8.83	32 9.36	39 13.5
13	9	. .	. .	. .	25.	. .	. .	. .	. .	. .	32 25.04	21.16	. .	IV.	1	34.040	53 49.60	5.85	9.39	32 46.20	48 54.8
14	10	. .	. .	. .	. .	. .	38.5	. .	. .	. .	33 15.18	21.16	. .	VI.	5	35.002	27 4.13	5.84	7.83	33 36.34	22 7.8
15	8	29.	41.	52.8	. .	. .	. .	. .	. .	. .	36 4.19	21.15	−0.01	I.	7	36.955	11 21.32	5.78	6.94	36 25.33	6 24.0
16	10	. .	. .	. .	26.5	38.5	. .	. .	. .	. .	36 26.70	21.15	. .	V.	2	44.908	41 45.98	5.77	8.71	36 47.85	36 50.5
17	8.9	. .	29.	41.	52.5	. .	. .	. .	. .	. .	37 52.47	21.15	. .	IV.	3	40.765	35 25.83	5.74	8.32	38 13.62	30 29.9
18	10	. .	. .	. .	. .	. .	. .	6.6	. .	. .	38 31.61	21.15	. .	VII.	1	47.905	40 2.55	5.73	8.60	38 52.76	35 6.9
19	9	1.5	13.	24.5	. .	. .	. .	. .	. .	. .	40 36.32	21.14	+0.01	III.	1	44.62	47 45.13	5.69	9.06	40 57.47	42 49.9
20	10	. .	. .	37.	. .	. .	. .	. .	. .	. .	41 48.67	21.14	. .	III.	5	48.68	19 13.04	5.68	7.38	42 9.81	14 16.1
21	9	. .	. .	. .	41.	53.	45.	. .	. .	. .	42 41.42	21.14	−0.01	VII.	6	45.592	12 17.94	5.66	6.99	43 2.55	7 20.6
22	9	. .	. .	. .	34.5	46.5	. .	. .	. .	. .	44 34.68	21.14	. .	VI.	4	42.56	28 31.72	5.63	7.92	44 55.82	23 35.3
23	9	. .	. .	. .	. .	. .	47.	. .	. .	. .	45 23.78	21.14	−0.01	VI.	7	38.11	10 41.63	5.62	6.90	45 44.91	5 44.2
24	10	. .	. .	. .	. .	. .	3.	. .	. .	. .	46 51.39	21.14	. .	VI.	3	34.010	39 18.42	5.57	8.57	47 12.53	34 22.6
25	10	38.	50.	1.5	13.6	. .	. .	. .	. .	. .	50 13.24	21.13	. .	IV.	6	34.792	16 46.83	5.55	7.24	50 34.37	11 49.6
26	9	33.	45.	57.	. .	. .	. .	. .	. .	. .	51 8.33	21.13	. .	I.	5	34.530	27 20.27	5.54	7.86	51 29.46	22 23.7
27	9	. .	24.5	36.5	. .	. .	. .	. .	. .	. .	51 47.95	21.13	. .	III.	5	38.164	25 15.28	5.53	7.73	52 9.08	20 18.5
28	9	20.8	32.5	44.3	55.8	. .	. .	. .	. .	. .	56 55.80	21.12	−0.01	IV.	7	47.149	5 30.35	5.48	6.60	57 16.91	0 32.4
29	10	. .	. .	. .	. .	. .	. .	1.	. .	. .	23 57 26.00	21.12	. .	VII.	3	49.639	30 19.94	5.48	8.04	23 57 47.12	25 23.5
30	10	. .	. .	50.	. .	13.	. .	. .	. .	. .	0 0 1.50	21.12	. .	V.	2	50.820	38 22.32	5.45	8.52	0 0 22.62	33 26.3
31	10	. .	. .	. .	. .	. .	22.	34.5	. .	. .	0 59.08	21.12	. .	VII.	3	40.82	35 23.72	5.45	8.33	1 20.20	30 27.5
32	10	. .	. .	. .	. .	5.	. .	. .	. .	. .	0 53.40	21.12	. .	V.	5	39.250	24 37.88	5.45	7.70	1 14.52	19 41.0
33	9	23.	35.	47.5	. .	. .	. .	. .	. .	. .	2 58.48	21.12	. .	IV.	4	48.485	25 7.72	5.44	7.73	3 19.60	20 10.9
34	9	. .	. .	. .	. .	47.	59.	. .	. .	. .	3 35.52	21.12	. .	V.	4	38.44	30 53.71	5.43	8.08	3 56.64	25 57.2
35	9	. .	. .	. .	. .	38.	50.	. .	. .	. .	4 26.54	21.12	. .	VII.	4	45.300	26 57.21	5.43	7.82	4 47.66	22 0.5
36	10	. .	. .	. .	. .	40.	. .	. .	. .	. .	0 5 28.41	+21.11	. .	V.	5	45.130	21 15.32	− 5.42	− 7 48	0 5 49.52	19 16 18.2

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848.	h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.	CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1848. h. m.	° ′ ″				″	″	in.	°	°
Zone 147	Sept. 1, 23 8	301 42 30.	35.8	36.5	39.5	35.60	35.45			
	23 40	. .	. .	. .	. .	. .	. .	29.978	73.8	66.7
	0	. .	. .	. .	. .	. .	. .	29.980	73.5	66.
	0 20	. .	. .	. .	. .	. .	. .	. .	. .	65.7
	0 40	. .	. .	. .	. .	. .	. .	29.984	72.8	64.9
	1	. .	. .	. .	. .	. .	. .	29.986	72.9	63.9

REMARKS.

(146) 100. Micrometer reading assumed as 45r.130 instead of 44r.130.

(147) 11. Minutes of transit assumed as 27 instead of 26.

(147) 18. Micrometer thread assumed as 2 instead of 1.

(147) 24. Transit over T. V assumed to have been recorded over T. VI.

Zone 147. September 1. Ms. $D_{\circ}=-18^{\circ}\ 54'\ 50''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
									.		h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
37	10	. .	. .	. .	. .	26.	37.5	. .	. .	. .	0 6 14.29	+21.11	. .	VJI.	4	45.565	26 48.09	− 5.42	− 7.81	0 6 35.40	19 21 51.3
38	9	. .	. .	19.	31.	42.5	. .	. .	. .	. .	9 30.90	21.11	. .	V.	6	49.582	10 0.68	5.41	6.84	9 52.01	5 2.9
39	8.9	54.	6.	17.5	29.5	. .	. .	. .	. .	. .	15 29.25	21.11	. .	IV.	1	43.980	48 7.20	5.40	9.11	15 50.36	43 11.7
40	9	. .	31.	43.	54.5	. .	. .	. .	. .	. .	16 54.47	21.11	. .	IV.	5	42.32	22 52.15	5.40	7.58	17 15.58	17 55.1
41	10	. .	. .	. .	. .	. .	. .	35.5	. .	. .	16 0.46	21.11	. .	VII.	6	36.752	17 22.44	5.40	7.25	16 21.57	12 25.1
42	8.9	. .	. .	. .	26.5	. .	50.	. .	. .	. .	18 26.56	21.10	. .	VI.	3	39.489	36 9.69	5.40	8.40	18 47.66	31 13.5
43	9	. .	. .	31.	43.	54.5	. .	. .	. .	. .	22 42.83	21.10	. .	V.	4	36.890	31 47.11	5.41	8.13	23 3.93	26 50.6
44	9	. .	48.	59.6	. .	22.8	. .	. .	. .	. .	24 11.24	21.10	. .	V.	7	43.999	7 53.31	5.42	6.74	24 32.34	2 55.5
45	10	. .	. .	. .	. .	. .	. .	24.	. .	. .	24 49.02	21.10	. .	VII.	3	39.993	35 52.22	5.42	8.39	25 10.12	30 56.0
46	9	52.	4.	16.	. .	. .	. .	. .	. .	. .	27 27.32	21.10	. .	III.	4	43.290	28 6.65	5.44	7.90	27 48.42	23 10.0
47	9	. .	. .	. .	. .	. .	49.	0.5	. .	. .	26 25.60	21.10	. .	VII.	5	47.585	19 50.57	5.44	7.40	26 46.70	14 53.4
48	10	21.5	. .	45.	. .	. .	. .	. .	. .	. .	30 56.58	21.10	. .	III.	5	40.252	24 3.36	5.46	7.65	31 17.68	19 6.5
49	10	15.5	28.	. .	. .	. .	. .	. .	. .	. .	34 50.92	21,10	. .	II.	4	38.260	30 59.84	5.51	8.08	35 12.02	26 3.4
50	10	35.5	47.3	59.5	10.5	. .	. .	. .	. .	. .	40 10.70	21.09	. .	IV.	1	43.140	48 36.14	5.57	9.13	40 31.79	43 40.8
51	9	18.	30.	42.	. .	. .	. .	. .	. .	. .	40 53.32	21.09	. .	III.	4	44.095	26 30.03	5.57	7.79	41 14.41	21 33.4
52	10	. .	. .	40.5	52.5	. .	. .	. .	. .	. .	42 52.30	21.09	. .	IV.	3	40.115	35 48.22	5.62	8.35	43 13.39	30 52.2
53	10	. .	. .	. .	43.	55.	. .	. .	. .	. .	43 43.18	21.09	. .	V.	3	40.795	35 24.78	5.63	7.62	44 4.27	30 28.0
54	10	. .	36.	48.	59.6	. .	. .	. .	. .	. .	44 59.49	21.09	. .	IV.	4	43.225	28 8.91	5.65	7.88	45 20.58	23 12.4
55	8.9	. .	40.	52.	3.5	. .	. .	. .	. .	. .	47 3.47	21.09	. .	I.	4	47.76	25 32.48	5.69	7.75	47 24.56	20 35.9
56	9	. .	. .	. .	. .	19.	31.	. .	. .	. .	48 7.50	21.09	. .	VI.	2	49.002	39 24.87	5.70	8.59	48 28.59	34 29.2
57	10	30.5	. .	54.	. .	. .	. .	. .	. .	. .	51 5.58	21.09	. .	III.	4	49.708	24 25.57	5.77	7.69	51 26.67	19 29.0
58	9	48.	0.	11.8	23.5	. .	. .	. .	. .	. .	54 23.45	21.09	. .	IV.	2	41.680	43 37.19	5.84	8.82	54 44.54	38 41.8
59	9	42.5	54.5	6.	17.6	. .	. .	. .	. .	. .	56 17.63	21.09	. .	IV.	4	44.938	27 9.90	5.89	7.83	56 38.72	22 13.6
60	9	. .	. .	. .	. .	. .	21.5	33.5	. .	. .	56 58.36	21.09	. .	VII.	6	45.465	12 22.32	5.90	8.69	57 19.45	7 26.9
61	10	. .	. .	. .	. .	39.	. .	. .	. .	. .	0 58 27.39	+21.09	. .	V.	2	42.402	43 12.30	− 5.93	− 8.80	0 58 48.48	19 38 17.0

Zone 148. September 2. Maj. $D_{\circ}=-22^{\circ}\ 40'\ 30''$.

1	8	. .	. .	. .	. .	. .	26.5	. .	. .	. .	18 50 2.46	+21.55	+0.01	.	2	36.22	46 45.27	−25.42	−11.17	18 50 24.02	23 27 51.9
2	8	. .	. .	. .	. .	. .	2.	. .	. .	. .	50 38.04	21.55	. .	.	4	32.28	34 25.94	25.36	10.31	50 59.59	15 31.6
3	8	. .	. .	. .	. .	35.	. .	. .	. .	. .	51 23.10	21.54	. .	.	5	41.588	23 17.36	25.26	9.53	51 44.64	4 22.2
4	8	. .	. .	. .	. .	. .	21.5	. .	. .	. .	51 57.47	21.54	+0.01	.	2	39.348	44 57.53	25.19	11.04	52 19.02	23 26 3.8
5	5	. .	. .	. .	. .	. .	37.2	. .	. .	. .	52 13.37	21.53	−0.01	.	6	44.19	13 6.44	25.16	8.85	52 34.89	22 54 10.4
6	7	. .	. .	. .	19.7	. .	. .	. .	. .	. .	54 19.75	21.52	−0.01	.	6	41.86	14 26.70	24.92	8.94	54 41.26	22 55 30.6
7	7	. .	. .	. .	. .	1.0	13.	. .	. .	. .	54 49.10	21.52	. .	.	5	37.514	25 37.69	24.86	9.70	55 10.62	23 6 42.2
8	8	. .	12.7	24.3	36.1	. .	. .	. .	. .	. .	56 36.30	21.51	. .	.	5	42.058	23 1.18	24.65	9.51	56 57.81	4 5.3
9	8	. .	. .	. .	. .	18.	30.2	. .	. .	. .	57 6.12	21.51	+0.01	.	1	45.03	47 31.03	24.60	11.21	57 27.64	23 28 36.8
10	8	. .	. .	. .	. .	. .	. .	27.	. .	. .	57 51.06	21.51	. .	.	6	38.23	16 31.74	24.51	9.46	58 12.57	22 57 35.7
11	6	. .	. .	7.	18.2	30.8	. .	. .	. .	. .	18 59 18.66	21.50	+0.01	.	2	40.76	44 8.88	24.34	10.99	18 59 40.17	23 25 14.2
12	7	. .	. .	. .	. .	21.0	33.2	. .	. .	. .	19 0 9.13	21.49	+0.01	.	2	40.29	44 25.07	24.24	11.01	19 0 30.63	25 30.3
13	9	. .	23.0	. .	46.4	. .	. .	. .	. .	. .	2 46.62	21.48	. .	.	5	33.98	27 39.43	23.94	9.84	3 8.10	8 43.2
14	8	. .	. .	. .	. .	17.0	29.0	. .	. .	. .	3 5.06	21.48	. .	.	3	40.09	35 49.08	23.90	10.40	3 26.54	16 53.4
15	9	. .	. .	. .	. .	42.5	. .	. .	. .	. .	3 30.60	21.48	. .	.	5	44.488	21 37.44	23.85	9.42	3 52.08	2 40.7
16	7	. .	. .	. .	. .	46.2	58.	. .	. .	. .	4 34.18	21.47	. .	.	4	40.28	29 50.36	23.73	9.99	4 55.65	10 54.1
17	9	. .	. .	. .	. .	. .	. .	. .	36.	. .	4 42.40	21.47	. .	.	3	36.465	37 53.39	23.71	10.54	5 3.87	18 57.6
18	9	. .	. .	. .	25.7	38.2	. .	. .	. .	. .	7 26.00	21.46	+0.01	.	2	34.518	47 43.90	23.40	11.24	7 47.47	28 48.5
19	9	. .	. .	. .	. .	27.5	39.2	. .	. .	. .	8 15.42	21.45	. .	.	4	41.005	29 25.35	23.30	9.96	8 36.87	10 28.6
20	9	. .	. .	. .	. .	22.	33.5	. .	. .	. .	19 9 9.81	+21.45	. .	.	3	40.567	35 32.62	−23.20	−10.39	19 9 31.26	23 16 36.2

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848. h.	s.	s.	s.	s.	s.	° ′ ″	r.
Sept. 2, 21	+17.264	g 0.033	. .	− 0.429	− 0.192	0 0 1.28	40.051

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848. h. m.	° ′ ″				″	″	in.	°	°
Zone 148	Sept. 2, 18 50	297 57 3.2	5.6	9.5	9.4	6.93	6.92	30.072	77.0	71.5
	19	. .	. .	. .	. .	. .	. .	. .	. .	70.6
	19 20	. .	. .	. .	. .	. .	. .	. .	. .	70.3
	19 31	3.7	7.0	10.2	10.0	7.74	7.72			
	19 42	. .	. .	. .	. .	. .	. .	30.080	75.8	69.2
	20 0	. .	. .	. .	. .	. .	. .	. .	. .	68.8
	20 20	. .	. .	. .	. .	. .	. .	30.076	75.0	68.3
	20 40	. .	. .	. .	. .	. .	. .	. .	. .	67.8

REMARKS.

(147) 44. Micrometer reading assumed as $42^{r}.999$ instead of $43^{r}.999$.

(147) 51. Micrometer reading assumed as $46^{r}.095$ instead of $44^{r}.095$, to agree with Arg. 319, 54.

ZONE 148. SEPTEMBER 2. MAJ. $D_0 = -22° 40' 30''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a^1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
21	9	. .	. .	. .	23.0	34.7	. .	. .	. .	. .	19 10 22.95	+21.44	−0.01	.	6	43.277	13 37.89	−23.06	− 8.87	19 10 44.38	22 54 39.8
22	8	. .	. .	. .	17.5	29.8	. .	. .	. .	. .	11 17.69	21.44	. .	.	3	35.254	38 35.67	22.95	10.59	11 39.13	23 19 39.2
23	9	. .	. .	11.5	. .	35.1	. .	. .	. .	. .	12 23.30	21.43	. .	.	3	38.580	36 41.09	22.83	10.46	12 44.73	17 44.4
24	8	. .	. .	21.	33.4	. .	. .	. .	. .	. .	12 33.15	21.43	. .	.	3	42.678	34 19.94	22.81	10.30	12 54.58	15 23.0
25	10	. .	. .	. .	51.	4.2	. .	. .	. .	. .	13 51.64	21.42	+0.01	.	2	45.91	41 11.47	22.65	10.78	14 13.07	22 14.9
26	9	. .	. .	. .	. .	. .	3.4	. .	. .	. .	14 39.40	21.42	. .	.	3	33.29	39 43.21	22.56	10.68	15 0.82	20 46.4
27	8	. .	46.	. .	. .	. .	. .	. .	. .	. .	15 9.99	21.42	+0.01	.	2	36.746	46 27.16	22.51	11.16	15 31.42	27 30.8
28	7	. .	. .	. .	. .	54.	6.3	. .	. .	. .	14 42.20	21.42	. .	.	3	35.164	38 38.77	22.56	10.59	15 3.62	23 19 41.9
29	8	. .	37.	49.0	0.5	12.7	. .	. .	. .	. .	18 0.79	21.40	−0.01	.	6	43.112	13 43.57	22.18	8.87	18 22.18	22 54 44.6
30	7	. .	. .	. .	. .	52.4	4.7	. .	. .	. .	18 40.62	21.40	. .	.	4	41.20	29 18.66	22.10	9.95	19 2.02	23 10 20.7
31	10	. .	. .	. .	. .	. .	. .	58.5	. .	. .	19 22.56	21.40	−0.01	VII.	6	37.80	16 46.29	22.02	9.09	19 43.95	22 57 47.4
32	7	. .	. .	. .	18.4	31.	. .	. .	. .	. .	22 18.75	21.38	+0.01	.	2	41.965	43 27.37	21.69	10.94	22 40.14	23 24 30.0
33	7	. .	. .	. .	. .	15.3	27.4	39.2	. .	. .	23 3.57	21.37	. .	.	5	43.42	22 14.25	21.61	9.86	23 24.94	3 15.7
34	10	. .	. .	. .	. .	27.5	. .	. .	. .	. .	24 15.59	21.37	. .	.	3	38.038	36 59.75	21.47	9.68	24 36.96	18 0.9
35	9	. .	. .	. .	. .	22.4	34.5	. .	. .	. .	25 10.47	21.36	+0.01	.	1	40.838	49 55.42	21.38	11.39	25 31.84	23 30 58.2
36	9	. .	. .	31.	43.0	. .	. .	. .	. .	. .	26 43.04	21.36	−0.01	.	7	41.35	8 50.12	21.20	8.35	27 4.39	22 49 49.7
37	8	. .	. .	. .	. .	. .	31.5	43.	. .	. .	27 7.34	21.35	. .	VII.	4	44.204	27 34.92	21.15	9.83	27 28.69	23 8 35.9
38	8	. .	. .	. .	. .	. .	. .	. .	18.	30.	30 24.38	21.34	. .	.	5	42.248	22 54.63	20.76	9.51	30 45.72	3 54.9
39	8	. .	. .	. .	. .	. .	. .	. .	. .	10.	31 4.34	21.33	. .	.	5	42.842	22 34.16	20.71	9.48	31 25.67	3 34.4
40	10	. .	. .	. .	. .	. .	. .	61.0	. .	. .	33 25.10	21.32	+0.01	.	2	41.307	43 49.77	20.46	10.96	33 46.43	24 51.2
41	8	. .	. .	66.	. .	. .	. .	41.7	. .	. .	36 18.08	21.31	+0.01	.	1	47.09	46 20.07	20.24	11.19	35 39.40	27 21.5
42	7	. .	49.2	1.0	. .	. .	. .	. .	. .	. .	36 13.02	21.31	. .	.	4	37.362	31 30.87	20.15	10.11	36 34.33	12 31.1
43	8	. .	. .	. .	. .	. .	12.	24.3	. .	. .	37 48.23	21.30	. .	.	4	42.14	28 46.29	19.98	9.92	38 9.53	9 46.2
44	8	. .	. .	. .	. .	22.	. .	46.0	. .	. .	38 10.08	21.30	. .	.	4	41.006	29 25.35	19.94	9.96	38 31.38	10 25.2
45	8	. .	. .	. .	. .	. .	. .	. .	57.4	. .	39 3.84	21.29	+0.01	.	2	35.050	47 25.58	19.84	11.21	39 25.14	28 26.6
46	7	. .	. .	45.5	57.4	9.2	. .	33.5	. .	. .	40 57.42	21.28	. .	.	4	43.27	28 7.36	19.64	9.87	41 18.70	9 6.9
47	6	. .	. .	. .	30.5	43.0	54.7	. .	. .	. .	43 30.79	21.27	+0.01	.	1	38.828	51 4.67	19.37	11.48	43 52.07	23 32 5.5
48	9	. .	. .	. .	. .	56.8	8.8	. .	. .	. .	44 44.96	21.26	−0.01	.	7	38.372	10 32.68	19.24	8.66	45 6.21	22 51 30.6
49	9	. .	58.	10.	21.8	. .	. .	. .	. .	. .	47 21.87	21.25	. .	.	5	37.974	25 21.85	18.97	9.68	47 43.12	23 6 20.5
50	7	. .	. .	. .	. .	33.	45.	. .	. .	. .	47 21.02	21.25	+0.01	.	2	36.872	46 22.81	18.98	11.15	47 42.28	27 22.9
51	9	. .	. .	. .	. .	. .	. .	59.4	. .	. .	48 23.52	21.25	. .	.	3	34.792	38 51.32	18.87	10.62	48 44.77	19 50.8
52	10	. .	. .	. .	. .	. .	. .	0.0	. .	. .	49 24.06	21.24	. .	.	6	32.068	20 3.76	18.76	9.31	49 45.30	1 1.8
53	8	. .	. .	. .	32.0	44.	. .	. .	. .	. .	51 32.04	21.23	. .	.	3	44.56	33 15.10	18.55	10.23	51 53.27	14 13.9
54	6	. .	. .	55.2	7.1	18.8	31.2	. .	. .	. .	52 7.10	21.22	. .	.	4	43.965	27 43.42	18.49	9.84	52 28.32	8 41.8
55	.	. .	. .	60.7	12.0	24.	. .	. .	. .	. .	54 12.23	21.21	+0.01	.	3	45.83	41 14.23	18.28	10.78	54 33.45	22 13.3
56	6	53.	. .	. .	. .	41.0	53.0	. .	. .	. .	29.04	21.21	−0.01	.	5	48.66	19 48.20	−18.25	− 9.30	54 50.24	23 0 45.8
57	.	. .	. .	. .	. .	. .	61.0	. .	. .	. .	54 37.07	21.21	. .	.	.	. .	. .	. .	. .	54 58.28	
58	9	. .	. .	. .	. .	. .	. .	42.4	. .	. .	56 6.48	21.20	. .	.	5	43.448	22 13.03	−18.09	− 9.46	56 27.68	23 3 10.6
59	9	. .	10.5	23.0	34.2	. .	. .	. .	. .	. .	19 59 34.50	21.19	. .	.	4	46.09	26 30.22	17.75	9.76	19 59 55.69	7 27.7
60	9	. .	. .	. .	. .	. .	. .	40.2	. .	. .	20 0 4.32	21.18	. .	.	3	37.50	37 18.04	17.70	10.51	20 0 25.50	18 16.2
61	8	3.3	15.0	27.0	38.7	51.0	2.9	14.3	. .	. .	3 38.89	21.17	+0.01	.	2	39.79	44 42.30	17.37	11.05	4 0.07	25 40.7
62	7	. .	. .	. .	59.4	. .	23.5	. .	. .	. .	4 59.45	21.16	. .	.	3	35.19	38 37.88	17.23	10.60	5 20.61	23 19 35.7
63	.	. .	. .	. .	. .	. .	. .	59.7	. .	. .	7 23.75	21.15	−0.01	.	6	41.23	14 48.14	17.01	8.94	7 44.89	22 55 44.1
64	7	. .	. .	. .	22.2	34.1	46.4	. .	. .	. .	10 22.27	21.13	. .	.	4	38.82	30 40.64	16.72	10.05	10 43.40	23 11 37.4
65	8	35.5	47.4	59.4	11.0	. .	. .	. .	. .	. .	12 11.27	21.12	. .	.	4	32.918	34 3.96	16.56	10.28	12 32.39	23 15 0.8
66	6	. .	3.	14.7	26.3	38.8	50.7	. .	. .	. .	13 26.74	21.12	−0.01	.	7	42.515	8 10.00	16.45	8.48	13 47.85	22 49 4.9
67	8	. .	. .	34.	46.	58.2	. .	. .	. .	. .	14 46.06	21.11	. .	.	4	37.590	31 23.02	16.33	10.10	15 7.17	23 12 19.4
68	9	. .	3.0	14.7	26.5	39.	. .	. .	. .	. .	15 26.77	21.11	. .	.	5	43.128	22 24.32	16.27	9.47	15 47.88	3 20.1
69	9	. .	. .	. .	41.2	53.2	. .	. .	. .	. .	20 16 41.24	+21.10	. .	.	5	40.973	23 38.55	−16.16	− 9.56	20 17 2.34	23 4 34.3

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848.	h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848. h. m.	° ′ ″				″	″	in.	°	°
Zone 148	Sept. 2, 21 0	3.8	7.3	10.7	10.4	8.07	8.05	30.076	74.	67.4
	21 20	. .	. .	. .	. .	. .	. .	. .	. .	67.4
	21 40	3.8	7.5	11.3	11.1	8.45	8.42	30.082	73.0	66.9
	22 0	. .	. .	. .	. .	. .	. .	30.080	73.0	66.0

REMARKS.

(148) 41. Transit over T. VI assumed to have been recorded over T. VII, and minutes of transit as 35 instead of 36.

(148) 55. Micrometer thread assumed as 2 instead of 3.

(148) 56. Micrometer reading assumed as 47ʳ.66 instead of 48ʳ.66.

Zone 148. September 2. Maj. $D_0 = -22° 40' 30''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
70	8	. .	. .	. .	. .	. .	14.	26.0	. .	. .	20 17 50.10	+21.10	. .	.	5	44.415	21 39.98	−16.06	− 9.42	20 18 11.20	23 2 35.5
71	7	. .	. .	. .	. .	8.4	20.5	32.4	. .	. .	18 56.47	21.09	+0.01	.	1	42.038	49 14.11	15.96	11.36	19 17.57	23 30 11.4
72	6	. .	. .	. .	21.	32.8	45.	. .	. .	. .	20 21.06	21.08	−0.01	.	7	35.538	12 10.33	15.83	8.76	20 42.13	22 53 4.9
73	6	. .	. .	14.	. .	. .	. .	. .	51.	3.3	20 25.93	21.08	. .	.	3	33.72	39 28.51	15.83	10.67	20 47.01	23 20 25.0
74	7	. .	. .	. .	. .	. .	. .	. .	. .	. .	21 57.66	21.08	−0.01	.	6	33.638	19 9.93	15.77	9.25	21 18.73	0 5.0
75	8	. .	. .	. .	. .	41.5	53.2	. .	. .	. .	22 29.48	21.07	−0.01	.	6	33.265	19 22.78	15.64	9.26	22 50.54	0 17.7
76	6	. .	. .	. .	. .	. .	. .	. .	. .	. .	22 29.50	21.07	. .	.	4	35.297	32 42.01	15.55	10.19	22 50.57	13 37.8
77	8	. .	. .	2.8	14.5	26.5	. .	. .	. .	. .	27 14.59	21.05	. .	.	4	35.430	32 37.43	15.22	10.18	27 35.64	23 13 32.8
78	7	. .	. .	. .	. .	47.3	59.7	11.4	. .	. .	28 35.58	21.05	−0.01	.	6	38.738	16 48.69	15.10	9.08	28 56.62	22 57 42.9
79	10	. .	. .	. .	2.0	14.0	. .	. .	. .	. .	30 2.04	21.04	. .	.	3	41.580	34 57.75	14.98	10.35	30 23.08	23 15 53.1
80	7	. .	. .	. .	46.8	59.2	11.3	. .	. .	. .	30 47.13	21.03	. .	.	2	47.88	40 3.62	14.91	10.71	31 8.16	20 59.2
81	9	. .	. .	. .	. .	. .	27.4	. .	. .	. .	32 3.39	21.03	+0.01	.	2	44.625	41 55.63	14.80	10.84	32 24.43	22 51.3
82	9	. .	. .	. .	. .	. .	. .	37.4	. .	. .	33 1.49	21.02	. .	.	4	42.35	28 38.79	14.72	9.91	33 22.51	9 33.4
83	9	. .	. .	. .	. .	. .	. .	39.1	. .	. .	33 3.22	21.02	+0.01	.	2	44.668	41 54.01	14.72	10.84	33 24.25	23 22 49.6
84	6	. .	. .	. .	. .	. .	43.0	55.2	. .	. .	34 19.20	21.02	−0.01	.	6	35.015	18 22.49	14.58	9.19	34 40.21	22 59 16.3
85	10	. .	56.	7.5	19.4	31.3	. .	. .	. .	. .	36 19.52	21.01	. .	.	5	34.173	27 36.32	14.43	9.43	36 40.53	23 8 30.2
86	10	. .	. .	. .	. .	. .	. .	. .	35.7	. .	36 42.14	21.01	. .	.	1	45.14	47 26.67	14.40	11.24	37 3.15	28 22.3
87	6	34.	46.2	8.0	9.2	22.2	34.	. .	. .	. .	39 9.92	21.00	+0.01	.	2	43.277	42 42.18	14.18	10.90	39 30.93	23 37.3
88	6	39.	51.0	3.	14.	. .	38.	. .	. .	. .	39 14.56	21.00	. .	.	3	39.883	35 56.22	14.17	10.41	39 35.56	16 50.8
89	9	. .	. .	. .	50.8	. .	15.0	. .	. .	. .	40 50.94	20.98	. .	.	5	42.157	22 57.77	14.05	9.51	41 11.92	23 3 51.3
90	9	. .	. .	. .	33.4	45.4	57.4	. .	. .	. .	44 33.50	20.97	−0.01	.	6	34.888	18 26.87	13.71	9.20	44 54.46	22 59 19.8
91	8	. .	. .	47.2	59.	. .	. .	. .	. .	. .	45 59.10	20.96	+0.01	.	2	40.772	44 8.47	13.59	11.00	46 20.07	23 25 3.1
92	8.9	. .	37.2	49.1	60.4	12.6	. .	. .	. .	. .	48 0.83	20.95	+0.01	.	1	39.148	50 53.66	13.42	11.49	48 21.79	31 48.6
93	8	21.2	33.	45.2	56.4	8.	. .	. .	. .	. .	50 56.74	20.94	. .	.	3	39.60	36 5.96	13.17	10.42	51 17.68	16 59.6
94	8	. .	. .	50.	1.5	13.2	. .	. .	. .	. .	51 1.56	20.94	. .	.	3	34.658	38 56.20	13.17	10.63	51 22.50	19 50.0
95	8	. .	. .	. .	12.0	24.0	35.3	. .	. .	. .	52 11.79	20.93	+0.01	.	2	36.539	46 34.28	13.07	11.18	52 32.73	27 28.5
96	10	. .	. .	. .	. .	. .	. .	24.5	. .	. .	52 48.59	20.93	. .	.	4	41.852	28 55.94	13.02	9.93	53 9.52	9 48.9
97	7	. .	. .	. .	35.5	48.0	59.7	. .	. .	. .	54 35.77	20.92	. .	VII.	4	35.241	32 43.68	12.86	10.19	54 56.69	13 36.7
98	10	. .	. .	. .	. .	. .	. .	26.4	. .	. .	55 50.48	20.91	. .	.	5	39.120	24 42.12	12.76	9.63	56 11.39	23 5 34.5
99	8	20.0	32.1	43.5	55.5	7.5	19.4	31.6	. .	. .	58 55.66	20.90	−0.01	.	6	40.55	15 11.83	12.50	8.97	20 59 16.55	22 56 3.3
100	8	. .	. .	. .	. .	. .	. .	23.2	. .	. .	20 59 47.24	20.90	+0.01	.	1	38.98	50 59.43	12.43	11.49	21 0 8.15	23 31 53.4
101	8	. .	. .	. .	. .	10.	23.	. .	. .	. .	21 0 58.58	20.89	. .	.	4	45.197	27 0.98	12.33	9.79	1 19.47	7 53.1
102	7	. .	6.4	. .	30.	42.	54.0	. .	. .	. .	1 30.11	20.89	. .	.	5	40.054	24 10.20	12.29	9.60	1 51.00	5 2.1
103	11	. .	. .	. .	. .	17.0	. .	. .	. .	. .	3 5.08	20.88	. .	.	4	42.84	28 22.14	12.16	9.89	3 25.96	9 14.2
104	7	. .	1.4	. .	. .	37.	. .	. .	. .	. .	4 25.22	20.87	. .	.	2	45.244	41 34.41	12.03	10.83	4 46.09	22 27.3
105	7	. .	. .	15.4	. .	40.0	51.5	. .	. .	. .	4 27.66	20.87	. .	.	4	42.423	28 36.54	12.03	9.90	4 48.53	9 28.5
106	9	. .	. .	. .	. .	. .	. .	7.5	. .	. .	5 31.56	20.87	+0.01	.	1	42.886	48 44.90	11.96	11.35	5 52.44	29 38.2
107	9	. .	. .	. .	. .	. .	. .	49.2	. .	. .	6 13.29	20.87	. .	.	4	43.958	27 43.41	11.90	9.84	6 34.16	23 8 35.2
108	8	. .	. .	. .	. .	54.8	6.6	18.8	. .	. .	7 42.84	20.86	−0.01	.	6	39.223	15 57.54	11.78	9.01	8 3.69	22 56 48.3
109	11	. .	. .	. .	33.8	. .	. .	. .	. .	. .	10 33.86	20.85	−0.01	.	7	34.722	12 38.44	11.57	8.78	10 54.70	22 53 28.8
110	8	. .	21.2	33.2	44.8	57.0	. .	. .	. .	. .	11 45.04	20.84	. .	.	6	31.724	20 15.85	11.45	9.32	12 5.88	23 1 6.6
111	9	. .	. .	53.2	5.0	. .	. .	. .	. .	. .	13 5.09	20.83	. .	.	6	30.554	20 56.16	11.34	9.37	13 25.92	1 46.9
112	9	. .	. .	. .	. .	. .	43.2	. .	. .	. .	13 19.21	20.83	. .	.	3	34.081	39 16.00	11.31	10.67	13 40.04	20 8.0
113	5	. .	. .	51.	2.	15.0	. .	. .	. .	. .	14 2.66	20.83	. .	.	3	37.203	37 28.53	11.27	10.53	14 23.49	18 20.3
114	5	. .	. .	. .	. .	23.2	35.2	47.2	. .	. .	15 11.26	20.82	+0.01	.	2	43.022	42 16.51	11.17	10.87	15 32.09	23 8.5
115	9	. .	49.2	1.0	13.	. .	. .	. .	. .	. .	17 13.00	20.82	. .	.	4	47.042	25 57.42	11.01	9.72	17 33.82	6 48.2
116	3	9.2	21.	33.	44.2	. .	. .	20.5	. .	. .	16 44.74	20.82	. .	.	5	42.781	22 36.27	10.98	9.49	18 5.56	3 26.7
117	10	. .	. .	31.3	43.2	. .	. .	. .	. .	. .	19 43.20	20.81	. .	.	3	35.658	38 21.76	10.80	10.59	20 4.01	19 13.2
118	10	. .	. .	. .	52.	4.7	. .	. .	. .	. .	21 19 52.39	+20.80	. .	.	3	37.158	37 30.09	−10.79	−10.57	21 20 13.19	23 18 21.4

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848.	h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.		CIRCLE.						Barom.	Attached Thermom.	External Thermom.
			A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848.	h. m.	° ′ ″				″	″	in.	°	°

REMARKS.

(148) 73. Observations of transit over threads 11 and 12 assumed to belong to next star.

(148) 78. Micrometer reading assumed as 37r.738 instead of 38r.738.

(148) 83. Declination 9′ discordant from Argelander 234, 7, and 311, 87.

(148) 85. Micrometer reading assumed as 44r.173 instead of 34r.173.

(148) 87. Time of transit over T. III assumed as 58s instead of 8s.

(148) 114. Micrometer reading assumed as 44r.022 instead of 43r.022.

(148) 116. Minutes of transit assumed as 17 instead of 16.

Zone 148. September 2. Maj. $D_\circ = -22^\circ\ 40'\ 30''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
119	10	. .	. .	. .	. .	. .	37.2	48.8	. .	. .	21 21 13.04	+20.80	+0.01	.	2	40.345	44 23.07	−10.69	−11.02	21 21 33.85	23 25 14.8
120	10	. .	. .	. .	. .	41.5	52.3	64.	. .	. .	22 28.68	20.79	. .	.	4	34.958	32 53.66	10.58	10.20	22 49.47	13 44.4
121	7	. .	. .	. .	. .	. .	52.7	4.0	. .	. .	23 28.42	20.79	. .	.	3	39.150	36 21.47	10.51	10.45	23 49.21	23 17 12.4
122	9	. .	. .	. .	. .	. .	. .	10.4	. .	. .	28 34.43	20.77	−0.01	.	7	41.458	8 46.15	10.11	8.51	28 55.19	22 49 34.8
123	9	. .	. .	. .	. .	. .	. .	. .	1.8	. .	29 8.16	20.77	. .	.	3	43.180	34 2.07	10.07	10.28	29 28.93	23 14 52.4
124	8	. .	. .	. .	. .	16.3	. .	. .	. .	. .	31 4.45	20.76	−0.01	.	7	40.92	9 4.94	9.92	8.53	31 25.20	22 49 53.4
125	9	. .	. .	. .	. .	. .	25.	36.0	. .	. .	32 0.52	20.75	+0.01	.	2	36.442	46 37.51	9.85	11.19	32 21.28	23 27 28.6
126	7	. .	51.	3.0	14.1	26.8	. .	. .	. .	. .	37 14.70	20.73	. .	.	4	32.93	34 3.54	9.54	10.28	36 35.43	14 53.4
127	9	. .	. .	43.4	55.6	. .	19.2	31.3	. .	. .	37 55.39	20.73	. .	.	2	40.921	29 28.28	9.42	9.96	38 16.12	23 10 17.7
128	8	18.7	30.6	. .	. .	. .	. .	. .	. .	. .	39 54.40	20.72	−0.01	.	7	42.22	8 20.16	9.27	8.48	40 15.11	22 49 7.9
129	8	. .	. .	5.2	17.1	. .	. .	. .	. .	. .	40 17.10	20.72	+0.01	.	1	40.82	49 56.05	9.24	11.43	40 37.83	23 30 46.7
130	9	. .	. .	. .	. .	43.	55.0	. .	. .	. .	40 31.05	20.72	. .	.	3	35.513	38 26.72	9.23	10.60	40 51.77	19 16.6
131	9	. .	. .	. .	14.2	26.8	38.8	. .	. .	. .	43 14.62	20.70	+0.01	.	2	36.28	46 43.21	9.04	11.20	43 35.33	27 33.4
132	9	. .	. .	. .	. .	. .	. .	20.8	. .	. .	43 44.92	20.70	. .	.	2	44.463	42 1.07	9.00	10.86	44 5.62	22 50.9
133	9	52.3	41.	16.2	28.1	. .	. .	. .	. .	. .	46 28.13	20.69	. .	.	3	35.833	38 15.73	8.80	10.59	46 48.82	23 19 5.1
134	8	. .	. .	32.4	44.2	56.2	. .	. .	. .	. .	47 44.35	20.68	−0.01	.	7	42.135	7 48.54	8.72	8.45	48 5.02	22 48 35.7
135	8	. .	. .	. .	. .	50.5	3.0	14.7	. .	. .	48 38.79	20.68	+0.01	.	2	42.73	43 1.02	8.65	10.93	48 59.48	23 23 50.6
136	9	. .	. .	. .	. .	. .	20.	31.6	. .	. .	48 55.84	20.68	+0.01	.	2	41.113	43 56.61	8.64	10.99	49 16.53	24 46.2
137	8	. .	. .	. .	30.	42.3	54.5	. .	. .	. .	50 30.29	20.68	. .	.	2	44.767	41 50.85	8.53	10.85	50 50.97	22 40.2
138	8	. .	58.2	10.	21.8	. .	. .	. .	. .	. .	52 21.97	20.67	. .	.	2	24.228	53 38.36	8.40	11.70	52 42.64	34 28.5
139	8	. .	. .	. .	6.4	18.5	30.4	. .	. .	. .	53 6.47	20.66	. .	.	3	43.513	33 51.17	8.36	10.27	53 27.13	23 14 39.8
140	7	. .	. .	. .	. .	. .	. .	. .	22.4	. .	53 28.96	20.66	−0.01	.	7	42.039	8 26.40	8.33	8.49	53 49.61	22 49 13.2
141	8	32.3	44.4	56.	8.	20.1	. .	. .	. .	. .	56 8.12	20.65	. .	.	6	32.252	19 57.67	8.16	9.30	56 28.77	23 0 45.1
142	8	35.	47.	59.	10.3	22.8	. .	. .	. .	. .	56 10.78	20.65	−0.01	.	6	36.719	17 23.79	8.16	9.11	56 31.42	22 58 11.1
143	6	56.4	8.8	20.7	32.5	44.2	56.5	. .	. .	. .	58 32.50	20.64	0.01	.	6	36.634	17 26.72	8.00	9.12	58 53.13	58 13.8
144	9	. .	. .	. .	. .	. .	60.2	. .	. .	. .	57 36.16	20.65	−0.01	.	6	43.175	13 41.30	8.07	8.86	57 56.80	22 54 28.2
145	8	. .	. .	. .	. .	. .	. .	. .	. .	23.2	21 59 17.36	20.64	. .	.	3	33.158	39 47.88	7.96	10.70	21 59 38.00	23 20 36.5
146	7	. .	. .	22.	33.6	45.7	. .	. .	. .	. .	22 1 33.83	20.63	−0.01	.	7	37.435	11 4.99	7.82	8.66	22 1 54.45	21 51 51.5
147	8	. .	. .	. .	29.2	41.4	53.4	. .	. .	. .	2 29.37	20.63	. .	.	4	33.897	31 12.44	7.77	10.19	2 50.00	23 12 0.4
148	7	. .	. .	. .	. .	. .	5.2	17.	. .	. .	2 41.20	20.63	. .	.	6	39.207	15 58.09	7.75	9.00	3 1.83	22 56 44.8
149	6	. .	49.	1.	12.2	24.5	. .	. .	. .	. .	22 5 12.66	+20.62	. .	.	6	33.295	19 21.74	− 7.61	− 9.25	22 5 33.28	23 0 8.6

Zone 149. September 18. Ms. $D_\circ = -17^\circ\ 40'\ 0''$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	9	. .	. .	. .	. .	. .	55.	6.5	. .	. .	19 22 31.82	+12.71	−0.01	VII.	6	34.653	18 34.76	−20.66	− 3.42	19 22 44.52	17 58 58.8
2	9.10	. .	58.	9.	20.1	32.	. .	. .	. .	. .	25 20.55	12.69	. .	VI.	4	37.303	31 32.81	20.38	4.06	25 33.24	18 11 57.2
3	9.10	14.5	26.	37.5	. .	. .	. .	. .	. .	. .	27 49.16	12.68	+0.01	III.	2	39.120	45 5.36	20.34	4.74	26 1.85	25 30.4
4	8	. .	. .	. .	. .	. .	31.	42.5	. .	. .	28 7.72	12.68	. .	VII.	1	34.110	53 12.54	20.13	4.15	28 20.40	33 36.8
5	10	. .	. .	. .	31.	. .	. .	. .	. .	. .	29 31.02	12.67	+0.01	IV.	2	35.922	46 55.54	20.00	4.83	29 43.70	27 20.4
6	9	. .	. .	. .	. .	. .	45.	56.5	. .	. .	31 21.80	12.66	. .	VII.	4	34.170	33 20.63	19.82	4.15	31 34.46	13 44.6
7	10	. .	50.	1.8	. .	24.5	. .	. .	. .	. .	33 13.16	12.65	+0.01	V.	2	33.810	48 8.27	19.64	4.90	33 25.82	28 32.8
8	9	. .	. .	. .	. .	. .	. .	31.2	. .	. .	33 56.42	12.64	0.01	VII.	1	36.640	52 19.84	19.57	5.13	34 9.07	32 44.5
9	9	32.	44.	. .	. .	. .	. .	. .	. .	. .	36 7.00	12.63	+0.01	II.	1	41.102	49 46.25	19.37	4.98	36 19.64	18 30 10.6
10	9	. .	. .	. .	. .	34.	45.6	57.5	. .	. .	36 22.59	12.63	−0.01	VII.	7	39.187	10 4.44	19.33	3.02	36 35.21	17 50 26.8
11	8.9	34.2	46.2	57.8	8.	20.1	32.2	43.5	. .	. .	39 8.86	12.62	0.01	VII.	7	39.187	10 4.44	19.07	3.02	39 21.47	17 50 26.5
12	10	. .	. .	16.	27.8	38.9	. .	. .	. .	. .	40 27.59	12.61	−0.01	VII.	5	44.349	21 42.05	18.94	3.57	40 40.19	18 2 4.6
13	9	. .	. .	19.5	31.5	43.3	. .	. .	. .	. .	44 31.43	12.59	. .	VI.	3	38.184	36 54.64	18.54	4.33	44 44.02	18 17 17.5
14	9	. .	. .	. .	. .	. .	41.	52.6	. .	. .	19 45 17.88	+12.58	−0.02	VII.	7	43.793	7 25.78	−18.48	− 2.88	19 45 30.44	17 47 47.1

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	*m*	*n*	*c*	Zenith Point.	Mic. Co.
1848. h. Sept. 18, 23	s. + 8.540	s. *g* 0.019	s. . .	s. − 0.429	s. − 0.192	° ′ ″ 0 0 2.26	r. 40.084

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848. h. m.	° ′ ″				″	″	in.	°	°
Zone 149	Sept. 18, 19 22	302 57 28.	30.6	31.	31.	30.29	30.15	30.128	65.	61.6
	19 44	. .	. .	. .	. .	. .	. .	. . .	. .	59.9
	20 2	. .	. .	. .	. .	. .	. .	30.130	64.7	58.7
	20 42	. .	. .	. .	. .	. .	. .	. . .	. .	57.9
	21 2	. .	. .	. .	. .	. .	. .	30.146	64.2	57.5
	21 22	. .	. .	. .	. .	. .	. .	. . .	. .	56.5
	21 42	. .	. .	. .	. .	. .	. .	30.152	63.5	55.3
	22 2	. .	. .	. .	. .	. .	. .	. .	. .	54.5

REMARKS.

(148) 126. Minutes of transit assumed as 36 instead of 37.

(148) 134. Micrometer reading assumed as $43^r.135$ instead of $42^r.135$.

(149) 3. Minutes of transit assumed as 25 instead of 27.

(149) 4. Micrometer reading assumed as $35^r.110$ instead of $34^r.110$.

ZONE 149. SEPTEMBER 18. Ms. $D_0 = -17° 40' 0''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
15	9	. .	. .	. .	46.8	58.	10.	21.2	. .	. .	19 46 46.67	+12.58	−0.01	VII.	6	38.190	16 32.92	−18.31	− 3.33	19 46 59.24	17 56 54.6
16	9	. .	. .	. .	. .	. .	19.	30.5	. .	. .	47 55.80	12.57	. .	VII.	4	43.825	27 48.04	18.21	3.89	48 8.37	18 8 10.1
17	9	. .	48.2	59.6	11.5	23.	34.6	46.5	. .	. .	50 11.44	12.55	+0.01	VII.	2	46.118	41 4.12	17.98	4.55	50 24.00	21 26.6
18	9	27.	39.5	50.6	12.	23.6	35.2	46.2	. .	. .	53 2.06	12.54	−0.01	VII.	6	37.182	20 34.32	17.68	3.52	53 14.59	18 0 55.5
19	9	. .	. .	. .	. .	28.	40.	51.5	. .	. .	54 16.73	12.53	+0.01	VII.	7	47.782	5 8.36	17.57	4.47	54 29.27	17 45 30.4
20	9	12.	24.5	36.	47.5	. .	. .	. .	. .	. .	56 47.36	12.52	. .	IV.	4	45.600	26 47.09	17.32	3.83	56 59.88	18 7 8.2
21	10	. .	. .	. .	57.5	. .	. .	. .	. .	. .	57 9.04	12.51	. .	IV.	3	42.110	34 39.50	17.19	4.21	19 58 21.55	15 0.9
22	10	. .	35.	46.6	58.	9.6	. .	. .	. .	. .	19 59 58.10	12.50	+0.01	V.	1	46.008	46 57.33	17.00	4.84	20 0 10.61	27 19.2
23	10	52.5	4.	15.	. .	. .	. .	. .	. .	. .	20 2 26.83	12.49	. .	III.	3	41.425	35 3.07	16.76	4.24	2 39.32	15 24.1
24	9	35.5	47.5	58.8	10.5	21.5	33.5	45.5	. .	. .	5 10.40	12.47	. .	VII.	4	45.302	26 57.15	16.49	3.84	5 22.87	7 17.5
25	8.9	21.	33.2	44.	55.6	7.2	18.8	30.4	. .	. .	9 55.74	12.46	. .	VII.	3	35.172	38 38.30	16.02	4.43	10 8.20	18 18 58.8
26	9	. .	. .	. .	. .	. .	43.	55.	. .	. .	11 20.06	12.44	−0.01	VII.	6	36.740	17 22.87	15.88	3.36	11 32.49	17 57 42.1
27	10	5.5	. .	. .	. .	. .	. .	. .	. .	. .	13 40.30	12.42	. .	I.	3	37.340	37 23.61	15.65	4.37	13 52.72	18 17 43.6
28	10.11	16.	27.	. .	. .	. .	. .	. .	. .	. .	16 38.80	12.40	−0.01	IV.	7	43.158	7 47.86	15.36	2.88	16 51.19	17 48 6.1
29	9	. .	. .	. .	46.5	57.8	9.6	21.	. .	. .	17 46.41	11.40	0.01	VII.	6	47.290	11 19.45	15.25	3.07	17 58.80	51 37.8
30	10	. .	. .	27.5	. .	. .	. .	. .	. .	. .	18 39.12	12.40	0.01	III.	7	41.190	8 55.62	15.17	2.74	18 51.51	49 13.5
31	8.9	. .	. .	. .	13.5	25.5	36.5	48.5	. .	. .	19 13.68	12.39	−0.01	VII.	6	40.604	15 9.76	15.11	3.26	19 26.06	55 28.1
32	10	. .	. .	. .	. .	. .	3.6	. .	. .	. .	21 40.54	12.38	−0.01	VI.	7	35.455	12 13.10	14.87	3.11	21 52.91	17 52 31.1
33	9	. .	16.	27.5	39.5	. .	. .	. .	. .	. .	26 39.22	12.35	. .	IV.	3	37.280	37 25.88	14.39	4.37	26 51.57	18 17 44.6
34	9	14.	26.	37.	49.	. .	. .	. .	. .	. .	28 48.86	12.34	. .	.	3	37.250	37 26.91	14.19	4.37	29 1.20	17 45.5
35	10	39.5	51.6	2.6	. .	. .	. .	. .	. .	. .	32 14.39	12.32	. .	III.	3	34.695	38 54.90	13.87	4.45	32 26.71	19 13.2
36	10	. .	. .	. .	. .	56.5	8.	19.5	. .	. .	32 44.86	12.32	. .	VII.	4	41.520	29 7.44	13.82	3.95	32 57.18	9 25.2
37	10.11	35.5	. .	. .	. .	. .	. .	. .	. .	. .	35 10.30	12.30	. .	I.	3	41.816	34 49.43	13.59	4.23	35 22.60	18 15 7.2
38	9	59.5	. .	22.6	34.	. .	. .	. .	. .	. .	37 34.14	12.29	−0.01	IV.	7	41.409	8 48.09	13.37	2.93	37 46.42	17 49 4.4
39	10	. .	. .	. .	. .	. .	49.	0.5	. .	. .	38 25.83	12.29	−0.02	VII.	7	47.113	5 31.41	13.28	2.76	38 38.10	17 45 47.4
40	10	. .	. .	. .	. .	. .	60.	11.8	. .	. .	40 36.87	12.27	. .	VII.	1	32.618	54 38.40	13.10	5.33	40 49.14	18 34 56.8
41	9	. .	. .	. .	18.	29.9	42.	. .	. .	. .	43 18.39	12.26	. .	VI.	3	35.673	38 21.15	12.86	4.42	43 30.65	18 38.4
42	9	. .	. .	. .	. .	. .	38.	50.	. .	. .	44 15.06	12.25	. .	VII.	5	35.672	26 40.95	12.77	3.83	44 27.31	6 57.6
43	8.9	. .	43.5	55.	6.5	18.2	. .	. .	. .	. .	46 6.60	12.24	+0.01	V.	1	42.650	48 53.00	12.61	4.96	46 18.85	18 29 10.6
44	9	. .	6.8	18.2	29.6	. .	. .	. .	. .	. .	47 29.77	12.23	−0.01	IV.	7	42.265	8 18.62	12.48	2.91	47 41.99	17 48 34.0
45	9	. .	. .	. .	16.2	27.5	39.5	. .	. .	. .	48 16.17	12.23	. .	VI.	5	38.780	24 53.99	12.41	3.73	48 28.40	18 5 10.1
46	9.10	. .	0.5	. .	23.6	. .	. .	. .	. .	. .	50 23.66	12.22	+0.01	IV.	2	37.725	45 53.43	12.23	4.80	50 35.89	26 10.5
47	10	. .	32.5	. .	. .	. .	. .	. .	. .	. .	51 55.63	12.21	. .	II.	4	32.994	34 1.25	12.10	4.19	52 7.84	14 17.5
48	8	. .	. .	. .	. .	24.	35.6	47.5	. .	. .	52 12.56	12.21	. .	VII.	5	36.300	26 19.31	12.07	3.81	52 24.77	6 35.2
49	10	. .	. .	. .	48.	. .	. .	. .	. .	. .	53 47.96	12.20	. .	IV.	4	38.432	30 54.01	11.94	4.03	54 0.16	11 10.0
50	8.9	. .	. .	. .	41.	52.	4.2	15.2	. .	. .	54 40.75	12.20	. .	VII.	5	42.140	22 58.15	11.86	3.63	54 52.95	18 3 13.64
51	7.8	33.5	45.2	56.2	7.6	19.	31.	. .	. .	. .	57 7.88	12.18	−0.01	VI.	7	40.912	9 5.12	11.66	2.95	57 20.05	17 49 19.7
52	9	. .	43.5	55.	6.5	17.8	29.	41.3	. .	. .	20 59 6.39	12.17	. .	VII.	5	42.380	22 49.88	11.48	3.63	20 59 18.56	18 3 5.0
53	10	31.8	43.6	. .	6.	. .	. .	. .	. .	. .	21 2 6.41	12.16	. .	II.	5	39.670	24 23.34	11.24	3.71	21 2 18.57	4 38.3
54	10	. .	. .	58.6	10.	21.5	. .	. .	. .	. .	5 10.03	12.14	. .	V.	4	39.482	30 17.83	10.99	4.01	5 22.17	10 32.8
55	8.9	. .	. .	. .	30.	41.8	. .	. .	. .	. .	6 30.12	12.14	. .	V.	5	36.900	25 58.83	10.89	3.79	6 42.26	6 13.5
56	9	4.	16.	28.	39.5	. .	. .	. .	. .	. .	9 39.23	12.12	. .	IV.	5	38.774	24 54.29	10.64	3.73	9 51.35	5 8.7
57	10	. .	34.5	46.	57.5	. .	. .	. .	. .	. .	17 57.58	12.07	+0.01	IV.	1	38.915	51 1.67	10.01	5.10	18 9.66	18 31 16.8
58	10	14.	25.8	36.8	48.	59.5	. .	. .	. .	. .	19 48.39	12.07	−0.01	VI.	6	42.520	14 3.88	9.87	3.19	20 0.45	17 54 16.9
59	9	7.8	19.8	31.	42.8	. .	. .	. .	. .	. .	22 42.69	12.05	−0.01	IV.	6	41.665	14 33.42	9.65	3.21	22 54.73	17 54 46.3
60	10	44.6	56.5	7.5	. .	. .	. .	. .	. .	. .	25 19.36	12.04	+0.01	III.	1	38.250	51 24.56	9.46	5.12	25 31.41	18 31 39.1
61	9	. .	. .	. .	. .	. .	. .	9.9	. .	. .	25 35.12	12.04	−0.01	.	6	40.060	14 54.06	9.44	3.22	25 47.15	17 55 6.7
62	10	. .	. .	. .	. .	. .	20.	31.8	. .	. .	27 56.98	12.03	0.01	VII.	7	46.816	5 41.65	9.27	2.75	28 9.00	45 53.7
63	9	. .	. .	. .	. .	37.6	49.	1.	. .	. .	21 29 26.09	+12.02	−0.01	VII.	6	45.280	12 28.70	− 9.16	− 3.11	21 29 38.10	17 52 41.0

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848. h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848. h. m.	° ′ ″				″	″	in.	°	°

REMARKS.

(149) 18. Transit over last four threads assumed to have been recorded too late by 10 seconds.

(149) 21. Transit over T. III assumed to have been recorded as over T. IV, and minutes assumed as 58.

(149) 28. Transits over T.'s II and III assumed to have been recorded over T.'s I and II.

(149) 61. Micrometer reading assumed as $41^r.060$ instead of $40^r.660$.

ZONE 149. SEPTEMBER 18. MS. $D_0 = -17° 40' 0''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
64	10	27.5	39.5	. .	. .	. .	. .	. .	. .	. .	21 32 2.47	+12.01	. .	III.	3	39.720	36 1.81	− 8.98	− 4.30	21 32 14.48	18 16 15.1
65	10	. .	. .	14.5	26.5	37.5	. .	. .	. .	. .	33 26.23	12.00	−0.01	V.	6	42.908	13 50.59	8.89	3.18	33 38.22	17 54 2.7
66	.	27.6	39.5	. .	2.5	. .	. .	. .	. .	. .	35 2.48	11.99	. .	IV.	5	40.600	23 51.39	8.77	3.68	35 14.47	18 4 3.8
67	9	33.	44.8	56.	7.8	. .	. .	. .	. .	. .	39 7.74	11.97	−0.01	VII.	6	34.24	18 48.98	8.49	3.42	39 19.70	17 59 0.9
68	9	. .	51.	2.8	14.	. .	. .	. .	. .	. .	44 14.17	11.95	0.01	VI.	7	46.815	5 41.79	8.15	2.75	44 20.11	45 52.7
69	10	. .	. .	. .	. .	. .	. .	9.	. .	. .	45 34.20	11.94	−0.01	VII.	6	46.815	11 35.82	8.06	3.06	45 46.13	17 51 46.9
70	10	. .	15.5	27.5	39.	. .	. .	. .	. .	. .	49 38.89	11.93	. .	IV.	2	48.550	39 40.54	7.80	4.50	49 50.82	18 19 52.8
71	10	. .	. .	47.	59.	. .	. .	. .	. .	. .	51 58.86	11.91	−0.01	IV.	7	45.535	6 25.97	7.65	2.79	52 10.76	17 46 36.4
72	9	. .	. .	. .	. .	4.	16.	. .	. .	. .	51 52.68	11.91	. .	VI.	4	47.36	25 46.38	7.65	3.78	52 4.59	18 5 57.8
73	10	. .	. .	. .	. .	4.	16.	. .	. .	. .	52 52.65	11.90	. .	VI.	3	43.845	33 39.62	7.59	4.18	53 4.55	13 51.4
74	9	. .	8.5	20.	31.5	. .	. .	. .	. .	. .	54 31.54	11.90	. .	IV.	4	42.403	28 37.23	7.49	3.93	54 43.44	8 48.6
75	9	. .	. .	. .	44.	56.	8.	19.	. .	. .	21 55 44.37	+11.89	+0.01	VII.	1	37.435	51 52.46	− 7.42	− 5.14	21 55 56.27	18 32 5.0

ZONE 150. OCTOBER 5. MAJ. $D_0 = -17° 1' 10''$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	8	. .	. .	. .	. .	37.5	49.4	. .	. .	. .	22 49 26.22	+ 9.12	. .	VII.	6	34.488	18 40.46	− 7.15	− 9.42	22 49 35.34	17 20 7.0
2	7	. .	. .	. .	. .	55.2	6.5	. .	. .	. .	50 43.61	9.11	. .	V.	6	33.178	19 25.76	7.09	9.46	50 52.72	20 52.3
3	7	. .	. .	. .	. .	56.0	7.4	19.0	. .	. .	52 44.41	9.10	. .	V.	3	33.385	39 40.03	6.99	10.50	52 53.51	41 7.5
4	5	32.8	44.	55.7	6.4	18.5	. .	. .	. .	. .	57 7.03	9.07	+0.01	IV.	1	37.786	51 40.57	6.78	11.12	57 16.11	53 8.5
5	5	. .	. .	4.	. .	27.2	38.2	50.	. .	. .	22 57 15.42	9.07	. .	12.	2	46.319	40 56.76	6.78	10.56	22 57 24.49	42 24.1
6	8	36.4	48.	. .	1.	. .	. .	35.	. .	. .	23 0 11.06	9.06	+0.01	.	1	39.74	50 33.26	6.63	11.08	23 0 20.13	52 1.0
7	7	. .	51.2	. .	. .	15.	. .	38.	. .	. .	0 3.71	9.06	. .	.	4	36.35	32 5.73	6.64	10.11	0 12.77	33 32.5
8	8	. .	. .	25.5	36.4	48.1	59.2	. .	. .	. .	3 36.51	9.04	. .	.	2	45.46	41 26.98	6.48	10.60	3 45.55	42 54.1
9	9	. .	14.8	26.	37.	. .	. .	. .	. .	. .	5 37.44	9.03	. .	.	2	42.97	42 52.76	6.39	10.67	5 46.47	44 19.8
10	8	. .	. .	. .	13.5	25.5	37.1	. .	. .	. .	6 13.83	9.03	. .	.	2	44.424	42 2.66	6.37	10.63	6 22.86	43 29.7
11	9	. .	. .	. .	. .	. .	37.2	. .	. .	. .	7 14.14	9.02	. .	.	4	43.028	28 15.61	6.32	9.91	7 23.16	29 41.8
12	9	25.	37.0	47.8	59.4	11.0	22.4	. .	. .	. .	9 59.55	9.01	−0.01	.	7	41,958	8 29.19	6.20	8.88	10 8.55	9 54.3
13	9	. .	31.3	43.	54.5	6.2	. .	. .	. .	. .	11 54.52	9.00	. .	.	5	37.009	25 55.09	6.12	9.79	12 3.52	27 21.0
14	7	. .	4.1	15.4	. .	. .	. .	. .	. .	. .	13 27.02	8.99	. .	.	4	41.457	29 9.81	6.05	9.95	13 36.01	30 35.8
15	8	. .	. .	. .	. .	. .	53.0	3 9	. .	. .	13 29.60	8.99	. .	.	3	32.12	40 23.63	6.06	10.54	13 38.59	41 50.2
16	9	. .	. .	. .	. .	. .	. .	. .	43.	. .	13 51.29	8.99	. .	.	4	39.867	30 4.16	6.04	10.01	14 0.28	31 30.2
17	8	. .	. .	. .	. .	. .	. .	46.	4.	. .	15 11.85	8.98	. .	VII.	6	31.90	30 9.60	5.99	9.49	15 20.83	21 35.1
18	7	. .	. .	. .	35.	46.9	58.2	. .	. .	. .	18 35.28	8.97	−0.01	.	7	48.43	4 46.24	5.85	8.69	18 44.24	6 10.8
19	10	. .	. .	. .	. .	. .	60.5	2.0	. .	. .	21 37.40	8.95	. .	.	4	34.902	32 55.52	5.73	10.15	21 46.35	34 21.4
20	9	13.	24.5	36.0	47.5	59.0	. .	. .	. .	. .	24 47.54	8.94	. .	.	3	35.558	38 25.21	5.61	10.44	24 56.48	39 51.3
21	7	. .	. .	43.	54.	5.4	. .	. .	. .	. .	25 54.22	8.93	−0.01	.	7	44.357	7 6.54	5.57	8.81	26 3.14	8 30.9
22	9	. .	. .	. .	2.3	. .	. .	. .	. .	. .	27 25.30	8.92	. .	.	2	47.365	40 21.36	5.52	10.54	27 34.22	41 47.4
23	5	56.	8.	. .	. .	31.5	. .	5.0	. .	. .	27 30.87	8.92	. .	12.	5	41.642	23 14.86	5.50	9.65	27 39.77	24 40.0
24	9	. .	15.	26.4	38.	49.4	. .	. .	. .	. .	23 33 37.95	+ 8.89	. .	.	4	41.643	29 3.40	− 5.28	− 9.95	23 33 46.84	17 30 28.6

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	*m*	*n*	*c*	Zenith Point.	Mic. Co.
1848.	h.	s.	s.	s.	s.	s.	° ′ ″	r.
Oct. 5,	20	+ 5.972	*g* 0.021	. .	− 0.527	− 0.192	0 0 1.73	40.058

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848. h. m.	° ′ ″				″	″	in.	°	°
Zone 150	Oct. 5, 22 46	303 36 1.7	5.8	9.1	10.1	6.70	6.68	30.266	63.0	
	23	. .	. .	. .	. .	. .	. .	. .	. .	55.2
	23 20	. .	. .	. .	. .	. .	. .	30.272	. .	54.5
	23 40	2.4	5.9	9.6	10.8	7.20	7.18	30.274	62.2	54.5

REMARKS.

(150) 6. Transit over T. IV assumed as at 11s.0 instead of 1s.0; that over VII rejected.

(150) 7. Transit over T. II assumed as at 41s.2 instead of 51s.2.

(150) 19. Transit over T. VII assumed as at 12s.0 instead of 2s.0.

(150) 22. Transit over T. II assumed to have been recorded over T. IV.

(150) 23. Transit over T. IV assumed to have been recorded over T. V.

ZONE 151. OCTOBER 6. Ms. $D_0 = -18° 20' 0''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	"	"	"	h. m. s.	° ' "
1	9	. .	. .	. .	49.	1.5	12.6	. .	. .	. .	22 45 49.41	+ 7.91	. .	VII.	4	38.070	30 31.83	−36.86	− 6.03	22 45 57.32	18 51 14.7
2	10	14.5	26.5	. .	. .	. .	. .	. .	. .	. .	49 49.60	7.88	+0.01	II.	1	42.202	49 8.36	36.66	7.06	49 57.49	19 9 52.1
3	9	. .	. .	. .	3.6	15.5	. .	38.8	. .	. .	49 3.83	7.89	0.01	VII.	1	39.540	50 39.95	36.65	7.15	50 11.73	11 23.8
4	10	46.	. .	. .	. .	. .	. .	. .	. .	. .	53 20.90	7.86	0.01	I.	2	37.925	45 46.34	36.51	6.87	53 28.77	6 29.7
5	10	. .	. .	. .	36.	. .	57.8	. .	. .	. .	53 36.25	7.86	0.01	VII.	2	32.446	48 55.28	36.50	7.05	53 44.12	9 38.8
6	10	. .	11.	23.5	. .	. .	. .	. .	. .	. .	22 57 34.66	7.83	+0.01	III.	1	41.928	49 17.87	36.32	7.07	22 57 42.50	19 10 1.3
7	10	. .	. .	. .	. .	23.	35.	46.5	. .	. .	23 2 11.64	7.81	−0.01	VII.	7	45.792	6 16.92	36.14	4.69	23 2 19.44	18 26 57.8
8	8.9	38.	49.5	0.5	12.	. .	. .	. .	. .	. .	5 12.44	7.79	. .	I.	1	40.270	50 14.80	36.03	7.16	5 20.23	19 10 58.1
9	10	. .	. .	0.	11.8	. .	. .	. .	. .	. .	8 11.76	7.77	. .	V.	7	35.190	12 22.30	35.92	5.03	8 19.53	18 33 3.2
10	8.9	. .	. .	. .	. .	17.5	29.5	40.8	. .	. .	9 6.04	7.77	. .	VII.	3	36.162	38 4.19	35.88	6.45	9 13.81	58 46.5
11	8.9	. .	59.5	11.2	22.8	34.5	46.	57.2	. .	. .	11 22.72	7.75	. .	I.	4	34.955	32 53.59	35.81	6.16	11 30.47	53 35.6
12	9	. .	. .	. .	. .	7.5	19.5	. .	. .	. .	12 56.20	7.74	−0.01	VI.	7	50.472	3 35.81	35.75	4.55	13 3.93	24 16.1
13	9	. .	29.5	41.	52.5	. .	. .	. .	. .	. .	15 52.42	7.73	. .	I.	6	39.34	15 53.31	35.66	5.23	16 0.15	36 34.2
14	10	. .	. .	. .	4.8	16.5	28.	. .	. .	. .	16 4.91	7.73	. .	VI.	7	38.533	10 27.07	35.66	4.93	16 12.64	31 7.7
15	9	. .	. .	. .	. .	17.	28.5	. .	. .	. .	17 5.44	7.72	−0.01	VII.	7	45.030	6 8.72	35.62	4.72	17 13.15	26 49.1
16	10	24.	35.6	. .	58.6	. .	. .	. .	. .	. .	22 58.75	7.69	. .	V.	5	37.602	25 34.64	35.46	5.76	23 6.44	46 15.9
17	9	. .	. .	34.	45.8	. .	. .	. .	. .	. .	24 45.73	7.68	. .	I.	6	36.525	17 30.28	35.41	5.32	24 53.41	38 11.0
18	10	. .	. .	. .	. .	5.5	17.5	. .	. .	. .	24 53.98	7.68	. .	VI.	4	36.692	31 53.86	35.40	6.11	25 1.66	52 35.6
19	10	. .	. .	. .	. .	. .	. .	45.	. .	. .	26 10.10	7.67	. .	VII.	5	43.105	22 24.91	35.37	5.58	26 17.77	43 5.9
20	9.10	49.	1.5	12.8	24.3	. .	. .	. .	. .	. .	31 24.30	7.65	. .	IV.	6	38.292	16 29.60	35.24	5.27	31 31.95	37 10.1
21	7.8	5.5	17.	29.	. .	. .	. .	. .	. .	. .	33 40.41	7.64	. .	III.	4	39.235	30 26.34	35.19	6.03	33 48.05	51 7.6
22	7.8	. .	. .	. .	50.5	. .	13.8	25.5	. .	. .	33 50.58	7.63	. .	VII.	6	35.560	18 3.51	35.19	5.35	33 58.21	18 38 44.0
23	8	. .	54.5	6.5	17.	29.	. .	. .	. .	. .	36 17.49	7.62	+0.01	II.	2	28.042	45 42.41	35.14	6.87	36 25.12	19 6 24.4
24	10	. .	. .	. .	. .	. .	. .	22.	. .	. .	36 47.10	7.62	. .	VII.	5	43.333	22 17.05	35.13	6.22	36 54.72	18 42 58.4
25	9	3.5	14.8	26.8	. .	. .	. .	. .	. .	. .	39 38.26	7.61	. .	III.	4	47.401	25 45.04	35.07	5.77	39 45.87	46 25.9
26	10	. .	. .	. .	41.	53.	. .	. .	. .	. .	43 41.20	7.59	. .	V.	3	45.710	32 35.46	34.99	6.15	43 48.79	53 16.6
27	9	. .	. .	. .	. .	39.	50.	. .	. .	. .	44 27.09	7.58	. .	VI.	4	38.820	30 40.55	34.99	6.05	44 34.67	18 51 21.6
28	9	. .	. .	. .	37.	49.	. .	. .	. .	. .	45 37.22	7.58	. .	V.	2	39.350	46 6.32	34.97	6.93	45 44.80	19 6 48.2
29	9	. .	11.6	23.6	35.	. .	. .	. .	. .	. .	47 35.00	7.57	. .	IV.	6	33.912	19 0.48	34.94	5.40	47 42.57	18 39 40.8
30	10	. .	1.	. .	. .	28.5	40.	. .	. .	. .	48 16.84	7.57	. .	VI.	5	30.532	29 38.11	34.93	5.98	48 24.41	50 19.0
31	9	42.	54.	5.6	17.	. .	. .	. .	. .	. .	52 17.17	7.55	. .	F. W.	.	40.061	29 57.91	34.88	6.00	52 24.72	18 50 38.8
32	9	34.5	46.	57.8	9.	. .	. .	. .	. .	. .	56 9.26	7.53	. .	IV.	3	33.250	39 44.70	34.84	6.53	57 16.79	19 0 26.1
33	9	. .	14.2	26.5	37.2	48.8	. .	. .	. .	. .	23 58 37.47	7.52	. .	V.	4	37.255	31 34.54	34.81	6.09	23 58 44.99	18 52 15.4
34	9	16.	27.8	. .	. .	. .	. .	. .	. .	. .	0 3 50.96	7.49	. .	II.	4	44.48	27 25.59	34.78	5.87	0 3 58.45	48 6.2
35	7.8	. .	. .	12.	23.8	35.	46.8	. .	. .	. .	4 23.61	7.49	. .	VI.	4	47.865	25 28.99	34.78	5.75	4 31.10	46 9.5
36	10	. .	23.	35.	. .	. .	. .	. .	. .	. .	7 46.39	7.47	. .	III.	4	50.260	24 6.56	34.76	5.66	7 53.86	44 47.0
37	9.10	. .	. .	37.8	49.	. .	. .	. .	. .	. .	8 49.21	7.47	. .	IV.	4	52.060	23 4.58	34.75	5.61	8 56.68	43 44.9
38	9	. .	21.8	33.5	. .	. .	. .	. .	. .	. .	11 45.02	7.46	. .	III.	7	39.410	9 56.94	34.75	4.86	11 52.48	30 36.6
39	9	. .	. .	. .	19.5	30.5	42.	. .	. .	. .	12 19.14	7.45	. .	VI.	7	37.350	11 7.82	34.75	4.95	12 26.59	31 47.5
40	10	. .	7.5	. .	. .	. .	. .	. .	. .	. .	14 30.63	7.44	. .	II.	6	35.842	17 53.90	34.75	5.33	14 38.07	38 34.0
41	9	. .	53.	4.5	16.	27.5	. .	. .	. .	. .	16 16.06	7.44	. .	II.	6	35.980	17 49.15	34.75	5.32	16 23.50	18 38 29.2
42	10	. .	. .	2.6	. .	26.	. .	. .	. .	. .	17 14.27	7.43	. .	V.	1	37.670	51 44.54	34.75	7.27	17 21.70	19 12 26.6
43	10	. .	. .	. .	. .	. .	4.	16.	. .	. .	19 40.96	7.42	. .	VII.	5	47.666	19 47.80	34.75	5.43	19 48.38	18 40 28.0
44	9	. .	. .	. .	24.5	36.	. .	. .	. .	. .	24 24.46	7.40	. .	V.	2	44.462	42 1.34	34.77	6.70	24 31.86	19 2 42.8
45	9	. .	. .	. .	. .	. .	18.	30.	. .	. .	24 54.94	7.40	. .	VII.	3	40.770	35 25.46	34.77	6.31	25 2.34	18 56 6.5
46	10	. .	. .	. .	. .	12.5	24.5	36.	. .	. .	26 1.11	7.39	. .	VII.	3	40.245	35 43.54	34.78	6.33	26 8.50	56 24.6
47	9	. .	. .	26.	37.5	. .	. .	. .	. .	. .	28 37.64	7.39	. .	IV.	7	47.48	5 18.97	34.79	4.61	28 45.03	25 58.4
48	9	. .	. .	. .	. .	. .	28.	39.5	. .	. .	29 4.72	7.38	. .	VII.	7	38.280	10 35.68	34.80	4.92	29 12.10	31 15.4
49	9	26.	38.	50.	1.5	. .	. .	. .	. .	. .	33 1.28	7.37	. .	IV.	5	44.172	21 48.35	34.83	6.21	33 8.65	42 29.4
50	3.4	. .	. .	. .	. .	56.	7.5	31.	. .	. .	0 35 55.94	+ 7.36	. .	I.	4	43.902	27 45.39	−34.86	− 5.88	0 36 3.30	18 48 26.1

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848.	h.	s.	s.	s.	s.	s.	° ' "	r.
Oct. 6,	20	+ 4.719	g 0.029	. .	− 0.527	− 0.192	a 0 2.43	40.061

INSTRUMENT READINGS.

	Date.		CIRCLE.						Barom.	Attached Thermom.	External Thermom.
			A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848.	h. m.	° ' "				"	"	in.	°	°
Zone 151	Oct. 6,	22 40	$302\begin{Bmatrix}20\\19\end{Bmatrix}52.2$	56.3	58.2	0.8	56.88	56.90	30.356	62.5	53.
		23	. .	. .	. .	. .	. .	. .	. .	. .	52.7
		23 20	. .	. .	. .	. .	. .	. .	30.344	61.2	52.2
		23 40	. .	. .	. .	. .	. .	. .	. .	. .	52.
		0	. .	. .	. .	. .	. .	. .	30.344	61.	51.2
		0 20	. .	. .	. .	. .	. .	. .	. .	. .	50.9

REMARKS.

(151) 1. Micrometer reading assumed as $39^{r}.070$ instead of $40^{r}.070$.

(151) 2. Right ascension differs 1^{m} 51^{s} from Arg. Z. 262, 30.

(151) 3. Minutes of transit assumed as 50 instead of 49.

(151) 13. Transit over T. IV assumed as at $52^{s}.5$ instead of $32^{s}.5$.

(151) 15. Micrometer reading assumed as $46^{r}.030$ instead of $45^{r}.030$.

(151) 23. Micrometer reading assumed as $38^{r}.042$ instead of $28^{r}.042$.

(151) 28. Micrometer reading assumed as $37^{r}.350$ instead of $39^{r}.350$.

(151) 32. Minutes assumed as 57 instead of 56.

(151) 48. Declination differs 7′ from Arg. Z. 321, 1 and 6′ from transit, 1848, October 24.

(151) 50. Transits over T.'s IV and V assumed to have been recorded over T.'s V and VI.

ZONE 152. OCTOBER 7. MAJ. $D_0 = -20° 47' 50''$.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
1	9	11.5	. .	35.2	46.	. .	. .	. .	. .	. .	22 35 46.64	+ 7.84	+0.01	IV.	2	41.957	43 27.65	−14.43	− 6.83	22 35 54.49	21 31 38.9
2	8	. .	0.6	11.8	23.5	35.2	. .	. .	. .	. .	38 23.68	7.82	−0.01	.	6	41.242	14 47.98	14.42	5.01	38 31.49	2 57.4
3	7	. .	. .	. .	. .	. .	. .	. .	28.5	. .	38 35.67	7.82	+0.01	II.	2	36.462	46 36.42	14.42	7.04	38 43.50	34 47.9
4	6	8.	20.2	31.6	43.5	55.1	6.9	18.5	. .	. .	41 43.40	7.80	−0.01	.	6	38.352	16 27.53	14.42	5.16	41 51.19	21 4 37.1
5	8	. .	. .	. .	25.	56.2	. .	. .	. .	. .	44 24.81	7.78	−0.01	.	7	50.319	3 41.17	14.43	4.34	44 32.58	20 51 49.9
6	9	. .	27.2	39.	50.2	2.	. .	. .	. .	. .	45 50.50	7.77	. .	V.	5	43.298	22 18.44	14.44	5.52	45 58.27	21 10 28.4
7	8	. .	. .	. .	. .	. .	. .	51.4	. .	. .	46 15.94	7.77	+0.01	VII.	1	39.772	50 31.92	14.44	7.29	46 23.72	38 43.6
8	8	. .	. .	32.	43.4	55.5	. .	. .	. .	. .	47 43.63	7.76	. .	.	4	37.201	31 36.42	14.45	6.09	47 51.39	19 47.0
9	7	. .	56.2	7.9	. .	. .	. .	. .	. .	. .	49 19.74	7.75	. .	.	3	32.85	39 58.48	14.45	6.60	49 27.49	28 9.5
10	6	. .	. .	. .	. .	38.0	50.	1.8	. .	. .	49 26.36	7.75	−0.01	.	6	38.415	16 25.37	14.45	5.16	49 34.10	4 35.0
11	9	. .	. .	. .	. .	55.4	7.0	19.2	. .	. .	50 43.55	7.74	. .	VI.	1	34.988	53 16.85	14.45	7.48	50 51.29	41 28.8
12	8	. .	. .	12.	23.2	. .	. .	. .	. .	. .	52 23.46	7.73	+0.01	.	1	42.644	48 53.22	14.47	7.19	52 31.20	37 4.9
13	6	60.0	12.5	23.9	35.0	47.2	. .	. .	. .	. .	54 35.55	7.72	+0.01	IV.	1	37.078	52 4.96	14.48	7.40	54 43.28	40 16.8
14	8	. .	. .	. .	. .	. .	40.	51.8	. .	. .	55 16.38	7.71	. .	VII., V.	3	39.048	36 24.60	14.49	6.37	55 24.09	24 35.5
15	8	. .	51.5	3.2	14.4	25.5	. .	. .	. .	. .	22 57 14.55	7.70	. .	IV.	3	35.238	38 36.23	14.51	6.52	22 57 22.25	26 47.3
16	10	. .	. .	. .	. .	38.2	. .	1.8	. .	. .	23 0 26.42	7.68	. .	VII., IV.	3	39.685	36 2.69	14.53	6.36	23 0 34.10	24 13.6
17	10	. .	. .	. .	. .	. .	. .	10.2	. .	. .	4 34.79	7.66	. .	VII.	3	42.112	34 38.99	14.59	6.28	4 42.45	21 22 49.9
18	9	. .	44.	55.	7.2	18.4	. .	. .	. .	. .	7 7.06	7.64	−0.01	IV.	7	38.96	10 12.45	14.62	4.73	7 14.69	20 58 21.8
19	6	29.5	41.0	53.	4.4	16.3	28.	39.7	. .	. .	9 4.56	7.62	. .	.	2	44.579	41 57.33	14.65	6.74	9 12.18	21 30 8.7
20	7	54.5	6.4	18.2	29.7	41.5	53.	4.9	. .	. .	11 29.74	7.61	. .	.	2	42.50	43 8.95	14.68	6.83	11 37.35	31 20.5
21	8	. .	. .	4.9	. .	. .	. .	. .	. .	. .	13 16.59	7.60	+0.01	.	1	37.35	51 55.58	14.70	7.41	13 24.20	40 7.7
22	8	. .	. .	. .	. .	43.	55.	. .	. .	. .	13 31.37	7.60	. .	.	6	34.14	18 52.63	14.71	5.29	13 38.97	7 2.6
23	4	. .	. .	46.	57.5	9.2	21.2	32.6	. .	. .	14 57.54	7.58	. .	IV.	7	34.608	12 42.37	14.75	4.91	15 5.12	0 52.0
24	7	. .	. .	24.0	. .	47.	. .	11.	. .	. .	16 35.54	7.58	. .	.	5	39.243	24 38.14	14.76	5.65	16 43.12	12 48.6
25	.	. .	. .	50.	. .	. .	. .	25.5	. .	. .	17 50.03	7.57	. .	.	6	35.41	18 8.88	14.79	5.26	17 57.60	6 18.9
26	6	. .	. .	. .	. .	. .	. .	27.	. .	. .	17 51.60	7.57	. .	.	3	36.692	37 46.13	14.80	6.48	17 59.17	25 57.4
27	4	. .	. .	. .	. .	. .	26.	37.4	. .	. .	18 2.17	7.57	. .	.	3	33.48	39 36.78	14.80	6.60	18 9.74	21 27 48.2
28	8	. .	. .	. .	. .	39.	. .	2.5	. .	. .	20 27.16	7.55	−0.01	.	7	38.372	10 32.71	14.85	4.76	20 34.70	20 58 42.3
29	8	. .	. .	. .	. .	. .	. .	3.0	. .	. .	20 27.57	7.55	. .	.	4	41.125	29 21.25	14.85	5.96	20 35.12	21 17 32.1
30	9	. .	. .	. .	. .	. .	10.	22.	. .	. .	21 46.49	7.54	. .	.	6	32.88	19 35.94	14.88	5.34	21 54.03	7 46.2
31	8	. .	. .	. .	. .	. .	. .	30.	. .	. .	21 54.59	7.54	. .	.	3	39.89	35 55.97	14.88	6.35	22 2.13	21 24 7.2
32	7	31.8	43.4	55.2	7.3	. .	. .	. .	. .	. .	25 7.08	7.53	−0.01	IV.	7	45.048	6 42.75	14.96	4.53	25 14.60	20 54 52.2
33	9	. .	. .	. .	. .	50.5	. .	. .	. .	. .	25 38.81	7.53	−0.01	.	7	41.783	8 35.19	14.96	4.64	25 46.33	56 44.8
34	8	. .	. .	. .	39.8	51.4	. .	. .	. .	. .	26 39.78	7.52	. .	.	7	36.198	11 47.61	14.99	4.84	26 47.30	20 59 57.4
35	7	. .	. .	. .	. .	. .	8.2	19.4	. .	. .	30 44.19	7.49	. .	.	1	34.292	53 40.92	15.09	7.53	30 51.68	21 41 53.5
36	9	. .	59.5	11.2	22.0	34.6	. .	. .	. .	. .	33 22.72	7.48	. .	.	4	40.802	29 32.37	15.16	5.97	33 30.20	17 43.5
37	6	. .	. .	. .	. .	. .	. .	. .	42.4	. .	33 49.63	7.48	. .	.	7	35.95	11 56.14	15.16	4.85	33 57.11	0 6.2
38	8	. .	27.2	39.0	50.6	2.5	. .	. .	. .	. .	35 50.73	7.46	. .	.	6	35.201	18 16.08	15.23	5.26	35 58.19	6 26.6
39	7	. .	. .	. .	. .	. .	. .	. .	. .	55.2	35 50.49	7.46	. .	.	6	35.103	18 19.46	15.23	5.27	35 57.95	21 6 30.0
40	6	. .	. .	55.2	7.	17.9	. .	. .	. .	. .	47 6.79	7.40	. .	.	7	48.732	4 35.83	15.56	6.56	47 14.19	20 52 48.0
41	9	. .	. .	. .	. .	18.9	31.2	42.3	. .	. .	48 7.20	7.39	. .	.	3	50.392	29 54.19	15.59	5.99	48 14.59	21 18 5.8
42	5	. .	. .	. .	. .	31.6	43.2	55.	. .	. .	49 19.61	7.39	+0.01	.	1	37.405	51 53.69	15.63	7.40	49 27.01	40 6.7
43	8	. .	. .	. .	. .	43.	55.	. .	. .	. .	50 31.36	7.38	. .	.	6	30.388	21 1.88	15.66	5.44	50 38.74	9 13.0
44	7	. .	. .	. .	. .	28.3	40.2	. .	. .	. .	51 16.56	7.38	. .	.	3	43.732	33 43.62	15.70	6.22	51 23.94	21 55.5
45	8	45.	57.2	8.9	20.3	32.1	44.2	55.7	. .	. .	53 20.49	7.37	. .	.	2	40.482	44 18.46	15.76	6.91	53 27.86	21 32 31.1
46	6	. .	. .	56.	7.7	19.0	. .	. .	. .	. .	23 55 7.65	+ 7.36	−0.01	.	7	48.140	4 56.23	−15.83	− 4.41	23 55 15.00	20 53 6.5

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848. h.	s.	s.	s.	s.	s.	° ′ ″	r.
Oct. 7, 19	+ 4.589	g 0.039	. .	− 0.527	− 0.192	0 0 1.32	40.064

INSTRUMENT READINGS.

	Date.	CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1848. h. m.	° ′ ″				″	″	in.	°	°
Zone 152	Oct. 7, 22 31	299 49 33.8 32.0	34.0 35.9	39.1 39.5	39.9 40.2	36.80	36.80	30.234	63.2	56.1
	23	31.2 29.8	. .	. .	. .	. .	. .	30.228	. .	55.9
	23 40	30.4 29.	30.5 32.4	34.7 36.0	37.0 37.4	33.32	33.32	30.212	62.5	55.4
	24	. .	. .	. .	. .	. .	. .	30.204	61.9	55.5

REMARKS.

(152) 5. Transit over T. V assumed as at $36^s.2$ instead of $56^s.2$.

(152) 25. Transit at 50^s assumed to have been over T. IV instead of T. III.

ZONE 153. OCTOBER 14. MS. $D_0 = -16° 24' 40''$.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
1	8.9	. .	36.5	48.2	0.0	. .	. .	. .	. .	. .	20 26 59.71	+ 3.15	. .	V.	3	37.002	37 0.98	−20.98	−10.33	20 27 2.86	17 2 12.3
2	9	. .	9.	. .	31.5	43.2	54.8	. .	. .	. .	30 31.75	3.13	+0.01	VI.	2	48.612	39 38.32	20.62	10.44	30 34.89	17 4 49.4
3	8	. .	. .	. .	. .	14.6	26.2	37.8	. .	. .	32 3.24	3.12	−0.01	VII.	6	42.955	13 48.81	20.47	9.24	32 6.35	16 38 58.5
4	10	. .	. .	33.	. .	. .	. .	. .	. .	. .	36 44.55	3.10	−0.01	III.	7	40.678	9 13.26	20.00	9.03	36 47.64	16 34 22.3
5	9	. .	. .	. .	0.5	12.5	23.8	. .	. .	. .	38 0.77	3.08	+0.01	VI.	1	41.932	49 17.66	19.86	10.90	38 3.86	17 14 28.4
6	8.9	. .	. .	26.5	38.2	. .	. .	. .	. .	. .	39 38.08	3.08	. .	IV.	4	42.955	28 18.22	19.70	9.91	39 41.16	16 53 27.8
7	8.9	. .	. .	. .	. .	. .	. .	17.	. .	. .	39 42.54	3.08	+0.01	VII.	3	35.000	38 44.24	19.69	10.40	39 45.63	17 3 54.3
8	9	2.5	14.5	26.	37.5	. .	. .	. .	. .	. .	42 37.37	3.06	. .	IV.	3	45.134	32 55.32	19.41	10.13	42 40.43	16 58 4.9
9	9	47.	. .	10.	. .	. .	. .	. .	. .	. .	44 21.50	3.05	−0.01	III.	5	50.320	18 16.55	19.25	9.45	44 24.54	43 25.2
10	10	10.	22.	33.5	. .	. .	. .	. .	. .	. .	48 44.80	3.02	0.01	III.	5	48.385	19 23.20	18.81	9.50	48 47.81	44 31.5
11	8.9	. .	. .	. .	13.5	24.5	36.	. .	. .	. .	49 13.26	3.01	0.01	VI.	6	47.860	10 59.94	18.76	9.11	49 16.26	36 7.8
12	10	. .	. .	. .	. .	3.	. .	. .	. .	. .	51 51.61	2.99	−0.02	V.	7	49.938	3 54.28	18.50	8.77	51 54.58	16 29 1.6
13	9.10	. .	. .	. .	8.5	20.2	31.6	. .	. .	. .	53 8.60	2.99	. .	VI.	3	39.800	35 58.99	18.38	10.26	53 11.59	17 1 7.6
14	9.10	20.5	32.	43.8	. .	7.	. .	. .	. .	. .	55 55.21	2.97	. .	V.	3	39.964	35 53.40	18.10	10.26	55 58.18	17 1 1.8
15	9.10	. .	. .	. .	. .	51.	2.5	13.	. .	. .	56 39.19	2.97	. .	VII.	5	41.605	23 16.59	18.05	9.69	56 42.16	16 48 24.3
16	9	. .	26.5	38.	50.	. .	. .	. .	. .	. .	20 59 49.64	2.95	. .	IV.	3	39.88	35 56.32	17.75	10.26	20 59 52.59	17 1 4.3
17	10	11.	23.	. .	. .	. .	. .	. .	. .	. .	21 0 45.69	2.94	. .	II.	5	46.390	20 31.87	17.67	9.55	21 0 48.63	16 45 39.1
18	9	. .	. .	. .	. .	10.5	22.	33.5	. .	. .	0 59.00	2.94	+0.01	VII.	1	44.130	48 1.85	17.64	10.85	1 1.95	17 13 10.3
19	10	39.	. .	. .	. .	. .	. .	. .	. .	. .	7 1.84	2.90	−0.01	I.	7	38.250	10 36.73	17.08	9.07	7 4.73	16 35 42.9
20	9	. .	. .	. .	. .	. .	34.	46.	. .	. .	7 11.26	2.90	0.01	VII.	6	36.775	17 21.69	17.08	9.39	7 14.15	42 28.2
21	9	54.	6.	18.	29.5	. .	. .	. .	. .	. .	10 29.08	2.88	−0.01	IV.	7	46.699	5 45.87	16.78	8.85	10 31.95	30 51.5
22	9	. .	. .	40.	51.5	3.6	14.6	. .	. .	. .	10 51.70	2.87	. .	VI.	5	41.680	23 14.11	16.75	9.68	10 54.57	48 20.5
23	9	52.5	4.	15.5	26.8	38.8	. .	. .	. .	. .	13 27.02	2.86	. .	I.	4	41.994	28 51.13	16.52	9.94	13 29.88	16 53 57.6
24	10	. .	. .	19.5	. .	. .	. .	. .	. .	. .	15 30.94	2.84	+0.01	III.	3	33.310	39 42.61	16.34	10.46	15 33.79	17 4 49.4
25	10	. .	. .	. .	48.	. .	. .	. .	. .	. .	16 47.99	2.84	. .	IV.	3	37.309	37 24.87	16.22	10.35	16 50.83	17 2 31.4
26	9	22.	34.	45.5	. .	. .	. .	. .	. .	. .	21 56.83	2.80	. .	III.	4	36.002	32 17.70	15.78	10.10	21 59.63	16 57 23.6
27	9	45.5	57.5	8.6	19.6	. .	. .	. .	. .	. .	25 20.06	2.78	. .	IV.	3	36.488	26 13.05	15.49	9.81	25 22.84	16 51 18.4
28	10	. .	. .	. .	19.	31.	42.6	. .	. .	. .	26 19.37	2.77	+0.01	VI.	2	37.400	46 4.54	15.41	10.76	26 22.15	17 11 10.7
29	10	. .	. .	. .	. .	. .	. .	26.	. .	. .	26 51.50	2.77	. .	VII.	4	39.260	30 25.32	15.37	10.00	26 54.27	16 55 30.7
30	10	35.	. .	58.	. .	. .	. .	. .	. .	. .	29 9.52	2.76	. .	III.	3	44.815	33 6.30	15.17	10.13	29 12.28	58 11.6
31	9.10	. .	. .	. .	. .	40.	52.	3.2	. .	. .	29 28.75	2.76	. .	F. W.	.	40.004	29 59.84	15.15	10.00	29 31.51	16 55 5.0
32	4	. .	. .	32.5	44.	56.	. .	. .	. .	. .	31 44.16	2.74	. .	V.	1	31.992	55 0.13	14.96	11.21	31 46.90	17 20 6.3
33	9	26.6	38.2	50.	. .	. .	. .	. .	. .	. .	36 1.21	2.71	−0.01	III.	6	42.185	14 15.49	14.61	9.24	36 3.91	16 39 19.3
34	10	. .	. .	. .	. .	. .	. .	34.	. .	. .	35 59.45	2.71	0.01	VII.	5	48.590	19 15.98	14.61	9.48	36 2.15	44 20.1
35	10	. .	37.	49.	. .	. .	. .	. .	. .	. .	38 0.20	2.70	−0.01	III.	6	39.79	15 37.99	14.45	9.31	38 2.89	40 41.8
36	4	. .	. .	. .	. .	54.	5.	17.	. .	. .	38 42.36	2.70	. .	VII.	5	41.960	23 4.36	14.40	9.67	38 45.06	48 8.4
37	9	. .	. .	. .	. .	. .	58.5	10.	. .	. .	40 35.51	2.68	. .	VII.	5	45.985	20 45.71	14.24	9.56	40 38.19	45 49.5
38	9	33.	45.	56.5	7.	. .	. .	. .	. .	. .	42 7.61	2.67	. .	IV.	4	43.501	27 59.41	14.13	9.90	42 10.28	53 3.4
39	10	. .	55.	. .	. .	. .	. .	. .	. .	. .	45 17.96	2.65	. .	II.	3	46.45	32 9.92	13.88	10.09	45 20.61	57 13.9
40	10	54.	. .	. .	. .	. .	. .	. .	. .	. .	50 28.36	2.62	−0.01	I.	7	47.695	5 11.38	13.48	8.82	50 30.97	30 13.7
41	10	. .	. .	. .	. .	17.	29.	. .	. .	. .	50 5.77	2.62	. .	VI.	4	37.468	31 27.15	13.51	10.06	49 8.39	56 30.7
42	10	39.	. .	. .	. .	. .	. .	. .	. .	. .	55 13.57	2.59	. .	VI.	4	41.34	29 13.76	13.14	9.96	55 16.16	54 16.9
43	10	. .	. .	. .	. .	. .	. .	41.	. .	. .	55 6.50	2.59	. .	VII.	4	42.795	28 23.55	13.15	9.92	55 9.09	53 26.6
44	9.10	. .	. .	. .	. .	. .	22.	33.6	. .	. .	55 59.05	2.58	. .	VII.	4	43.842	27 47.47	13.09	9.89	56 1.63	52 50.4
45	9	. .	. .	35.	46.5	57.6	. .	. .	. .	. .	57 46.41	2.57	−0.01	V.	5	50.450	18 12.07	12.95	9.43	57 48.97	43 14.4
46	9	5.5	17.	28.	40.	. .	. .	. .	. .	. .	21 59 39.85	2.56	−0.01	V.	5	49.620	18 40.66	12.82	9.45	21 59 42.40	16 43 42.9
47	8.9	. .	. .	. .	. .	. .	36.	. .	. .	. .	22 0 12.92	2.56	+0.01	VII.	1	38.258	51 24.13	12.78	11.05	22 0 15.49	17 16 28.0
48	9.10	23.5	35.	46.5	. .	. .	. .	. .	. .	. .	5 57.98	2.52	. .	III.	4	49.322	24 38.87	12.38	9.73	6 0.50	16 49 41.0
49	8.9	. .	. .	. .	27.5	39.	51.	. .	. .	. .	22 6 27.77	+ 2.52	−0.01	VI.	7	43.721	7 28.38	−12.35	− 8.89	22 6 30.28	16 32 29.6

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848. h.	s.	s.	s.	s.	s.	° ′ ″	r.
Oct. 14,	. .	. .	. .	− 0.527	− 0,192	. . .	40.040

INSTRUMENT READINGS.*

	Date.			CIRCLE.						Barom.	Attached Thermom.	External Thermom.
				A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848.	h.	m.	° ′ ″				″	″	in.	°	°
Zone 153	Oct. 14,	20	26	304 12 28.2	30.7	35.1	37.4	33.02	32.85			
		20	40	. .	. .	. .	. .	. .	. .	29.972	61.	53.2
		21		. .	. .	. .	. .	. .	. .	. .	. .	52.6
		21	40	. .	. .	. .	. .	. .	. .	29.968	51.2	59.3
		22		. .	. .	. .	. .	. .	. .	. .	. .	51.
		22	20	. .	. .	. .	. .	. .	. .	29.970	58.5	50.
		22	40	. .	. .	. .	. .	. .	. .	. .	. .	49.9
		23		. .	. .	. .	. .	. .	. .	29.966	57.8	49.2

REMARKS.

(153) 1. Micrometer reading assumed as $38^r.002$ instead of $37^r.002$.

(153) 19. Transit over T. II assumed to have been recorded as over T. I.

(153) 27. Micrometer thread assumed as 5 instead of 3.

(153) 41. Minutes assumed as 49 instead of 50.

* The nearest nadir point is October 11.

ZONE 153. OCTOBER 14. MS. $D_0 = -16° 24' 40''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
50	9	. .	16.	28.	39.8	. .	3.	. .	. .	. .	22 8 39.55	+ 2.51	+0.01	IV.	2	43.495	42 34.67	−12.19	−10.61	22 8 42.07	17 7 37.5
51	9.10	. .	. .	. .	. .	. .	35.	. .	. .	. .	9 12.06	2.50	. .	VI.	5	44.006	21 53.99	12.16	9.43	9 14.55	16 46 55.6
52	10	48:	59.5	11.	. .	. .	. .	. .	. .	. .	14 22.43	2.47	−0.01	III.	7	37.595	10 59.46	11.82	9.07	14 24.89	36 0.4
53	10	. .	. .	. .	25.	36.5	. .	. .	. .	. .	15 24.96	2.46	. .	V.	6	35.510	18 5.41	11.75	9.42	15 27.42	43 6.6
54	10	0.	. .	. .	. .	. .	. .	. .	. .	. .	20 34.57	2.43	. .	I.	4	37.47	31 26.97	11.41	10.07	20 37.00	56 28.4
55	10	. .	. .	. .	. .	57.	8.5	20.	. .	. .	20 45.52	2.43	. .	VII.	4	40.20	29 52.93	11.41	10.00	20 47.95	16 54 54.3
56	9	. .	56.	7.	. .	. .	. .	. .	. .	. .	22 18.72	2.42	+0.01	III.	2	44.028	41 41.84	11.30	10.59	22 21.15	17 6 43.7
57	9	26.	38.	50.	. .	. .	. .	. .	. .	. .	28 0.99	2.39	0.01	III.	2	40.182	44 28.77	10.90	10.70	28 3.39	9 30.4
58	10	. .	. .	. .	. .	. .	31.	. .	. .	. .	28 7.94	2.39	0.01	VI.	2	35.538	47 8.69	10.90	10.84	28 10.34	12 10.4
59	9	. .	. .	. .	. .	37.	49.	. .	. .	. .	29 25.75	2.38	0.01	VI.	2	41.750	43 34.69	10.80	10.66	29 28.14	8 36.2
60	10	. .	. .	. .	. .	36.	. .	. .	. .	. .	30 24.56	2.37	+0.01	V.	1	41.115	49 45.87	10.82	10.98	30 26.94	17 14 47.7
61	9	. .	41.	52.5	3.8	. .	. .	. .	. .	. .	32 3.91	2.36	. .	IV.	5	43.915	21 57.20	10.73	9.46	32 6.27	16 46 57.4
62	9	44.	. .	7.5	. .	. .	. .	. .	. .	. .	35 18.74	2.35	−0.01	III.	6	39.725	15 40.23	10.54	9.30	35 21.08	40 40.1
63	10	. .	. .	. .	. .	. .	. .	2.	. .	. .	35 27.50	2.35	. .	VII.	4	39.850	30 4.99	10.54	10.00	35 29.85	16 55 5.5
64	9	22.5	34.	45.6	. .	. .	. .	. .	. .	. .	38 57.02	2.33	+0.01	III.	2	36.120	46 48.70	10.34	10.82	38 59.36	17 11 49.9
65	9	. .	. .	. .	. .	25.	37.	48.8	. .	. .	39 13.95	2.33	. .	VII.	4	38.640	30 46.66	10.32	10.03	39 16.28	16 55 47.0
66	9	29.	40.	52.5	. .	. .	. .	. .	. .	. .	42 3.49	2.30	. .	III.	2	45.720	41 18.00	10.17	10.55	42 5.79	17 6 18.7
67	9	. . .	14.	26.	37.5	. .	. .	. .	. .	. .	45 37.31	2.28	. .	IV.	3	37.780	37 8.55	9.99	10.34	45 39.59	2 8.9
68	8	. .	24.	35.6	46.	58.	. .	. .	. .	. .	46 46.64	2.28	. .	V.	3	35.015	38 43.89	9.93	10.42	46 48.92	3 44.2
69	9	19.	31.	42.5	. .	. .	. .	. .	. .	. .	48 53.83	2.27	. .	IV.	3	34.402	39 5.01	9.82	10.43	48 56.10	17 4 5.3
70	10	36.	48.	59.5	. .	. .	. .	. .	. .	. .	50.10.79	2.26	−0.01	III.	6	36.872	17 18.50	9.75	9.38	50 13.04	16 42 17.6
71	9.10	. .	13.	25.	. .	. .	. .	. .	. .	. .	51 36.22	2.25	. .	III.	4	40.760	29 33.80	9.69	9.98	51 38.47	16 54 33.5
72	9	. .	. .	. .	. .	58.	9.8	. .	. .	. .	52 46.65	2.24	+0.01	VI.	2	36.695	46 28.83	9.63	10.80	52 48.90	17 11 29.3
73	10	44.	56.	. .	. .	. .	. .	. .	. .	. .	22 56 18.72	2.23	. .	II.	5	40.595	23 51.49	9.46	9.70	22 56 20.95	16 48 50.6
74	10	33.	45.	56.3	7.	. .	. .	. .	. .	. .	23 2 7.57	2.19	. .	IV.	3	41.762	34 51.48	9.20	10.24	23 2 9.76	16 59 50.9
75	10	53.5	6.	. .	. .	. .	. .	. .	. .	. .	3 28.52	2.18	. .	II.	3	35.350	38 32.28	9.14	10.43	3 30.70	17 3 31.8
76	10	0.0	12.	24.	. .	. .	. .	. .	. .	. .	4 34.99	2.17	. .	III.	4	33.840	33 32.17	9.10	10.18	4 37.16	16 58 31.4
77	10	23.	34.5	46.5	57.5	. .	. .	. .	. .	. .	6 57.62	2.16	. .	IV.	3	36.080	38 7.22	8.99	10.40	6 59.78	17 3 6.6
78	9	58.5	10.	22.	33.5	45.	. .	. .	. .	. .	9 33.30	2.15	. .	V.	3	42.720	34 18.47	8.88	10.22	9 35.45	16 59 17.6
79	9	. .	. .	. .	. .	. .	8.	20.	. .	. .	11 45.26	2.14	−0.01	VII.	6	47.815	11 1.39	8.81	9.05	11 47.39	16 35 59.2
80	9	. .	. .	57.	8.	20.	31.5	. .	. .	. .	15 8.36	2.12	. .	VI.	2	43.40	42 37.86	8.68	10.63	15 10.48	17 7 37.2
81	10	54.	. .	17.	. .	. .	. .	. .	. .	. .	16 28.50	2.11	. .	III.	3	42.120	34 39.14	8.63	10.23	16 30.61	16 59 38.0
82	10	. .	47.	. .	. .	. .	. .	. .	. .	. .	18 9.97	2.10	. .	II.	3	45.50	32 42.64	8.57	10.15	18 12.07	16 57 41.4
83	10	. .	. .	31.	42.5	54.5	. .	. .	. .	. .	18 42.66	2.10	. .	V.	2	46.172	41 2.44	8.55	10.55	18 44.76	17 6 1.5
84	9	. .	. .	. .	. .	. .	. .	36.	. .	. .	23 1.48	2.08	. .	VII.	4	51.452	23 25.33	8.41	9.67	23 3.56	16 48 23.4
85	9	27.	39.	50.8	. .	13.	. .	. .	. .	. .	26 1.83	2.06	. .	V.	2	42.265	43 17.03	8.31	10.67	26 3.89	17 8 16.0
86	9	32.	44.	55.6	7.	18.5	. .	. .	. .	. .	28 6.93	2.05	. .	V.	2	44.400	42 3.47	8.25	10.60	28 8.98	17 7 2.3
87	9	14.	25.5	37.	48.5	0.0	. .	. .	. .	. .	39 48.50	1.99	. .	V.	5	40.410	23 57.92	7.95	9.70	39 50.49	16 48 55.6
88	10	. .	58.	9.	20.	. .	. .	. .	. .	. .	42 20.48	1.98	. .	IV.	3	31.82	40 33.95	7.91	10.52	42 22.46	17 5 32.4
89	9	. .	. .	. .	. .	. .	7.5	19.	. .	. .	41 44.52	1.98	. .	VII.	6	38.320	16 28.46	7.92	9.33	41 46.50	16 41 25.7
90	10	. .	. .	. .	. .	. .	. .	38.	. .	. .	43 3.51	1.97	. .	VII.	4	36.00	32 17.61	7.89	10 12	43 5.48	57 15.6
91	10	. .	. .	. .	. .	40.	52.	. .	. .	. .	44 28.80	1.97	. .	VI.	5	38.760	24 54.69	7.86	10.32	44 30.77	49 52.9
92	8.9	1.6	. .	25.	36.5	47.5	. .	. .	. .	. .	50 36.30	1.94	. .	V.	6	39.494	15 48.18	7.75	9.29	50 38.24	40 45.2
93	10	. .	. .	14.	. .	36.	48.	. .	. .	. .	23 59 25.07	+ 1.89	. .	VI.	6	39.180	15 58.94	− 7.62	− 9.30	23 59 26.96	16 40 55.9

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848.	h. m.	s.	s.	s.	s.	s.	° ′ ″	r.

REMARKS.

(153) 56. Micrometer reading assumed as $45^r.028$ instead of $44^r.028$.

INSTRUMENT READINGS.

	Date.	CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1848. h. m.	° ′ ″				″	″	in.	°	°
Zone 153	Oct. 14, 23 20	. .	. .	. .	. .	. .	. .	. .	. .	48.9
	23 40	. .	. .	. .	. .	. .	. .	29.960	56.9	48.6

ZONE 154. NOVEMBER 28. MAJ. $D_0 = -26° 25' 50''$.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
1	8	. .	. .	. .	32.5	. .	. .	. .	. .	. .	2 41 32.47	−11.31	. .	V.	5	36.918	17 16.91	−10.35	− 6.65	2 41 21.16	26 43 23.9
2	9	. .	. .	59.2	. .	23.8	. .	. .	. .	. .	46 11.52	11.34	. .	VI.	4	41.362	29 12.95	10.55	7.92	46 0.18	55 21.4
3	8	. .	. .	. .	. .	31.	43.2	55.5	. .	. .	47 18.60	11.35	. .	VI.	5	47.029	20 9.80	10.60	7.01	47 7.25	46 17.4
4	7	. .	37.2	. .	. .	. .	. .	. .	. .	. .	49 1.66	11.36	. .	.	7	45.15	6 39.24	10.67	5.69	48 50.30	32 45.6
5	7	. .	. .	. .	. .	17.8	29.8	. .	. .	. .	49 5.38	11.36	. .	VI.	6	34.48	18 40.79	10.67	6.86	48 54.02	44 48.3
6	6	. .	. .	. .	. .	58.	10.5	23.	. .	. .	49 45.86	11.36	. .	VII.	5	42.890	22 32.21	10.70	7.25	49 34.50	48 40.2
7	7	. .	. .	. .	. .	. .	. .	37.8	. .	. .	50 0.75	11.37	. .	12.	6	39.024	16 3.38	10.71	6.61	49 49.38	42 10.7
8	8	23.8	36.2	48.5	60.5	. .	. .	. .	. .	. .	53 0.72	11.38	. .	IV.	6	33.439	19 16.78	10.85	6.92	52 49.34	45 24.6
9	10	. .	7.	. .	31.5	. .	. .	. .	. .	. .	2 55 31.54	11.40	. .	.	5	41.374	23 24.73	10.97	7.35	2 55 20.14	26 49 33.0
10	10	. .	. .	. .	. .	. .	. .	33.2	. .	. .	3 0 56.19	11.44	. .	11.	3	37.262	37 25.82	11.24	8.65	3 0 44.75	27 3 35.7
11	9	. .	. .	. .	. .	. .	. .	57.5	. .	. .	2 20.48	11.45	. .	.	3	41.071	35 14.99	11.31	8.53	2 9.03	27 1 24.8
12	9	. .	. .	. .	. .	. .	. .	. .	. .	41.	2 33.16	11.45	. .	.	4	39.982	29 59.61	11.32	8.00	2 21.71	26 56 8.9
13	9	. .	. .	. .	. .	. .	. .	. .	. .	31.2	3 23.48	11.45	. .	.	5	40.933	23 38.91	11.37	7.36	3 12.03	49 47.6
14	7	3.0	15.2	27.7	39.6	51.9	4.7	16.6	. .	. .	6 39.81	11.47	. .	.	5	41.352	23 25.48	11.54	7.33	6 28.34	26 49 34.4
15	8	50.7	3.2	15.4	27.2	. .	. .	. .	. .	. .	8 27.64	11.48	. .	.	3	42.309	34 32.64	11.64	8.45	8 16.16	27 0 42.7
16	6	. .	. .	. .	. .	. .	. .	21.5	. .	. .	8 44.44	11.48	. .	.	6	43.472	13 31.17	11.65	6.33	8 32.96	26 39 39.2
17	8	. .	. .	. .	. .	. .	. .	12.8	. .	. .	3 9 35.77	−11.49	. .	.	4	38.55	30 49.95	11.70	8.08	9 24.28	26 56 59.7
18	8	. .	. .	. .	. .	. .	. .	. .	. .	. .	. . .	. .	. .	.	3	37.52	37 17.61	11.73	8.73	9 24.28	27 3 28.1
19	6	. .	. .	24.	. .	48.5	60.4	. .	. .	. .	3 11 36.09	−11.50	. .	.	4	43.258	28 7.78	11.81	7.81	11 24.59	26 54 17.4
20	5	. .	5.9	18.8	30.7	. .	. .	. .	. .	. .	14 30.77	11.52	. .	.	5	40.083	24 9.21	11.99	7.41	14 19.25	26 50 18.6
21	5	. .	. .	20.	32.3	. .	. .	. .	. .	. .	14 32.28	11.52	. .	.	2	42.85	42 56.89	12.00	9.32	14 20.76	27 9 8.2
22	8	. .	. .	. .	. .	. .	. .	27.2	. .	. .	14 50.16	11.52	. .	.	6	37.82	16 45.86	12.00	6.66	14 38.64	26 42 54.5
23	8	. .	. .	. .	. .	. .	. .	17.5	. .	. .	15 40.47	11.53	. .	.	5	42.155	22 57.84	12.05	7.29	15 28.94	49 7.2
24	7	. .	. .	. .	56.8	. .	21.2	. .	. .	. .	16 56.76	11.53	. .	.	6	43.65	13 25.04	12.13	6.32	16 45.23	39 33.5
25	7	. .	. .	. .	. .	57.2	10.2	. .	. .	. .	17 45.26	11.54	. .	.	5	44.092	21 51.10	12.18	7.17	17 33.72	48 0.4
26	8	. .	. .	. .	. .	. .	. .	. .	22.	. .	18 26.85	11.54	. .	.	6	40.752	15 4.86	12.22	6.49	18 15.31	41 13.6
27	8	. .	. .	. .	6.8	. .	31.2	43.2	. .	. .	21 6.52	11.56	. .	.	6	30.39	21 1.81	12.38	7.10	20 54.96	47 11.3
28	8	. .	. .	. .	. .	. .	. .	50.7	. .	. .	22 13.67	11.56	. .	.	5	36.998	25 55.48	12.45	7.59	22 2.11	52 5.5
29	8	. .	32.	44.4	56.8	9.2	. .	. .	. .	. .	23 56.76	11.57	. .	.	5	39.561	24 27.19	12.56	7.43	23 45.19	26 50 37.2
30	8	. .	. .	40.2	52.4	5.0	17.8	. .	. .	. .	*19 52.66	11.58	. .	.	2	44.71	41 52.81	12.63	9.21	24 41.08	27 8 4.6
31	9	. .	. .	. .	. .	41.5	. .	. .	. .	. .	26 29.21	11.59	. .	.	1	41.254	49 41.07	12.73	10.02	26 17.62	27 15 53.8
32	9	. .	. .	. .	. .	. .	. .	43.7	. .	. .	27 6.64	11.59	. .	11.	7	40.942	9 3.50	12.76	5.89	26 55.05	26 35 12.2
33	8	45.	57.2	9.8	21.8	. .	. .	. .	. .	. .	29 21.95	11.60	. .	.	4	40.248	29 51.46	12.91	7.99	29 10.35	26 56 2.4
34	8	. .	. .	. .	. .	. .	. .	. .	38.4	. .	29 43.19	11.60	. .	.	1	38.68	51 9.77	12.93	10.17	29 31.59	27 17 22.9
35	7	19.2	31.7	43.7	. .	. .	. .	. .	. .	. .	32 56.23	11.62	. .	.	1	46.849	46 28.37	13.15	9.68	32 44.61	27 12 41.2
36	8	: .	. .	36.	47.8	. .	. .	. .	. .	. .	33 48.09	11.63	. .	.	6	37.918	16 42.49	13.21	6.65	33 36.46	26 42 52.4
37	10	40.	. .	4.7	. .	. .	. .	. .	. .	. .	37 17.03	11.64	. .	.	5	39.45	24 30.98	13.46	7.44	37 5.39	26 50 41.9
38	9	. .	. .	. .	42.0	54.1	. .	. .	. .	. .	40 41.90	11.66	. .	.	3	34.162	39 13.28	13.69	8.93	40 30.24	27 5 25.9
39	9	. .	. .	55.2	7.4	. .	. .	. .	. .	. .	42 7.43	11.67	. .	.	2	36.822	46 24.53	13.79	9.68	41 55.76	27 12 38.0
40	5	. .	. .	. .	. .	. .	. .	. .	48.2	. .	41 53.05	11.67	. .	.	6	39.447	15 49.82	13.78	6.56	41 41.38	26 42 0.2
41	8	. .	. .	. .	. .	. .	40.1	52.5	. .	. .	43 15.48	11.67	. .	VII.	6	34.852	18 27.80	13.88	6.84	42 3.81	26 44 38.5
42	9	. .	. .	. .	. .	43.2	55.4	7.9	. .	. .	44 30.82	11.68	. .	.	3	37.328	37 24.20	13.97	8.74	44 19.14	27 3 36.9
43	10	. .	. .	. .	. .	50.7	. .	15.4	. .	. .	45 38.36	11.68	. .	11.	1	41.472	49 32.91	14.08	10.00	45 26.68	15 47.0
44	10	. .	. .	31.	43.2	. .	. .	. .	. .	. .	48 43.24	11.69	. .	.	3	39.322	36 15.54	14.28	8.62	48 31.55	27 2 28.4
45	8	. .	. .	. .	17.4	30.	42.4	55.	. .	. .	49 17.69	11.70	. .	.	4	34.662	33 3.88	14.33	8.30	49 5.99	26 59 16.5
46	6	. .	. .	. .	. .	. .	. .	. .	. .	39.7	49 32.22	11.70	. .	.	7	33.658	13 15.10	14.34	6.30	49 20.52	26 39 25.7
47	9	. .	. .	. .	. .	. .	. .	31.9	. .	. .	50 54.87	11.71	. .	.	2	40.398	44 21.06	14.45	9.47	50 43.16	27 10 35.0
48	7	. .	. .	. .	17.	29.4	41.0	. .	. .	. .	52 17.93	11.72	. .	.	7	45.63	6 22.70	14.56	5.63	52 6.21	26 32 32.9
49	8	47.4	60.2	12.5	24.7	. .	. .	. .	. .	. .	3 54 24.73	−11.72	. .	.	1	41.387	49 36.52	−14.74	−10.01	3 54 13.01	27 15 51.3

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848. h.	s.	s.	s.	s.	s.	° ′ ″	r.
Nov. 28, 3	−12.987	g 0.014	. .	− 1.264	− 0.897	359 59 59.63	40.138

INSTRUMENT READINGS.

	Date.	CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1848. h. m.	° ′ ″				″	″	in.	°	°
Zone 154	Nov. 28, 2 40	294 12 1.4	5.2	5.7	10.8	5.79	5.78	30.240	40.2	32.2
	3	. .	. .	. .	. .	. .	. .	. .	. .	32.0
	3 20	. .	. .	. .	. .	. .	. .	. .	. .	31.8
	3 40	. .	. .	. .	. .	. .	. .	30.234	39.5	31.5
	3 59	4.4	8.0	7.7	13.4	8.39	8.38	. .	. .	31.1

REMARKS.

(154) 1. Micrometer thread assumed as 6 instead of 5.
(154) 30. * Minutes of transit probably 24.
(154) 18. Same right ascension as 17.

ZONE 154. NOVEMBER 28. MAJ. $D_0 = -26° 25' 50''$—Continued.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
50	6	. .	53.2	5.8	17.8	30.3	. .	. .	. .	. .	3 55 17.93	−11.73	. .	.	4	39.450	30 18.95	−14.80	− 8.02	3 55 6.20	26 56 31.8
51	8	. .	. .	. .	. .	42.2	55.7	. .	. .	. .	56 30.44	11.73	. .	.	3	38.28	36 51.43	14.89	8.69	56 18.71	27 3 5.0
52	8	. .	. .	. .	. .	. .	. .	6.2	. .	. .	3 57 29.17	−11.74	. .	.	4	43.048	28 15.01	−14.97	− 7.82	3 57 17.43	26 54 27.8

ZONE 155. NOVEMBER 28. MAJ. $D_0 = -28° 56' 20''$.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	8	. .	. .	. .	. .	. .	9.5	22.	. .	. .	6 6 44.06	−12.03	−0.01	.	1	39.735	50 33.43	−13.40	−12.67	6 6 32.02	29 47 19.5
2	8	. .	. .	. .	55.0	7.8	20.7	. .	. .	. .	17 55.18	12.02	−0.01	.	1	39.955	50 25.86	15.04	12.65	17 43.15	47 13.6
3	8	. .	. .	. .	. .	. .	. .	. .	52.5	. .	17 56.06	12.02	+0.01	.	6	40.55	15 11.83	15.04	8.11	17 44.05	11 55.0
4	7	. .	40.0	52.8	5.2	. .	. .	. .	. .	. .	20 5.29	12.02	−0.01	.	2	47.074	40 31.38	15.36	11.36	19 53.26	37 18.1
5	8	. .	. .	. .	46.4	. .	. .	. .	. .	. .	20 46.50	12.02	+0.01	.	7	46.112	6 6.09	15.43	6.97	20 34.49	2 48.5
6	8	. .	. .	. .	. .	23.	35.7	48.3	. .	. .	21 10.44	12.01	. .	.	5	39.82	24 18.26	15.51	9.28	20 58.43	21 3.0
7	9	. .	. .	. .	. .	. .	. .	26.6	. .	. .	21 48.68	12.01	−0.01	.	2	40.255	44 25.95	15.61	11.86	21 36.66	41 13.4
8	9	. .	. .	. .	. .	10.8	23.4	. .	. .	. .	22 58.26	12.01	+0.01	.	6	40.668	15 7.73	15.78	8.10	22 46.26	11 51.6
9	9	. .	. .	. .	56.4	10.5	. .	. .	. .	. .	23 57.14	12.01	. .	.	4	44.728	27 17.14	15.93	9.66	23 45.13	24 2.7
10	9	. .	. .	. .	. .	. .	49.5	2.1	. .	. .	24 24.11	12.01	−0.01	.	1	42.401	49 1.45	15.99	12.47	24 12.09	45 49.9
11	8	41.2	54.0	6.5	18.8	. .	. .	. .	. .	. .	26 19.03	12.01	+0.01	.	6	39.99	15 31.12	16.27	8.15	26 7.03	12 15.5
12	8	. .	. .	. .	50.0	2.8	. .	. .	. .	. .	26 50.10	12.00	. .	.	3	38.645	36 38.85	16.35	10.84	26 38.10	33 26.0
13	8	. .	. .	. .	. .	. .	26.	39.4	. .	. .	27 1.11	12.00	. .	.	4	36.55	31 58.85	16.37	10.24	26 49.11	28 45.5
14	8	. .	. .	. .	. .	7.8	. .	. .	. .	. .	27 55.21	12.00	. .	.	4	33.54	33 42.53	16.51	10.46	27 43.21	30 29.5
15	9	. .	. .	19.2	. .	. .	57.5	10.0	. .	. .	28 32.03	12.00	. .	.	4	32.68	34 12.16	16.60	10.53	28 20.03	30 59.3
16	9	. .	. .	20.0	32.3	44.9	. .	. .	. .	. .	30 32.44	12.00	+0.01	.	6	32.29	19 56.36	16.90	8.70	30 20.45	16 42.0
17	10	. .	. .	. .	40.8	54.0	. .	. .	. .	. .	31 41.12	12.00	−0.01	.	2	37.861	45 48.75	17.07	12.04	31 29.11	42 37.9
18	8	. .	63.0	15.4	. .	. .	. .	. .	. .	. .	33 28.04	11.99	+0.01	.	7	47.832	5 6.84	17.33	6.85	33 16.06	1 51.0
19	10	. .	. .	10.5	23.0	. .	. .	. .	. .	. .	34 23.03	11.99	−0.01	.	2	46.678	40 45.03	17.47	11.39	34 11.03	37 33.9
20	10	. .	. .	. .	. .	. .	19.5	32.0	. .	. .	34 54.14	11.99	−0.01	.	2	49.135	39 20.24	17.54	11.19	34 42.14	36 9.0
21	9	. .	. .	23.2	36.0	. .	. .	. .	. .	. .	36 35.88	11.99	. .	.	3	52.29	28 48.83	17.82	9.86	36 23.89	25 36.4
22	8	. .	. .	41.0	53.2	6.2	. .	. .	. .	. .	37 53.46	11.98	. .	.	3	45.72	32 35.14	17.99	10.32	37 41.48	29 23.4
23	6	. .	13.7	26.5	38.6	. .	. .	. .	. .	. .	40 38.86	11.98	. .	.	4	44.257	27 33.36	18.40	9.70	40 26.88	24 21.5
24	9	. .	. .	. .	17.5	30.0	. .	. .	. .	. .	41 17.43	11.97	. .	.	4	39.741	30 8.93	18.49	10.03	41 5.46	26 57.4
25	9	. .	. .	. .	. .	2.5	15.4	. .	. .	. .	41 50.10	11.97	+0.01	.	6	38.187	16 33.18	18.57	8.30	41 38.14	13 20.0
26	8	. .	. .	. .	. .	. .	59.2	. .	. .	. .	42 33.96	11.97	. .	.	5	33.725	27 48.22	18.68	9.73	42 21.99	24 36.6
27	6	. .	. .	. .	. .	. .	38.7	51.5	. .	. .	43 13.50	11.97	. .	.	3	36.498	37 52.82	18.78	11.01	43 1.53	34 42.6
28	9	. .	. .	. .	39.5	. .	. .	. .	. .	. .	44 39.55	11.97	+0.01	.	7	29.435	15 40.57	18.99	8.18	44 27.59	12 27.7
29	7	. .	. .	. .	. .	19.2	31.5	. .	. .	. .	45 6.49	11.96	0.01	.	6	32.52	19 48.44	19.06	8.71	44 54.54	16 36.2
30	7	. .	. .	. .	. .	6.2	18.4	31.7	. .	. .	45 53.57	11.96	+0.01	.	6	40.364	15 18.23	19.17	8.12	45 41.62	12 5.5
31	8	. .	. .	. .	. .	. .	. .	10.4	. .	. .	46 32.50	11.96	. .	.	3	41.98	34 43.97	19.27	10.60	46 20.84	31 33.8
32	8	. .	. .	. .	. .	. .	. .	. .	53.3	. .	46 56.76	11.96	. .	.	5	42.338	22 51.53	19.33	9.10	46 44.80	19 40.0
33	8	. .	. .	41.	53.8	. .	. .	. .	. .	. .	48 53.72	11.96	. .	.	5	44.592	21 33.88	19.62	8.94	48 41.76	18 22.4
34	9	. .	. .	. .	. .	. .	38.4	51.4	. .	. .	49 13.26	11.95	−0.01	.	2	39.315	44 58.51	19.66	11.93	49 1.30	41 50.0
35	8	. .	. .	25.5	38.	50.5	. .	. .	. .	. .	50 38.01	11.95	. .	.	5	36.351	26 17.76	19.87	9.53	50 26.06	23 7.2
36	8	. .	. .	. .	. .	. .	27.5	39.6	. .	. .	51 1.95	11.95	. .	.	3	40.140	35 47.36	19.93	10.72	50 50.00	32 38.0
37	8	. .	. .	. .	. .	. .	. .	. .	30.8	. .	51 34.28	11.95	+0.01	.	5	45.23	21 11.90	20.01	8.88	51 22.34	18 0.8
38	8	. .	. .	. .	23.	. .	. .	60.8	. .	. .	52 22.96	11.94	+0.01	.	7	39.428	9 56.34	20.13	7.47	52 11.03	6 43.9
39	8	. .	. .	52.2	4.5	17.4	. .	. .	. .	. .	54 4.69	11.94	. .	.	4	34.57	33 7.05	20.38	10.38	53 52.75	29 57.8
40	8	. .	. .	. .	. .	. .	65.2	17.5	. .	. .	54 39.82	11.94	+0.01	.	6	40.292	15 20.71	20.47	8.13	54 27.89	12 9.3
41	7	. .	. .	. .	. .	56.5	9.2	. .	. .	. .	55 43.91	11.93	. .	.	3	42.782	34 16.35	20.63	10.54	55 31.98	31 7.5
42	8	. .	. .	. .	. .	. .	. .	. .	. .	65.7	6 55 56.60	−11.93	+0.01	.	6	43.24	13 39.16	−20.66	− 7.92	6 55 44.68	29 10 27.7

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848. h.	s.	s.	s.	s.	s.	° ′ ″	r.

REMARKS.

INSTRUMENT READINGS.

	Date.	CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1848. h. m.	° ′ ″				″	″	in.	°	°
Zone 155	Nov. 28, 6 15	291 42 7.8	10.4	11.2	17.2	11.66	11.65	30.210	38.2	31.5
	6 40	. .	. .	. .	. .	. .	. .	. .	. .	30.5
	7 0	. .	. .	. .	. .	. .	. .	. .	. .	30.7
	7 17	. .	. .	. .	. .	. .	. .	30.206	37.8	
	7 40	291 42 7.0	10.9	11.2	16.8	11.49	11.48	30.200	37.5	31.2

ZONE 155. NOVEMBER 28. MAJ. $D_0 = -28° 56' 20''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
43	9	. .	. .	57.2	9.5	. .	. .	. .	. .	. .	6 58 9.71	−11.93	+0.01	.	6	43.60	13 26.76	−20.99	− 7.89	6 57 57.79	29 10 15.6
44	9	. .	. .	. .	. .	. .	. .	47.4	. .	. .	58 9.47	11.93	+0.01	.	7	38.824	10 16.80	20.98	7.51	57 57.55	7 5.3
45	9	. .	. .	. .	. .	. .	24.8	. .	. .	. .	58 59.52	11.92	. .	.	4	36.53	31 59.38	21.11	10.24	58 47.60	28 50.7
46	9	. .	. .	. .	. .	. .	26.0	. .	. .	. .	6 59 0.73	11.92	. .	.	4	37.345	31 31.31	21.11	10.18	6 58 48.81	28 22.6
47	8	. .	. .	. .	. .	. .	35.4	. .	. .	. .	7 2 10.26	11.91	+0.01	.	6	40.554	15 11.69	21.58	8.10	7 1 58.36	12 1.4
48	8	. .	. .	. .	. .	. .	25.5	38.0	. .	. .	3 0.07	11.91	−0.01	.	1	43.095	48 37.69	21.71	12.43	2 48.15	45 31.8
49	9	. .	. .	. .	. .	. .	19.8	. .	. .	. .	3 54.44	11.91	0.01	. .	2	41.474	43 44.13	21.84	11.80	3 42.52	40 37.8
50	8	. .	. .	. .	. .	. .	. .	23.1	. .	. .	4 45.10	11.90	−0.01	.	1	37.302	51 57.23	21.96	12.89	4 33.19	48 52.1
51	7	. .	. .	. .	1.5	14.2	26.7	. .	. .	. .	6 1.49	11.90	. .	.	3	38.254	36 52.32	22.15	10.88	5 49.59	33 45.4
52	7	. .	. .	. .	. .	24.2	36.7	49.8	. .	. .	7 11.62	11.90	−0.01	.	2	43.171	42 45.84	22.32	11.66	6 59.71	39 39.8
53	8	. .	. .	. .	28.8	41.5	. .	. .	. .	. .	8 28.86	11.89	−0.01	.	2	41.595	43 40.12	22.52	11.79	8 16.96	40 34.4
54	9	40.4	53.5	6.0	18.8	. .	. .	. .	. .	. .	10 18.58	11.89	+0.01	.	6	37.237	17 5.95	22.78	8.35	10 6.70	13 57.1
55	8	. .	. .	. .	. .	. .	15.4	28.	. .	. .	10 50.06	11.88	−0.01	.	2	41.652	43 38.15	22.86	11.78	10 38.17	40 32.8
56	7	. .	. .	. .	. .	31.0	43.2	. .	. .	. .	11 18.17	11.88	. .	.	4	38.104	31 5.31	22.94	10.12	11 6.29	27 58.4
57	8	. .	. .	. .	. .	49.2	61.4	14.2	. .	. .	12 36.33	11.88	−0.01	.	3	32.624	40 6.26	23.12	11.31	12 24.44	37 0.7
58	8	. .	11.2	. .	35.8	. .	. .	. .	. .	. .	13 36.06	11.87	+0.01	.	7	44.584	6 58.72	23.27	7.06	13 24.20	3 49.0
59	7	. .	. .	. .	8.4	21.4	34.2	. .	. .	. .	15 8.69	11.86	. .	.	3	35.809	38 16.55	23.50	11.07	14 56.83	35 11.1
60	8	. .	. .	. .	. .	. .	19.2	31.9	. .	. .	15 53.84	11.86	−0.01	.	1	36.219	52 34.55	23.60	12.97	15 41.97	49 31.1
61	6	. .	. .	. .	. .	. .	41.2	53.5	. .	. .	17 15.76	11.86	. .	.	4	38.108	31 5.18	23.81	10.12	17 3.90	27 59.1
62	1	. .	. .	. .	. .	34.	46.1	. .	. .	. .	18 21.27	11.86	+0.01	.	7	49.40	4 12.83	23.97	6.72	18 9.42	1 3.5
63	.	. .	. .	. .	. .	. .	64.2	16.4	. .	. .	19 38.78	11.85	0.01	.	7	43.658	7 30.48	24.16	7.13	19 26.94	4 21.8
64	9	. .	. .	. .	9.5	22.2	. .	. .	. .	. .	21 9.64	11.84	+0.01	.	7	41.675	8 38.93	24.38	7.27	20 57.81	5 30.6
65	8	. .	. .	12.4	25.5	. .	. .	. .	. .	. .	22 25.26	11.84	. .	.	5	43.065	22 26.49	24.56	9.04	22 13.42	19 20.1
66	7	. .	. .	. .	. .	16.2	28.8	. .	. .	. .	23 3.66	11.83	+0.01	.	6	40.124	15 26.50	24.66	8.13	22 51.84	12 19.3
67	8	. .	. .	. .	. .	21.2	. .	. .	. .	. .	24 8.61	11.83	. .	.	3	42.66	34 20.56	24.81	10.55	23 56.78	31 16.0
68	9	. .	. .	. .	. .	12.5	25.0	. .	. .	. .	24 59.80	11.83	. .	.	3	36.111	38 6.11	24.95	11.05	24 47.97	35 2.1
69	7	. .	. .	. .	9.5	21.8	. .	. .	. .	. .	26 9.40	11.82	+0.01	I.	7	35.702	12 3.92	25.11	7.71	25 57.59	8 56.7
70	6	. .	. .	. .	. .	36.0	48.8	. .	. .	. .	26 23.52	11.82	. .	.	5	43.285	22 18.91	25.14	9.03	26 11.70	19 13.1
71	8	. .	. .	. .	. .	. .	. .	15.5	. .	. .	27 37.60	11.82	. .	.	3	44.360	33 21.99	25.32	10.42	27 25.78	30 17.7
72	6	. .	. .	. .	. .	. .	26.8	. .	. .	. .	29 1.70	11.81	+0.01	.	7	42.357	8 15.44	25.53	7.22	28 49.90	5 8.2
73	8	. .	. .	. .	. .	. .	16.0	28.8	. .	. .	29 50.76	11.81	− 0.01	.	2	41.95	43 27.89	25.65	11.78	29 38.94	40 25.3
74	8	. .	. .	. .	. .	. .	18.5	31.1	. .	. .	30 53.22	11.80	. .	.	4	39.574	30 14.68	25.80	10.02	30 41.42	27 10.5
75	7	46.4	59.9	12.2	. .	. .	. .	. .	. .	. .	33 24.66	11.79	+0.01	.	7	37.098	11 16.60	26.17	7.61	33 12.88	8 10.4
76	9	. .	. .	. .	. .	58.5	11.5	. .	. .	. .	33 46.00	11.79	−0.01	.	1	39.582	50 38.66	26.22	12.71	33 34.20	47 37.6
77	8	. .	. .	. .	. .	. .	54.2	5.6	. .	. .	34 28.34	11.78	. .	.	5	40.238	24 3.87	26.32	9.24	34 16.56	20 59.4
78	8	. .	. .	. .	. .	. .	51.5	. .	. .	. .	38 26.36	11.77	+0.01	.	6	39.418	15 50.83	26.90	8.20	38 14.60	12 45.9
79	8	. .	. .	. .	. .	45.6	57.2	10.6	. .	. .	39 32.54	11.76	. .	.	3	42.291	34 33.27	27.06	10.58	39 20.78	31 30.9
80	8	. .	. .	49.5	2.3	. .	. .	. .	. .	. .	7 41 2.18	−11.75	. .	.	3	41.61	34 56.72	−27.28	−10.64	7 40 50.43	29 31 54.6

ZONE 156. DECEMBER 2. MAJ. $D_0 = -21° 25' 10''$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	3	2.	13.9	25.6	37.4	49.4	1.6	12.8	. .	. .	23 1 37.53	−11.09	. .	IV.	3	44.040	33 33.01	−16.03	−10.22	23 1 26.44	21 59 9.3
2	8	. .	. .	. .	51.5	3.7	15.	. .	. .	. .	2 3.42	11.11	. .	.	5	39.968	24 30.40	15.97	9.64	2 52.31	50 6.0
3	8	. .	. .	. .	. .	. .	. .	23.5	. .	. .	3 47.89	11.11	. .	.	5	41.385	23 24.35	15.90	9.57	3 36.78	21 48 59.8
4	7	. .	28.7	40.6	52.	. .	. .	. .	. .	. .	7 52.28	11.14	+0.01	.	2	42.804	42 58.47	15.67	10.84	7 41.15	22 8 35.0
5	8	. .	. .	. .	37.4	. .	1.0	. .	. .	. .	8 37.32	11.15	. .	.	3	42.47	34 27.10	15.63	10.28	8 26.17	0 3.0
6	7	. .	. .	39.4	. .	3.0	. .	. .	. .	. .	8 3.02	11.16	. .	.	3	40.567	35 32.65	15.66	10.36	8 51.86	22 1 8.7
7	7	. .	. .	36.4	48.0	. .	. .	. .	. .	. .	23 11 48.20	−11.18	−0.02	.	7	46.512	5 52.31	−15.46	− 8.44	23 11 37.00	21 31 26.2

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848.	h.	s.	s.	s.	s.	s.	° ′ ″	r.
Dec. 2,	1	−14.545	g 0.014	. .	− 1.264	− 0.897	0 0 1.14	40.138

INSTRUMENT READINGS.

	Date.			CIRCLE.						Barom.	Attached Thermom.	External Thermom.
				A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848.	h.	m.	° ′ ″				″	″	in.	°	°
Zone 156	Dec. 2,	23	0	299 12 5.	8.4	7.8	13.7	8.76	8.72	29.848	. .	49.0
		23	20	. .	. .	. .	. .	. .	. .	29.858	52.0	48.0
		23	40	4.4	8.2	8.3	14.7	8.94	8.90	29.864	. .	46.9
		0	0	. .	. .	. .	. .	. .	. .	29.868	52.	44.8
		0	20	. .	. .	. .	. .	. .	. .	. .	. .	44.3
		0	42	. .	. .	. .	. .	. .	. .	29.872	51.5	41.6

REMARKS.

(156) 2. Transits over T.'s III–V assumed to have been recorded over T.'s IV–VI, and minutes assumed as 3 instead of 2.

(156) 6. Transits over T.'s II and IV assumed to have been recorded over T.'s III and V, and minutes assumed as 9 instead of 8.

ZONE 156. DECEMBER 2. MAJ. $D_0 = -21° 25' 10''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
8	8	. .	. .	19.3	31.4	43.8	. .	. .	. .	. .	23 12 31.53	−11.19	−0.01	.	5	46.921	20 13.66	−15.43	− 9.36	23 12 20.33	21 45 48.4
9	8	. .	. .	. .	34.8	46.4	. .	. .	. .	. .	13 34.74	11.20	−0.01	.	6	41.531	14 38.03	15.38	9.01	13 23.53	21 40 12.4
10	8	46.8	59.2	10.2	. .	. .	. .	. .	. .	. .	15 22.46	11.21	+0.01	.	2	43.432	42 36.84	15.29	10.82	15 11.26	22 8 13.0
11	8	8.5	21.	32.4	44.0	. .	. .	. .	. .	. .	16 44.26	11.22	. .	.	4	47.000	25 58.87	15.22	9.74	16 33.04	21 51 33.8
12	7	. .	. .	. .	. .	. .	27.4	39.	. .	. .	17 3.48	11.22	+0.01	.	1	40.135	50 19.65	15.21	11.33	16 52.27	22 15 56.2
13	7	. .	. .	. .	30.9	43.5	. .	. .	. .	. .	18 31.32	11.24	+0.01	.	1	41.36	49 37.45	15.14	11.29	18 20.09	15 13.9
14	6	. .	24.5	. .	. .	. .	12.0	23.6	. .	. .	18 48.16	11.24	. .	.	3	41.012	35 17.32	15.12	10.34	18 36.92	0 52.8
15	8	. .	. .	. .	. .	. .	. .	. .	13.5	. .	19 20.39	11.24	. .	.	3	37.958	37 2.53	15.11	10.45	19 9.15	2 38.1
16	8	. .	. .	. .	57.9	10.3	. .	. .	. .	. .	20 58.22	11.26	+0.01	.	1	37.160	52 2.13	15.02	11.44	20 46.97	17 38.6
17	5	25.2	37.	48.2	60.7	. .	. .	. .	. .	. .	24 0.58	11.29	0.01	.	2	37.125	46 14.10	14.89	11.06	23 49.30	11 50.0
18	6	. .	44.0	. .	7.	. .	. .	. .	. .	. .	24 7.36	11.29	+0.01	.	3	34.571	38 59.20	14.89	10.58	23 56.08	22 4 34.7
19	5	. .	. .	. .	. .	. .	0.0	11.7	. .	. .	25 36.22	11.30	−0.01	.	6	33.818	19 3.73	14.83	9.28	25 24.91	21 44 37.8
20	10	. .	. .	. .	. .	. .	18.4	. .	. .	. .	25 54.68	11.30	. .	.	4	39.745	30 8.68	14.81	9.99	25 43.38	55 43.5
21	8	. .	39.8	51.4	2.7	15.0	. .	. .	. .	. .	31 3.16	11.34	−0.01	.	6	38.548	16 20.79	14.61	9.11	30 51.81	41 54.5
22	8	. .	17.8	29.6	41.1	53.0	. .	. .	. .	. .	?32 41.29	11.38	. .	.	4	40.414	29 45.74	14.45	9.98	35 29.91	21 55 20.2
23	9	. .	. .	35.3	. .	59.2	. .	. .	. .	. .	37 47.24	11.40	+0.01	.	2	46.97	40 34.97	14.38	10.69	37 35.85	22 6 10.0
24	9	. .	. .	. .	. .	. .	57.9	. .	. .	. .	39 34.06	11.42	. .	.	1	32.008	54 59.50	14.31	11.65	39 22.64	22 20 35.5
25	8	. .	. .	20.5	32.1	44.5	. .	. .	. .	. .	41 32.39	11.43	. .	.	5	37.352	25 43.27	14.26	9.72	41 20.96	21 51 17.2
26	8	. .	. .	. .	50.6	2.8	. .	. .	. .	. .	42 50.85	11.45	−0.01	.	6	46.78	11 37.22	14.22	8.81	42 39.39	37 10.2
27	8	. .	. .	47.	58.2	. .	. .	. .	. .	. .	43 58.60	11.46	−0.02	.	7	46.918	11 22.80	14.19	8.79	43 47.12	21 36 55.8
28	8	. .	. .	10.4	21.8	34.7	. .	. .	. .	. .	45 22.29	11.47	. .	.	1	35.026	53 15.65	14.16	11.53	45 10.82	22 18 51.3
29	6	62.1	13.8	26.0	37.4	49.6	. .	. .	. .	. .	47 37.66	11.49	+0.01	.	2	35.347	47 15.35	14.10	11.13	47 26.18	22 12 50.6
30	7	. .	. .	. .	. .	. .	25.6	37.9	. .	. .	48 2.11	11.49	−0.01	.	5	44.23	21 46.35	14.09	9.46	47 50.61	21 47 19.9
31	5	. .	. .	. .	38.4	50.3	2.2	. .	. .	. .	49 38.52	11.50	0.01	.	6	41.670	14 33.24	14.04	9.01	49 27.01	40 6.3
32	9	17.4	29.2	41.0	52.2	. .	. .	. .	. .	. .	51 52.72	11.52	0.01	.	5	45.038	21 18.52	13.99	9.44	51 41.19	46 52.0
33	9	. .	. .	. .	. .	43.2	55.4	. .	. .	. .	52 31.58	11.53	0.01	.	5	48.470	19 20.27	13.98	9.30	52 20.04	44 53.5
34	6	. .	. .	. .	. .	. .	2.1	14.4	. .	. .	53 38.64	11.54	0.01	.	7	44.637	6 56.90	13.96	8.52	53 27.09	32 29.4
35	9	. .	. .	. .	. .	50.7	2.8	14.4	. .	. .	54 38.95	11.55	−0.01	.	6	37.718	16 49.36	13.91	9.14	54 27.39	21 42 22.4
36	8	. .	27.2	39.4	50.4	2.8	15.2	. .	. .	. .	57 50.99	11.58	+0.01	.	2	42.000	43 26.17	13.87	10.88	57 39.42	22 9 0.9
37	.	. .	. .	. .	. .	14.7	26.5	. .	. .	. .	23 58 2.78	11.58	. .	.	1	32.632	54 38.09	13.87	11.62	23 57 51.20	20 13.6
38	6	. .	32.2	44.2	55.5	8.3	. .	. .	. .	. .	0 0 55.99	11.60	+0.01	.	1	42.217	49 7.94	13.82	11.28	0 0 44.40	14 43.0
39	5	. .	. .	19.7	31.	. .	. .	. .	. .	. .	1 31.24	11.61	. .	.	3	38.29	36 51.08	13.81	10.45	1 19.63	2 25.3
40	7	. .	. .	. .	. .	. .	. .	43.5	. .	. .	2 7.90	11.61	+0.01	.	2	34.98	47 27.98	13.80	11.16	1 56.30	13 2.9
41	8	. .	27.4	39.7	. .	. .	. .	. .	. .	. .	3 51.31	11.63	. .	.	3	33.74	39 27.82	13.79	10.62	3 39.68	5 2.2
42	7	20.3	31.6	44.0	55.6	7.8	19.7	. .	. .	. .	6 55.76	11.65	. .	.	3	40.28	35 42.54	13.75	10.37	6 44.11	22 1 16.7
43	5	17.0	29.	40.7	52.4	. .	. .	. .	. .	. .	10 52.56	11.69	. .	.	3	45.426	32 45.27	13.71	10.17	10 40.87	21 58 19.2
44	10	. .	. .	. .	. .	. .	. .	15.5	. .	. .	10 39.93	11.69	. .	.	2	52.93	37 9.42	13.71	10.47	10 28.24	22 2 43.6
45	9	. .	. .	. .	. .	. .	. .	18.4	. .	. .	20 42.84	11.77	+0.01	.	2	44.728	41 51.96	13.66	10.78	20 31.08	7 26.4
46	8	. .	. .	38.5	49.9	2.0	. .	. .	. .	. .	22 50.13	11.79	0.01	.	1	37.100	52 4.20	13.67	11.47	22 38.35	17 39.3
47	6	. .	. .	. .	51.3	3.6	15.8	. .	. .	. .	23 51.71	11.80	+0.01	.	2	38.91	45 12.60	13.67	11.00	23 39.92	22 10 47.3
48	7	12.8	24.6	36.6	48.	60.1	. .	. .	. .	. .	28 48.26	11.84	−0.01	.	7	39.928	9 39.12	13.68	8.68	28 36.41	21 35 11.5
49	7	. .	. .	. .	. .	. .	. .	. .	46.4	59.	28 53.52	11.84	+0.01	.	2	34.085	47 58.82	13.69	11.19	28 41.69	22 13 33.7
50	8	. .	. .	. .	. .	. .	. .	32.4	. .	. .	30 56.83	11.86	. .	.	3	40.468	35 36.07	13.70	10.36	30 44.97	22 1 10.1
51	8	. .	. .	. .	. .	39.	51.4	. .	. .	. .	31 27.44	11.86	. .	.	5	36.196	26 23.11	13.70	9.77	31 15.58	21 51 56.6
52	8	. .	. .	. .	. .	. .	32.4	. .	. .	. .	33 8.72	11.87	. .	. .	5	41.398	23. 23.91	13.72	9.57	32 56.85	48 57.2
53	8	56.2	8.0	19.7	31.4	. .	. .	. .	. .	. .	36 31.60	11.90	. .	.	4	43.381	28 3.54	13.75	9.87	36 19.70	53 37.2
54	9	. .	. .	. .	. .	. .	5.4	16.8	. .	. .	36 41.45	11.90	. .	.	4	42.48	28 34.47	13.76	9.90	36 29.55	54 8.1
55	8	. .	. .	10.2	21.9	33.4	46.2	. .	. .	. .	38 22.04	11.92	−0.01	.	6	34.115	18 19.04	13.77	9.32	38 10.11	43 52.13
56	8	. .	. .	44.3	56.2	8.0	. .	. .	. .	. .	0 39 56.21	−11.93	−0.01	.	6	39.35	15 53.16	−13.79	− 9.07	0 39 44.27	21 41 26.0

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	*m*	*n*	*c*	Zenith Point.	Mic. Co.
1848. h.	s.	s.	s.	s.	s.	° ′ ″	r.

REMARKS.

(156) 22. Adopted minute 35 instead of 32.

(156) 27. Micrometer reading assumed as $36^r.918$ instead of $46^r.918$.

(156) 55. Micrometer reading assumed as $35^r.115$ instead of $34^r.115$.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1848. h. m.	° ′ ″				″	″	in.	°	°

ZONE 156. DECEMBER 2. MAJ. $D_\circ=-21^\circ\ 25'\ 10''$—Continued.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
57	5	16.8	29.4	41.	52.8	. .	. .	. .	. .	. .	0 41 52.78	−11.95	. .	.	3	45.79	32 32.73	−13.82	−10.16	0 41 40.83	21 58 6.7
58	7	. .	. .	. .	. .	. .	28.4	. .	. .	. .	42 4.60	11.95	+0.01	.	1	45.31	47 21.38	13.82	11.15	41 52.66	22 12 56.4
59	8	. .	. .	. .	. .	. .	. .	47.	. .	. .	0 42 11.42	−11.95	. .	.	4	37.71	31 18.88	−13.83	−10.09	0 41 59.47	21 56 52.8

ZONE 157. DECEMBER 4. MAJ. $D_\circ=-21^\circ\ 25'\ 20''$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	3	. .	. .	. .	. .	. .	. .	40.0	. .	. .	3 12 4.36	−13.83	. .	IV.	1	35.823	52 48.19	−11.03	−11.59	3 11 50.53	22 18 30.8
2	7.5	. .	. .	. .	. .	. .	. .	39.0	. .	. .	15 3.43	13.84	. .	VII., V.	3	42.588	34 22.65	11.27	10.31	14 49.59	22 0 4.2
3	6	. .	. .	. .	. .	. .	. .	. .	42.5	. .	15 49.50	13.85	. .	VII., V.	6	44.708	12 48.20	11.33	8.83	15 35.65	21 38 28.4
4	9	. .	. .	. .	. .	. .	. .	53.4	. .	. .	17.76	13.85	. .	.	6	45.93	12 6.26	11.37	8.79	16 3.91	37 46.4
5	7	. .	. .	. .	45.5	57.2	9.2	21.3	. .	. .	18 45.57	13.86	. .	.	7	37.868	10 50.08	11.57	8.70	18 31.71	21 36 30.4
6	9	. .	. .	. .	9.5	21.2	33.2	. .	. .	. .	20 21.29	13.87	. .	.	2	37.32	46 7.38	11.70	11.12	20 7.42	22 11 50.2
7	10	. .	. .	. .	. .	. .	. .	56.0	. .	. .	21 20.41	13.88	. .	.	4	40.442	29 44.53	11.77	9.98	21 6.53	21 55 26.3
8	8	. .	28.2	. .	52.0	16.	. .	. .	. .	. .	22 52.04	13.89	. .	.	4	43.735	27 51.34	11.92	9.85	22 38.15	53 33.1
9	8	38.5	50.	2.3	. .	. .	. .	. .	. .	. .	23 13.99	13.89	. .	.	4	38.625	30 47.36	11.95	10.06	23 0.10	56 29.4
10	9	4.5	16.3	28.0	40.0	. .	. .	. .	. .	. .	25 39.97	13.90	. .	.	6	32.090	20 3.25	12.16	9.32	25 26.07	21 45 44.7
11	4	48.2	0.2	11.9	23.	35.4	47.6	59.2	. .	. .	27 23.64	13.91	. .	.	2	43.219	42 44.18	12.31	10.89	27 9.73	22 8 27.4
12	9	11.2	22.8	34.8	46.1	58.3	. .	. .	. .	. .	30 46.51	13.93	. .	.	1	37.905	51 36.47	12.61	11.50	30 32.58	22 17 20.6
13	10	. .	56.0	. .	19.5	. .	. .	. .	. .	. .	32 19.57	13.94	. .	.	5	42.180	22 56.97	12.76	10.32	32 5.63	21 48 40.0
14	10	30.	41.9	53.5	5.4	. .	. .	. .	. .	. .	34 5.48	13.95	. .	.	5	36.258	26 20.97	12.92	10.55	33 51.53	52 4.4
15	7	3.8	16.0	27.4	39.3	. .	. .	. .	. .	. .	35 39.38	13.96	. .	.	6	36.451	17 33.03	13.07	9.15	35 25.42	43 15.2
16	9	. .	. .	51.	. .	. .	. .	38.5	. .	. .	36 2.88	13.96	. .	.	7	38.45	10 30.02	13.11	8.67	35 48.92	21 36 11.8
17	.	. .	. .	. .	. .	. .	. .	18.2	. .	. .	35 42.64	13.96	. .	.	3	37.604	37 14.71	13.08	10.50	35 28.68	22 2 58.3
18	9	. .	. .	. .	. .	37.0	. .	. .	. .	. .	38 25.21	13.97	. .	.	6	30.954	20 42.36	13.33	9.36	38 11.24	21 46 25.0
19	8	. .	. .	. .	. .	. .	. .	11.0	. .	. .	38 35.44	13.97	. .	.	3	36.465	37 53.96	13.35	10.54	38 21.47	22 3 37.8
20	9	. .	. .	. .	. .	. .	. .	23.0	. .	. .	38 47.38	13.97	. .	.	6	30.28	21 5.36	13.37	9.39	38 33.41	21 46 48.1
21	7	. .	. .	. .	. .	. .	. .	. .	41.0	53.2	41 47.93	13.99	. .	.	3	38.195	36 54.36	13.66	10.48	41 33.94	22 2 38.5
22	6	35.	46.8	58.5	0.4	. .	. .	. .	. .	. .	45 10.44	14.01	. .	.	6	35.060	18 20.94	14.01	9.21	44 56.43	21 44 4.2
23	9	. .	. .	. .	. .	. .	55.4	. .	. .	. .	45 31.76	14.01	. .	.	6	40.115	15 26.70	14.04	9.02	45 17.75	41 9.8
24	8	. .	. .	. .	. .	. .	30.2	42.	. .	. .	46 6.47	14.01	. .	.	7	36.441	11 39.23	14.10	8.75	45 52.46	21 37 22.1
25	8	. .	45.8	57.4	8.8	. .	. .	. .	. .	. .	48 57.33	14.02	. .	.	1	38.502	51 15.90	14.29	11.48	47 43.31	22 17 1.7
26	9	. .	. .	50.7	2.4	. .	. .	. .	. .	. .	49 2.45	14.02	. .	.	3	41.105	35 14.12	14.40	10.36	48 48.43	0 58.9
27	8	. .	. .	. .	. .	. .	43.2	55.2	. .	. .	49 19.54	14.02	. .	.	3	38.702	36 36.88	14.43	10.46	49 5.52	22 2 21.8
28	9	. .	. .	. .	39.0	51.0	. .	. .	. .	. .	54 39.07	14.04	. .	.	4	40.80	29 32.44	15.01	9.97	54 25.03	21 55 17.4
29	7	22.	34.0	45.8	57.5	. .	. .	. .	. .	. .	56 57.60	14.06	. .	.	5	39.478	24 30.05	15.26	9.62	56 43.54	21 50 14.9
30	7	. .	. .	. .	. .	. .	53.4	55.0	. .	. .	57 29.54	14.06	. .	.	3	33.980	39 19.55	15.32	10.65	57 15.48	22 5 5.5
31	7	. .	. .	. .	52.5	4.0	. .	. .	. .	. .	3 58 52.34	14.06	. .	.	5	36.518	26 12.01	15.47	9.74	3 58 38.28	21 51 57.2
32	7	50.0	2.0	13.9	25.6	. .	. .	. .	. .	. .	4 0 25.66	−14.07	. .	.	3	34.780	38 51.99	−15.64	−10.64	4 0 11.59	22 4 38.3

ZONE 158. DECEMBER 18. MAJ. $D_\circ=-27^\circ\ 1'\ 50''$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	7	. .	. .	. .	61.5	. .	. .	. .	. .	. .	3 51 1.56	−15.68	. .	.	1	31.825	55 5.90	−11.87	− 8.57	3 50 45.88	27 57 16.3
2	8	. .	13.5	26.0	38.0	. .	. .	. .	. .	. .	52 38.20	15.69	. .	V.	5	37.789	25 28.22	11.96	5.53	52 22.51	27 35.7
3	6	51.5	4.2	16.	28.4	. .	. .	. .	. .	. .	54 28.58	15.71	+0.01	.	6	43.199	13 40.58	12.05	4.36	54 12.88	15 47.0
4	9	. .	. .	. .	. .	27.5	40.0	. .	. .	. .	55 15.11	15.71	−0.02	.	1	44.718	47 41.74	12.08	7.80	54 59.38	49 51.6
5	6	. .	22.5	35.2	47.2	59.2	. .	. .	. .	. .	56 47.25	15.72	−0.02	.	1	36.898	52 11.16	12.16	8.27	56 31.51	54 21.6
6	8	. .	. .	. .	. .	. .	. .	. .	. .	54.2	3 56 46.16	−15.72	. .	.	5	42.308	22 52.56	−12.16	− 5.86	3 56 30.44	27 25 0.6

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848.	h.	s.	s.	s.	s.	s.	° ′ ″	r.
Dec. 4,	23	−15.243	g 0.020	. .	− 1.264	− 0.897	0 0 1.66	40.119
Dec. 18,	1	−15.912	l 0.009	. .	+ 0.976	− 0.809	359 59 58.30	40.112

INSTRUMENT READINGS.

	Date.			CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1848.	h.	m.	° ′ ″				″	″	in.	°	°
Zone 157	Dec. 4,	3	13	299 12 4.5	8.0	7.2	12.3	8.03	8.00			
		3	20	. .	. .	. .	. .	. .	. .	30.278	50.5	42.5
		3	40	. .	. .	. .	. .	. .	. .	30.284	50.5	42.7
		4	0	. .	. .	. .	. .	. .	. .	30.282	50.4	41.
Zone 158	Dec. 18,	3	30	. .	. .	. .	. .	. .	. .	29.970	54.8	48.0
		3	40	293 36 0.5	1.9	2.0	7.9	3.09	3.08			
		4	0	. .	. .	. .	. .	. .	. .	29.970	55.0	48.1
		4	15	1.9	3.8	3.8	9.9	4.87	4.85			

REMARKS.

(157) 4. Minutes of transit assumed as 16.

(157) 6. Transits over T.'s III, IV, and V assumed to have been recorded over T's. IV, V, and VI.

(157) 8. Transit over T. VI assumed to have been recorded over T. V.

(157) 25. Transits over T.'s III, IV, and V assumed to have been recorded over T.'s II, III, and IV.

(157) 30. Transit over T. VII assumed to have been at 5^s.0 instead of 55^s.0.

ZONE 158. DECEMBER 18. MAJ. $D_0 = -27° 1' 50''$—Continued.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
7	9	. .	. .	. .	. .	18.5	31.	43.0	. .	. .	4 1 6.03	−15.75	. .	VI.	4	39.497	30 17.19	−12.39	− 6.02	4 0 50.28	27 32 25.6
8	8	. .	10.4	22.4	34.9	. .	. .	. .	. .	. .	5 34.94	15.77	. .	.	7	44.518	7 1.00	12.61	3.68	5 19.17	9 7.3
9	8	. .	. .	. .	24.0	36.4	48.8	. .	. .	. .	6 24.03	15.78	. .	VI.	5	39.100	24 42.93	12.66	5.45	6 8.25	26 51.0
10	8	48.0	0.4	12.8	25.	37.5	. .	. .	. .	. .	13 25.16	15.81	. .	.	3	39.74	36 1.14	13.02	6.63	13 9.35	38 10.8
11	7	. .	. .	. .	. .	. .	. .	37.2	. .	. .	48 59.87	15.98	. .	.	1	32.39	54 46.45	17.44	8.58	48 43.89	57 2.5
12	7	. .	. .	54.	6.0	18.4	. .	. .	. .	. .	50 6.13	15.99	. .	.	1	32.89	54 29.22	17.62	8.54	49 50.14	56 44.4
13	7	19.5	32.	44.3	56.6	9.3	21.5	33.7	. .	. .	52 56.70	16.00	. .	.	3	36.392	37 56.47	18.03	6.82	52 40.70	40 11.3
14	8	. .	. .	60.8	12.9	25.7	38.0	. .	. .	. .	4 58 13.11	16.02	. .	.	1	40.622	50 2.87	18.81	8.08	4 57 57.09	52 19.8
15	8	. .	. .	4.2	16.2	29.0	. .	. .	. .	. .	5 0 16.46	16.02	−0.02	.	2	39.78	44 42.64	19.11	7.56	5 0 0.42	46 59.3
16	8	. .	. .	. .	60.2	12.3	25.2	. .	. .	. .	2 0.18	16.03	. .	.	5	36.317	26 18.93	19.37	5.62	1 44.15	28 33.9
17	6	. .	. .	. .	28.4	. .	. .	. .	. .	. .	5 28.43	16.04	+0.02	.	6	33.74	19 6.41	19.88	4.88	5 12.41	21 21.2
18	6	30.2	. .	55.2	7.	19.2	. .	. .	. .	. .	7 7.22	16.05	. .	.	5	33.305	28 2.68	20.12	5.80	6 51.17	30 18.6
19	6	34.8	47.0	. .	11.3	24.	. .	. .	. .	. .	7 11.68	16.05	. .	.	5	30.28	29 46.89	20.13	5.98	6 55.63	32 3.0
20	8	. .	. .	. .	29.5	41.8	54.5	. .	. .	. .	8 29.54	16.05	. .	.	5	34.94	27 6.36	20.33	5.70	8 13.49	29 22.4
21	4	. .	. .	. .	. .	. .	3.9	16.	. .	. .	9 39.00	16.05	+0.04	.	7	48.46	4 45.21	20.50	3.40	9 22.99	6 59.1
22	8	. .	. .	19.3	32.0	44.4	. .	. .	. .	. .	11 31.92	16.06	0.01	.	5	43.116	22 24.73	20.77	5.21	11 15.87	24 40.7
23	7	. .	. .	. .	. .	. .	. .	29.5	. .	. .	11 52.26	16.06	+0.01	.	5	39.82	24 18.26	20.83	5.41	11 36.21	26 34.5
24	4	. .	. .	28.4	40.7	53.5	. .	. .	. .	. .	13 40.86	16.07	. .	.	4	41.145	29 20.56	21.10	5.93	13 24.79	31 37.6
25	8	. .	. .	. .	. .	12.5	. .	. .	. .	. .	15 0.14	16.07	. .	.	1	31.725	55 9.35	21.30	8.66	14 44.07	57 29.3
26	8	42.2	55.0	7.1	19.2	. .	. .	. .	. .	. .	17 19.47	16.08	. .	.	4	39.089	30 31.39	21.64	6.06	17 3.39	32 49.1
27	8	11.2	23.0	36.0	48.4	60.5	. .	. .	. .	. .	21 48.22	16.09	+0.01	.	5	44.500	21 37.05	22.31	5.12	21 32.14	23 54.5
28	8	. .	. .	51.2	3.9	16.	. .	. .	. .	. .	24 3.78	16.10	+0.03	.	7	40.880	9 6.32	22.65	3.86	23 47.71	11 22.8
29	7	. .	8.5	21.0	33.0	45.7	. .	. .	. .	. .	26 33.26	16.10	−0.02	.	2	41.331	43 49.21	23.02	7.47	26 17.14	46 9.7
30	8	48.5	1.1	13.2	25.2	38.2	50.2	2.8	. .	. .	28 25.60	16.11	+0.03	VII.	7	38.968	10 11.87	23.31	3.95	28 9.52	12 29.1
31	7	. .	. .	. .	0.2	12.2	25.0	37.1	. .	. .	30 0.02	16.11	−0.02	.	3	32.190	40 21.22	23.54	7.09	29 43.89	42 41.8
32	4	. .	12.2	25.2	. .	. .	. .	. .	. .	. .	31 37.32	16.11	. .	.	1	31.28	55 24.68	23.78	8.68	31 21.21	57 47.1
33	8	. .	. .	40.0	52.0	4.7	. .	. .	. .	. .	31 52.23	16.12	−0.01	VII.	3	35.764	38 17.79	23.82	6.88	31 36.10	40 38.5
34	7	. .	. .	. .	. .	26.3	38.7	51.0	. .	. .	33 13.82	16.12	−0.03	.	2	36.332	46 41.41	24.03	7.77	32 57.67	49 3.2
35	7	. .	. .	. .	. .	20.7	33.3	45.5	. .	. .	34 8.37	16.12	. .	.	4	42.202	28 44.15	24.16	5.87	33 52.25	31 4.2
36	8	63.2	15.2	27.8	39.9	52.7	5.0	17.5	. .	. .	36 40.19	16.13	−0.02	.	2	39.974	44 35.96	24.54	7.55	36 24.04	46 58.0
37	8	54.7	7.2	19.3	31.5	44.2	56.6	. .	. .	. .	39 31.79	16.13	−0.01	.	3	42.363	34 30.79	24.97	6.47	39 15.65	36 52.2
38	7	. .	. .	37.3	. .	2.3	. .	. .	. .	. .	39 49.81	16.13	. .	.	4	39.962	30 35.75	25.01	5.94	39 33.68	32 56.7
39	8	. .	. .	. .	. .	. .	. .	46.4	. .	. .	40 9.16	16.13	+0.01	.	5	38.088	25 17.93	25.06	5.51	39 53.04	27 38.5
40	6	. .	. .	. .	39.	51.3	4.0	. .	. .	. .	41 39.15	16.14	0.03	.	7	40.805	9 8.90	25.28	3.86	41 23.04	11 28.0
41	8	60.5	13.0	25.4	37.5	50.2	. .	. .	. .	. .	51 37.71	16.15	+0.02	.	6	34.312	18 46.70	26.78	4.84	51 21.58	21 8.3
42	8	. .	. .	. .	. .	. .	. .	. .	45.	. .	51 49.46	16.15	−0.02	.	2	39.720	44 44.71	−26.81	− 7.56	51 33.29	27 47 9.1
43	9	. .	. .	. .	. .	. .	. .	. .	56.	. .	51 0.40	16.15	. .	.	.	. . .	. . .	. .	. .	50 44.25	
44	9	. .	25.0	37.4	49.7	2.4	. .	. .	. .	. .	54 49.85	16.15	−0.03	.	1	38.144	51 28.23	−27.26	− 8.27	54 33.67	27 53 53.8
45	6	. .	47.2	0.	12.	24.	36.4	. .	. .	. .	56 11.93	16.16	+0.02	.	6	33.309	19 21.25	27.46	4.90	55 55.79	21 43.6
46	6	. .	1.3	. .	25.	37.4	. .	. .	. .	. .	56 25.36	16.16	0.01	.	5	41.69	23 13.84	27.50	5.29	56 9.21	25 36.6
47	7	. .	. .	. .	. .	. .	. .	. .	43.8	. .	5 59 48.42	−16.16	+0.03	.	7	41.545	8 43.41	−28.00	− 3.82	5 59 32.29	27 11 5.2

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1848.	h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.	CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1848. h. m.	° ′ ″				″	″	in.	°	°
Zone 158	Dec. 18, 4 20	. .	. .	. .	. .	. .	. .	29.968	55.	48.8
	5 0	. .	. .	. .	. .	. .	. .	29.954	55.	48.8
	5 20	. .	. .	. .	. .	. .	. .	29.940	54.5	48.8
	5 30	. .	. .	. .	. .	. .	. .	29.934	. .	48.8
	5 40	293 35 59.4	61.5	62.5	67.5	62.73	62.72	29.932	54.3	48.8
	6 0	293 36 0.6	1.4	2.2	8.8	3.26	3.25			

REMARKS.

(158) 38. Micrometer reading assumed as $38^{r}.962$ instead of $39^{r}.962$.

ZONE 159. JANUARY 23. MAJ. BELT, 289° 50′. D₀=−30° 47′ 10″.

No.	Mag.	SECONDS OF TRANSIT.									T.	a^1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
1	8	. .	. .	. .	. .	. .	22.4	35.	. .	. .	4 59 56.48	−24.00	−1.01	VI.	3	38.055	36 59.43	− 5.77	− 7.06	4 59 31.47	31 24 22.3
2	8	. .	. .	. .	. .	. .	23.0	36.2	. .	. .	5 1 57.35	24.02	1.01	.	2	42.29	43 19.46	5.96	8.02	5 1 32.32	30 43.4
3	10	43.2	. .	. .	14.0	. .	. .	. .	. .	. .	4 14.02	24.04	0.99	IV.	6	32.268	19 57.75	6.18	4.50	3 48.99	7 18.4
4	7	. .	. .	10.8	23.2	36.4	49.3	. .	. .	. .	7 23.46	24.06	1.01	VI.	2	44.621	41 58.85	6.49	7.83	6 58.39	29 23.2
5	8	. .	. .	. .	. .	. .	47.2	60.2	. .	. .	8 21.51	24.07	1.00	.	4	39.292	30 24.44	6.57	6.07	7 56.44	17 47.1
6	7	. .	. .	. .	. .	36.2	49.2	2.2	. .	. .	10 23.46	24.09	1.00	.	3	44.62	33 12.99	6.77	6.50	9 58.37	20 36.3
7	6	. .	. .	. .	. .	57.2	10.0	22.8	. .	. .	11 44.24	24.10	1.01	.	2	48.66	39 39.60	6.91	7.36	11 19.13	27 3.9
8	8	. .	. .	. .	54.2	7.5	. .	. .	. .	. .	13 54.46	24.11	1.03	.	1	33.513	54 11.06	7.11	9.71	13 29.32	41 37.9
9	8	. .	. .	. .	. .	0.5	13.2	26.0	. .	. .	14 47.49	24.12	1.00	.	4	36.128	32 13.65	7.22	6.33	14 22.37	19 37.2
10	7	33.0	45.5	58.3	11.3	. .	. .	. .	. .	. .	17 11.37	24.13	1.01	.	2	33.184	48 33.75	7.47	8.83	16 46.23	36 0.0
11	8	. .	. .	. .	11.4	24.7	37.0	50.	. .	. .	18 11.45	24.14	1.01	VII.	2	43.788	42 27.41	7.57	7.90	17 46.30	29 52.9
12	5	. .	. .	. .	. .	66.8	. .	. .	. .	. .	21 53.97	24.17	1.03	VI.	1	32.995	54 28.78	7.96	9.70	21 28.77	41 56.5
13	7	. .	. .	. .	. .	. .	64.2	. .	. .	. .	22 38.52	24.17	0.99	VII.	6	29.75	21 24.29	8.05	4.72	22 13.36	8 47.1
14	7	. .	. .	. .	. .	. .	46.	59.	. .	. .	23 20.32	24.18	1.00	VII.	5	38.282	25 10.61	8.12	5.28	22 55.14	12 34.0
15	7	. .	. .	. .	. .	. .	. .	46.2	. .	. .	24 7.56	24.18	0.99	VII.	6	36.845	17 19.40	8.21	4.11	23 42.39	31 4 41.7
16	8	. .	. .	6.0	18.2	32.	. .	. .	. .	. .	26 18.80	24.20	0.98	.	7	35.732	12 4.23	8.45	3.34	25 53.62	30 59 26.0
17	9	. .	15.	. .	40.2	. .	. .	. .	. .	. .	26 40.40	24.20	0.98	.	7	38.721	10 21.07	8.49	3.08	26 15.22	30 57 42.6
18	8	. .	8.1	20.9	33.7	. .	. .	. .	. .	. .	28 33.78	24.21	1.02	.	2	37.511	46 4.41	8.69	8.45	28 8.55	31 33 31.6
19	7	. .	. .	31.0	44.2	. .	. .	. .	. .	. .	29 44.00	24.22	1.01	.	3	34.437	39 4.46	8.82	7.39	29 18.77	26 30.7
20	8	. .	. .	52.5	5.	. .	. .	. .	. .	. .	30 5.15	24.22	1.02	.	2	41.409	13 49.86	8.86	8.10	29 39.91	31 16.8
21	8	. .	. .	. .	. .	. .	37.2	50.	. .	. .	32 11.43	24.24	0.99	.	5	39.62	24 24.78	9.10	5.16	31 46.20	11 49.0
22	6	. .	50.2	3.0	16.	28.0	41.2	54.	. .	. .	33 15.63	24.24	0.99	.	5	44.118	21 49.54	9.22	4.78	31 50.40	9 13.5
23	7	. .	. .	39.2	52.0	4.6	. .	. .	. .	. .	34 51.92	24.25	1.00	.	3	46.242	32 17.01	9.41	6.34	34 26.67	19 42.8
24	6	. .	. .	. .	38.0	51.5	. .	. .	. .	. .	35 38.33	24.26	1.01	.	3	37.107	37 32.31	9.50	7.14	35 13.06	24 58.9
25	7	. .	. .	. .	. .	9.0	. .	. .	. .	. .	35 56.17	24.26	1.00	.	4	38.072	31 6.54	9.53	6.16	35 30.91	18 32.2
26	8	. .	62.2	15.0	27.5	41.0	. .	. .	. .	. .	40 27.88	24.29	1.02	.	1	45.611	47 13.49	10.05	8.61	40 2.57	31 34 42.2
27	7	. .	. .	. .	. .	. .	. .	. .	21.0	. .	40 10.68	24.29	0.98	.	6	47.688	11 5.52	10.02	3.19	39 45.41	30 58 28.7
28	7	. .	. .	. .	. .	. .	49.2	61.5	. .	. .	42 23.14	24.20	1.00	VII.	3	43.582	33 48.45	10.28	6.57	41 57.84	31 21 15.3
29	7	. .	. .	. .	. .	16.5	. .	42.0	. .	. .	44 3.53	24.31	0.99	VII.	5	45.467	21 2.62	10.48	4.66	43 38.23	8 27.8
30	8	30.6	43.5	56.2	9.1	21.7	. .	. .	. .	. .	49 9.08	24.34	0.99	IV.	5	42.768	22 36.14	11.09	4.90	48 43.75	10 2.1
31	6	. .	21.0	33.2	46.0	59.5	. .	. .	. .	. .	50 46.38	24.35	1.02	IV.	2	37.653	45 59.50	11.28	8.43	50 21.01	33 29.2
32	5	29.	42.	. .	7.3	20.5	. .	. .	. .	. .	51 7.58	24.35	1.01	V.	3	38.209	36 54.23	11.33	7.05	50 42.22	24 22.6
33	7	. .	. .	. .	. .	. .	. .	. .	20.	33.2	51 22.36	24.36	1.00	12.	4	41.517	29 6.42	11.36	5.86	50 57.00	16 33.6
34	7	. .	. .	. .	. .	. .	. .	7.1	. .	. .	53 28.45?	24.37	0.98	.	6	41.252	14 47.66	11.74	3.74	54 3.10	31 2 13.1
35	7	. .	. .	. .	. .	. .	21.	. .	. .	. .	54 55.45	24.37	0.97	.	7	47.908	5 3.98	11.79	2.31	54 30.11	30 52 28.1
36	7	. .	. .	. .	9.	22.4	35.0	. .	. .	. .	5 55 9.35	24.38	0.98	12.	6	39.208	15 56.99	11.82	3.91	5 54 43.99	31 3 22.7
37	8	. .	. .	. .	. .	. .	. .	11.5	. .	. .	6 1 32.87	24.41	1.01	VII.	3	38.608	36 40.14	12.61	4.02	6 1 7.45	24 6.8
38	8	. .	. .	. .	. .	. .	. .	40.0	. .	. .	3 1.37	24.42	1.00	VII.	4	34.512	33 9.06	12.79	6.47	2 35.95	20 38.3
39	8	23.	36.0	. .	. .	. .	. .	40.0	. .	. .	5 1.60	24.43	1.00	.	4	32.517	34 18.28	13.04	6.65	4 36.17	31 21 48.0
40	5	. .	. .	. .	. .	. .	. .	53.0	. .	. .	4 14.35	24.43	0.98	.	7	34.924	12 32.11	12.94	3.43	3 48.94	30 59 58.5
41	8	. .	. .	. .	. .	46.3	59.2	12.0	. .	. .	8 33.51	24.45	0.98	.	7	38.25	10 37.32	13.49	3.12	8 8.08	30 58 3.9
42	9	55.2	. .	21.2	33.	. .	. .	. .	. .	. .	11 33.64	24.47	1.02	.	1	41.96	49 19.50	13.87	8.95	11 8.15	31 36 52.3
43	8	59.	12.	. .	37.0	. .	. .	. .	. .	. .	11 37.51	24.47	1.01	.	2	41.68	43 40.51	13.88	8.08	11 12.03	31 12.5
44	8	20.	32.5	45.4	58.	11.3	. .	. .	. .	. .	14 58.36	24.48	1.02	.	1	36.439	52 30.07	14.32	9.44	14 32.86	40 3.8
45	8	40.2	53.2	6.0	18.3	31.9	. .	. .	. .	. .	17 18.79	24.49	1.00	.	4	43.363	28 3.93	14.62	− 5.71	6 16 53.30	31 15 34.3
46	5	. .	. .	. .	. .	. .	. .	42.	. .	. .	18 3.37	24.50	. . .	upper edge field.			. .	14.72			
47	8.9	2.4	36.2	49.2	2.4	. .	. .	. .	. .	. .	20 2.27	24.51	1.01	.	2	45.831	41 17.24	14.97	− 7.72	6 19 36.75	31 28 49.9
48	8	46.	. .	. .	24.3	. .	. .	. .	. .	. .	20 24.50	24.51	1.01	.	3	39.19	36 20.40	15.02	6.96	19 58.98	23 52.4
49	6	. .	. .	. .	45.2	58.2	11.3	24.	. .	. .	6 24 45.42	−24.53	−0.98	.	6	37.234	17 6.34	−15.59	− 4.07	6 24 19.91	31 4 36.0

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	*m*	*n*	*c*	Zenith Point.	Mic. Co.
1849. h.	s.	s.	s.	s.	s.	° ′ ″	r.
Jan. 23, 4	−23.645	*g* 0.018	− 1.355	+ 0.852	− 0.694	0 0 2.80	39.406

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1849. h. m.	° ′ ″				″	″	in.	°	°
Zone 159	Jan. 23, 5 0	289 50 57.2	59.4	66.0	61.8	61.11	61.10	30.280	30.5	38.8
	20	. .	. .	. .	. .	. .	. .	. .	. .	30.3
	5 40	. .	. .	. .	. .	. .	. .	. .	. .	29.7
	6 19	57.2	59.4	6.0	1.5	61.03	61.02			
	6	. .	. .	. .	. .	. .	. .	30.280	38.0	28.9
	6 20	. .	. .	. .	. .	. .	. .	. .	. .	28.7
	6 24	58.3	0.9	7.7	62.0	62.23	62.22			
	6 40	. .	. .	. .	. .	. .	. .	30.282	37.5	28.3

REMARKS.

(159) 22. Minutes assumed as 32 instead of 33.
(159) 47. Fine double.

ZONE 159. JANUARY 23. MAJ. BELT, 289° 50′. D_0 = −30° 47′ 10″—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
50	9	. .	. .	. .	. .	. .	24.0	. .	. .	. .	6 25 58.39	−24.53	−0.98	.	7	32.825	13 44.40	−15.76	− 3.59	6 25 32.88	31 1 13.8
51	9	. .	. .	. .	. .	16.0	29.2	41.8	. .	. .	27 3.19	24.54	1.02	.	1	40.347	50 15.14	15.89	9.09	26 37.63	31 37 50.1
52	8	. .	. .	. .	. .	. .	. .	34.4	. .	. .	27 55.75	24.54	0.98	.	7	38.429	10 31.14	16.01	3.10	27 30.23	30 58 0.2
53	7	. .	. .	30.	42.9	55.3	. .	. .	. .	. .	29 42.76	24.55	0.99	IV.	5	41.992	22 42.92	16.24	4.92	29 17.22	31 10 14.1
54	7	. .	. .	1.	13.	26.5	. .	. .	. .	. .	30 13.49	24.55	1.01	11.	2	46.445	40 55.23	16.31	7.65	29 47.93	28 29.2
55	8	. .	. .	. .	. .	8.	. .	33.	. .	. .	29 54.76	24.55	1.02	12.	2	39.654	44 49.22	16.27	8.25	29 29.19	32 23.7
56	8	. .	. .	. .	. .	. .	. .	53.2	. .	. .	32 14.57	24.56	1.00	.	3	46.465	32 9.31	16.57	6.32	31 49.01	19 42.2
57	9	. .	. .	. .	. .	57.0	10.3	23.	. .	. .	33 44.36	24.57	1.00	.	4	41.847	28 56.20	16.77	5.82	33 18.79	16 28.8
58	7	44.	57.3	9.8	22.4	35.4	. .	. .	. .	. .	43 22.65	24.60	0.99	.	5	40.28	24 2.01	18.03	5.10	42 57.06	11 35.1
59	7	. .	. .	. .	23.4	36.4	49.4	. .	. .	. .	44 23.54	24.61	0.99	.	5	35.821	26 35.90	18.17	5.49	43 57.94	14 9.6
60	6	. .	. .	. .	. .	22.	34.	. .	. .	. .	45 8.64	24.61	1.02	.	1	40.171	50 21.26	18.27	9.10	44 43.01	37 58.6
61	7	. .	. .	. .	. .	. .	. .	. .	19.2	. .	45 21.64	24.61	0.99	.	6	34.218	18 50.44	18.30	4.33	44 56.04	6 23.1
62	7	. .	13.2	26.2	. .	52.2	. .	. .	. .	. .	48 39.12	24.62	1.01	.	3	35.688	38 21.28	18.73	7.26	48 13.49	25 57.3
63	6	. .	40.2	. .	5.0	18.3	. .	. .	. .	. .	49 5.52	24.62	1.02	.	2	31.757	49 23.01	18.79	8.96	48 39.88	37 0.8
64	6	. .	. .	27.2	40.0	53.2	6.0	. .	. .	. .	50 40.12	24.63	1.02	.	2	33.47	48 23.88	19.00	8.81	50 14.47	36 1.7
65	7	. .	. .	. .	. .	. .	. .	40.2	. .	. .	51 1.56	24.63	0.98	.	6	39.415	15 51.06	19.04	3.90	50 35.95	3 24.0
66	7	. .	. .	. .	. .	. .	. .	58.2	. .	. .	51 19.56	24.63	0.99	.	5	49.957	18 28.01	19.09	4.28	50 53.94	6 1.4
67	8	. .	. .	. .	. .	. .	. .	. .	7.2	. .	52 9.58	24.63	0.99	.	5	40.303	24 1.21	19.20	5.10	51 43.96	11 35.5
68	7	. .	19.2	31.	44.4	. .	. .	. .	. .	. .	54 44.37	24.64	0.99	.	6	32.773	19 40.31	19.54	4.46	54 18.74	31 7 14.3
69	6	. .	25.	38.	51.	. .	. .	. .	. .	. .	6 54 50.84	24.64	0.98	.	7	41.64	8 40.31	19.56	2.83	6 54 25.22	30 56 12.7
70	8	. .	. .	54.	6.2	19.	. .	. .	. .	. .	7 2 6.39	24.66	1.02	.	1	41.00	49 52.64	20.52	9.03	7 1 40.71	31 37 32.2
71	.	. .	. .	. .	14.	27.5	. .	. .	. .	. .	3 14.33	24.67	1.01	.	2	46.117	41 7.37	20.67	7.70	2 48.65	28 45.7
72	8	. .	. .	. .	. .	38.5	51.0	4.2	. .	. .	5 25.53	24.67	0.99	.	5	44.408	21 39.53	20.96	4.76	4 59.87	9 15.2
73	8	6.	19.0	31.5	44.5	. .	. .	. .	. .	. .	8 44.56	24.68	1.01	.	3	40.434	35 37.47	21.40	6.85	8 18.87	23 15.7
74	8	. .	. .	. .	. .	28.3	41.3	44.5	. .	. .	9 15.64	24.68	1.00	.	5	35.913	26 32.73	21.47	5.48	8 49.96	14 9.7
75	8	. .	. .	. .	. .	. .	. .	41.2	. .	. .	10 2.46	24.69	1.02	.	1	35.452	53 4.14	21.57	9.51	9 36.75	40 45.2
76	8	. .	. .	. .	. .	. .	. .	. .	4.7	. .	11 7.20	24.69	0.98	.	7	32.877	13 42.77	21.72	3.58	10 41.53	1 18.1
77	8	. .	. .	. .	. .	. .	. .	13.3	. .	. .	12 34.67	24.69	1.01	.	3	36.762	37 44.21	21.92	7.17	12 8.97	31 25 23.3
78	7	. .	. .	. .	. .	. .	. .	1.3	. .	. .	13 22.65	24.69	0.98	.	7	39.847	9 42.20	22.03	2.98	12 56.98	30 57 17.2
79	9	. .	. .	52.5	5.2	18.3	. .	. .	. .	. .	15 5.32	24.70	1.01	.	3	41.49	35 1.03	22.26	6.76	14 39.61	31 22 40.0
80	8	. .	. .	. .	. .	. .	. .	. .	54.2	. .	14 56.77	24.70	0.98	.	7	42.362	8 15.39	22.24	2.77	14 31.09	30 55 50.4
81	7	. .	52.	4.5	17.5	. .	. .	. .	. .	. .	17 17.50	24.70	0.98	.	7	39.232	10 3.43	22.55	3.03	16 51.82	30 57 39.0
82	4	. .	. .	. .	41.2	5.2	8.3	20.7	. .	. .	17 42.21	24.70	1.02	.	1	39.727	50 36.59	22.58	9.14	17 16.49	31 38 18.3
83	7	. .	. .	9.3	22.	35.	. .	. .	. .	. .	19 22.09	24.71	1.01	.	2	44.863	41 50.65	22.85	7.79	18 56.37	29 31.3
84	6	. .	. .	12.	24.	37.4	. .	. .	. .	. .	19 24.46	24.71	1.02	.	2	42.12	43 25.35	22.85	8.03	18 58.73	31 6.2
85	6	. .	. .	. .	. .	. .	49.0	. .	. .	. .	20 23.19	24.71	1.01	.	3	34.595	38 59.01	22.97	7.37	19 57.47	26 39.4
86	7	. .	. .	. .	. .	3.	15.0	. .	. .	. .	19 49.70	24.71	1.01	.	4	34.322	33 15.97	22.89	6.49	19 23.98	20 55.4
87	7	. .	. .	. .	. .	. .	. .	42.4	. .	. .	22 3.77	24.71	1.01	.	4	30.095	35 41.88	23.20	6.87	21 38.05	23 22.0
88	6	. .	. .	. .	31.2	. .	57.2	9.2	. .	. .	23 31.03	24.71	1.02	.	2	39.437	44 57.94	23.40	8.28	23 5.30	32 39.6
89	5	. .	. .	. .	43.	56.	. .	. .	. .	. .	23 43.10	24.71	0.99	.	5	44.902	21 22.47	23.43	4.72	23 17.40	9 0.6
90	10	. .	. .	. .	. .	37.4	. .	. .	. .	. .	25 24.57	24.72	1.01	.	3	42.679	34 19.94	23.67	6.66	24 58.84	31 22 0.3
91	8	. .	. .	31.3	. .	. .	. .	. .	. .	. .	27 44.20	24.72	0.98	.	7	40.77	9 10.34	23.99	2.91	27 18.50	30 56 47.2
92	8	. .	. .	. .	. .	. .	0.2	13.0	. .	. .	27 34.44	24.72	0.99	.	5	45.878	20 48.80	23.96	4.63	27 8.73	31 8 27.4
93	8	9.1	22.0	34.7	47.	. .	. .	. .	. .	. .	29 47.49	24.72	0.99	.	5	41.462	23 21.21	24.27	5.01	29 21.78	31 11 0.5
94	7	. .	44.2	57.2	. .	. .	. .	. .	. .	. .	31 9.92	24.73	0.98	.	7	36.30	11 44.62	24.46	3.29	30 44.21	30 59 22.4
95	8	. .	. .	. .	29.1	41.5	. .	. .	. .	. .	31 28.96	24.73	0.98	.	7	34.959	12 30.91	24.51	3.41	31 3.25	31 0 8.8
96	7	. .	21.	34.	46.6	. .	. .	. .	. .	. .	32 46.71	24.73	0.99	.	6	33.338	19 20.82	24.69	4.41	32 20.99	6 59.9
97	7	. .	. .	. .	. .	. .	32.2	45.	. .	. .	33 6.35	24.73	1.02	.	2	41.482	43 47.18	24.73	8.09	32 40.60	31 30.0
98	8	. .	. .	. .	. .	. .	. .	. .	. .	32.7	7 33 21.86	−24.73	−1.01	.	3	40.187	35 46.00	−24.77	− 6.87	7 32 56.12	31 23 27.6

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1849.	h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.			CIRCLE.						Barom.	Attached Thermom.	External Thermom.
				A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1849.	h.	m.	° ′ ″				″	″	in.	°	°
Zone 159	Jan. 23,	7	0	. .	. .	. .	. .	. .	. .	. .	. .	28.2
		7	33	289 51 0.7	0.7	6.4	2.9	2.69	2.68			
		7	40	. .	. .	. .	. .	. .	. .	. .	. .	27.9
		7	50	. .	. .	. .	. .	. .	. .	30.272	37.	28.1
		8	0	. .	. .	. .	. .	. .	. .	. .	. .	28.1

REMARKS.

(159) 74. Transit over T. VII assumed as at $54^s.5$ instead of $44^s.5$.

ZONE 159. JANUARY 23. MAJ. BELT, 289° 50′. D₀=−30° 47′ 10″—Continued.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
99	7	. .	. .	11.2	. .	. .	. .	. .	. .	. .	7 35 23.87	−24.73	−0.99	.	5	42.54	22 44.00	−25.06	− 4.90	7 34 58.15	31 10 24.0
100	6	. .	. .	. .	. .	42.	55.1	7.5	. .	. .	35 29.13	24.73	1.00	.	4	37.83	31 14.89	25.07	6.19	35 3.40	18 56.2
101	9	. .	. .	. .	. .	. .	10.	. .	. .	. .	36 44.23	24.73	1.00	.	4	35.759	32 26.22	25.24	6.36	36 18.50	20 7.8
102	9	. .	. .	. .	45.4	58.3	11.5	. .	. .	. .	38 45.52	24.74	1.00	.	4	36.984	31 44.09	25.53	6.26	38 19.78	19 25.9
103	10	. .	. .	. .	. .	. .	. .	56.9	. .	. .	39 18.27	24.74	1.01	.	4	31.21	35 3.03	25.60	6.76	38 52.52	31 22 45.4
104	9	. .	. .	. .	. .	34.9	47.8	60.1	. .	. .	41 21.95	24.74	0.97	.	7	43.057	7 51.38	25.89	2.69	40 56.24	30 55 30.0
105	7.8	. .	51.0	3.4	16.4	29.5	. .	. .	. .	. .	43 16.49	24.74	0.99	.	4	45.070	27 5.00	26.16	5.56	42 50.76	31 14 46.7
106	8	13.8	. .	39.3	. .	5.	18.	. .	. .	. .	44 52.27	24.74	0.99	.	4	44.259	27 33.00	26.38	5.63	44 26.54	15 15.0
107	8	. .	. .	18.3	31.0	. .	. .	. .	. .	. .	46 31.06	24.74	0.99	.	4	44.259	27 33.00	26.61	5.63	46 5.33	15 15.2
108	6.7	. .	. .	. .	47.2	0.1	13.3	. .	. .	. .	47 47.32	24.75	1.01	.	3	37.048	37 34.35	26.79	7.14	47 21.56	25 18.3
109	.	. .	. .	. .	. .	53.2	6.2	. .	. .	. .	48 40.40	24.75	1.00	.	4	35.963	32 19.30	26.91	6.35	48 14.65	20 2.6
110	6	. .	. .	. .	. .	. .	49.	2.3	. .	. .	49 23.49	24.75	0.99	.	6	30.495	20 58.94	27.02	4.69	48 57.75	8 40.6
111	9	. .	53.2	6.2	19.0	. .	. .	. .	. .	. .	52 18.99	24.75	1.01	.	3	35.255	38 36.22	27.42	7.30	51 53.23	26 20.9
112	9	. .	. .	. .	. .	. .	11.3	24.0	. .	. .	52 45.52	24.75	0.98	.	7	32.077	14 10.22	27.49	3.65	52 19.79	1 51.4
113	9	. .	. .	. .	. .	41.3	54.2	. .	. .	. .	54 28.40	24.75	1.02	.	2	36.00	46 56.52	27.73	8.57	54 2.63	34 42.8
114	9	. .	. .	. .	. .	. .	4.	17.2	. .	. .	54 38.40	24.75	1.01	.	4	32.160	34 30.44	27.75	6.69	54 12.64	22 14.9
115	9	32.2	. .	. .	. .	. .	. .	50.	. .	. .	57 11.14	24.75	1.01	.	3	30.080	41 34.84	28.11	7.76	56 45.38	29 20.7
116	9	. .	. .	. .	. .	52.4	5.5	. .	. .	. .	56 39.76	24.75	0.98	.	7	33.110	13 34.68	28.03	3.57	56 14.03	1 16.3
117	8	. .	. .	. .	. .	. .	. .	. .	59.4	. .	7 59 1.72	24.75	1.00	.	5	32.68	28 24.32	28.36	5.76	7 58 35.97	16 8.4
118	9	19.2	32.4	45.5	57.7	. .	. .	. .	. .	. .	8 1 58.04	24.75	1.02	.	2	35.82	47 2.77	28.78	8.58	8 1 32.27	34 50.1
119	7	. .	. .	. .	. .	40.	52.7	6.	. .	. .	2 27.21	24.75	0.99	.	6	33.28	19 22.82	28.84	4.42	2 1.47	7 6.1
120	6	. .	. .	. .	38.4	51.4	4.5	. .	. .	. .	8 3 38.59	−24.75	−0.99	.	5	38.945	24 48.08	−29.01	− 5.22	8 3 12.83	31 12 32.3

ZONE 160. JANUARY 27. MAJ. BELT, 289° 50′. D₀=−30° 46′ 50″.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	6	. .	41.0	53.5	6.2	19.2	. .	. .	. .	. .	3 2 6.42	−24.38	−0.98	V.	7	45.559	6 25.01	− 9.84	− 2.64	3 1 41.06	30 53 27.5
2	7	. .	. .	. .	. .	10.5	. .	. .	. .	. .	4 57.70	24.41	0.99	.	5	42.742	22 37.03	10.02	4.92	4 32.30	31 9 42.0
3	7	. .	. .	. .	25.5	. .	. .	. .	. .	. .	5 25.55	24.41	0.99	.	6	37.349	17 2.37	10.05	4.13	5 0.15	4 6.6
4	6	47.0	0.2	13.0	25.5	38.5	51.5	4.2	. .	. .	10 25.70	24.47	1.00	.	3	40.050	35 50.73	10.36	6.85	10 0.23	22 57.9
5	6	23.5	36.5	49.5	2.2	15.6	28.1	. .	. .	. .	16 2.35	24.52	1.02	.	1	37.245	52 2.25	10.74	9.24	15 36.81	39 12.2
6	7	37.	50.	2.5	15.7	28.2	41.2	. .	. .	. .	18 15.54	24.55	0.99	.	6	36.579	17 28.94	10.90	4.20	17 50.00	4 34.0
7	7	. .	. .	. .	. .	. .	. .	20.5	. .	. .	41.76	24.56	1.02	.	1	36.087	52 42.22	10.95	9.34	18 16.18	39 52.5
8	7	. .	. .	. .	. .	. .	51.3	4.0	. .	. .	20 25.49	24.57	0.99	.	5	43.475	22 11.73	11.05	4.87	19 59.93	31 9 17.6
9	7	. .	. .	. .	. .	. .	. .	56.5	. .	. .	21 17.85	24.58	0.99	.	6	45.683	12 14.73	11.12	3.45	20 52.28	30 59 19.3
10	6	. .	. .	. .	52.5	. .	. .	. .	. .	. .	24 52.62	24.62	0.98	.	7	49.920	3 54.52	11.39	2.29	24 27.02	30 50 58.2
11	6	35.5	48.1	1.0	13.2	. .	39.5	52.5	. .	. .	28 13.77	24.65	0.99	.	6	30.54	20 57.38	11.64	4.70	27 48.13	31 8 3.7
12	5	. .	. .	. .	. .	. .	. .	. .	. .	29.5	28 18.56	24.65	1.01	.	2	34.875	47 35.39	11.65	8.58	27 52.90	34 45.6
13	8	. .	. .	. .	. .	. .	. .	45.7	. .	. .	30 7.07	24.67	1.00	.	5	34.723	27 13.81	11.78	5.60	29 41.40	14 21.2
14	7	. .	8.4	21.5	34.2	47.2	. .	. .	. .	. .	37 34.27	24.75	1.01	.	2	43.399	42 41.19	12.43	7.86	37 8.51	29 51.5
15	9	. .	. .	54.3	7.2	20.2	. .	. .	. .	. .	40 7.22	24.77	1.01	.	3	38.142	36 56.58	12.60	7.02	39 41.44	24 6.2
16	8	. .	. .	. .	. .	. .	. .	. .	8.2	. .	41 10.50	24.78	1.00	.	4	36.227	32 10.23	12.69	6.32	40 44.72	19 19.2
17	6	. .	5.	17.7	30.2	43.	. .	. .	. .	. .	44 30.40	24.82	0.99	.	6	29.447	21 35.11	12.98	4.78	44 4.59	8 42.9
18	9	. .	. .	. .	. .	40.	53.	6.0	. .	. .	44 27.33	24.82	0.99	.	7	32.753	13 46.91	12.98	3.68	44 1.52	0 53.6
19	6	. .	. .	. .	. .	. .	. .	. .	44.3	. .	45 46.60	24.83	1.00	.	4	35.783	32 25.56	13.09	6.33	45 20.77	31 19 35.0
20	10	. .	. .	. .	. .	. .	. .	41.0	. .	. .	53 2.35	24.90	0.98	.	7	34.617	12 42.35	13.74	3.52	52 36.47	30 59 49.6
21	5	. .	. .	54.6	7.3	19.2	. .	. .	. .	. .	55 7.12	24.92	0.98	.	7	43.135	7 48.72	13.93	2.83	54 41.22	30 54 55.5
22	8	42.4	55.2	8.1	20.5	34.	. .	. .	. .	. .	56 20.96	24.94	1.02	.	1	36.580	52 25.20	14.05	9.30	55 55.00	31 39 38.6
23	8	. .	. .	24.2	37.2	50.4	. .	. .	. .	. .	3 59 37.26	−24.97	−1.01	.	2	34.783	47 38.57	−14.35	− 8.59	3 59 11.28	31 34 51.5

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1849. h.	s.	s.	s.	s.	s.	° ′ ″	r.
Jan. 27, 1	− 25.090	*g* 0.027	− 1.355	+ 0.852	− 0.694	0 0 0.74	39.366

REMARKS.

(160) 7. Minutes of transit assumed as 18.

INSTRUMENT READINGS.

	Date.	CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1849. h. m.	° ′ ″				″	″	in.	°	°
Zone 160	Jan. 27, 3 0	. .	. .	. .	. .	. .	. .	30.378	46.	34.8
	3 2	289 51 2.7	3.2	9.3	5.8	5.28	5.25			
	3 20	. .	. .	. .	. .	. .	. .	. .	. .	34.0
	3 40	. .	. .	. .	. .	. .	. .	. .	. .	33.3
	3 50	2.2	3.4	8.7	5.7	5.03	5.00			
	4 0	. .	. .	. .	. .	. .	. .	30.378	44.6	32.1
	4 20	. .	. .	. .	. .	. .	. .	. .	. .	30.8
	4 56	. .	. .	. .	. .	. .	. .	. .	. .	30.4

ZONE 160. JANUARY 27. MAJ. BELT, 289° 50′. D₀=−30° 46′ 50″—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
24	6	. .	. .	54.	7.	20.4	. .	. .	. .	. .	4 0 7.12	−24.97	−1.01	.	3	32.167	40 22.81	−14.40	− 7.52	3 59 41.14	31 27 34.7
25	6	. .	. .	. .	. .	. .	. .	54.5	. .	. .	1 15.87	24.98	1.00	.	4	35.936	32 20.28	14.51	6.32	4 0 49.89	19 31.1
26	6	. .	22.6	35.3	47.5	58.	. .	. .	. .	. .	7 47.32	25.05	1.02	.	1	35.891	52 48.99	15.14	9.36	7 21.25	31 40 3.5
27	8	33.	46.1	58.5	12.2	. .	. .	. .	. .	. .	10 11.69	25.07	0.98	.	7	41.359	8 50.01	15.37	2.97	9 45.64	30 55 58.4
28	9	. .	. .	. .	. .	57.6	10.9	23.5	. .	. .	10 44.94	25.08	1.00	.	4	44.912	27 10.42	15.42	5.59	10 18.86	31 14 21.4
29	8	. .	. .	. .	18.5	31.7	. .	. .	. .	. .	12 18.68	25.09	1.01	.	2	46.045	41 9.86	15.58	7.62	11 52.58	28 23.1
30	9	. .	. .	. .	. .	. .	. .	32.6	. .	. .	12 53.96	25.10	1.00	.	4	46.594	26 12.05	15.64	5.45	12 27.86	13 23.1
31	9	. .	. .	30.7	43.2	56.5	. .	. .	. .	. .	15 43.46	25.12	1.01	.	2	38.070	45 45.11	15.92	8.31	15 17.33	32 59.3
32	9	. .	. .	59.	11.5	24.9	. .	. .	. .	. .	17 11.79	25.14	1.01	.	3	36.035	38 9.30	16.07	7.20	16 45.64	25 22.6
33	8	. .	45.2	58.	10.8	23.5	36.5	. .	. .	. .	21 10.79	25.17	1.00	.	5	35.50	26 46.99	16.48	5.53	20 44.62	13 59.0
34	8	. .	. .	. .	. .	. .	19.2	32.	. .	. .	21 53.39	25.18	1.00	.	4	31.833	34 41.89	16.55	6.68	21 27.21	21 55.1
35	8	. .	16.2	28.7	41.3	54.5	. .	. .	. .	. .	27 41.61	25.23	1.01	.	2	49.098	39 24.94	17.14	7.37	27 15.37	31 26 39.4
36	4	. .	. .	56.3	9.	22.	34.7	. .	. .	. .	30 9.18	25.26	0.98	.	7	47.761	5 9.06	17.40	2.46	29 42.94	30 52 18.9
37	7	. .	. .	. .	. .	. .	53.2	6.0	. .	. .	31 27.47	25.27	0.99	.	6	42.27	14 12.52	17.53	3.73	31 1.21	31 1 23.8
38	8	. .	. .	. .	36.5	. .	2.2	. .	. .	. .	33 36.44	25.29	1.01	.	4	27.22	37 21.11	17.75	7.08	33 10.14	24 35.9
39	9	. .	. .	. .	. .	. .	. .	45.2	. .	. .	33 6.58	25.29	1.01	.	3	32.964	39 54.93	17.70	7.45	32 40.28	27 10.1
40	6	. .	22.4	35.0	47.5	0.4	13.4	. .	. .	. .	37 47.76	25.32	0.99	.	7	29.507	15 39.08	18.19	3.94	37 21.45	2 51.2
41	7	9.	21.7	34.5	47.4	0.5	13.7	. .	. .	. .	39 47.57	25.34	1.00	.	5	37.027	25 54.29	18.40	5.41	39 21.23	31 13 8.1
42	8	. .	. .	48.3	1.1	13.7	. .	. .	. .	. .	42 1.11	25.36	0.98	.	7	37.622	10 58.99	18.62	3.28	41 34.77	30 58 10.9
43	7	. .	. .	41.2	54.0	6.4	. .	. .	. .	. .	43 53.86	25.38	1.02	.	1	33.753	54 2.77	18.83	9.53	43 27.46	31 41 21.1
44	7	. .	. .	. .	. .	49.	2.0	14.8	. .	. .	44 36.21	25.38	1.00	.	5	35.647	26 41.91	18.91	5.52	44 9.83	31 13 56.3
45	7	39.	51.7	4.4	17.2	29.9	. .	. .	. .	. .	47 17.28	25.41	0.98	.	7	43.638	7 31.36	19.19	2.79	46 50.89	30 54 43.3
46	8	47.2	0.2	12.7	25.4	38.3	. .	. .	. .	. .	49 25.68	25.42	1.02	.	1	36.049	52 43.53	19.42	9.36	48 59.24	31 40 2.3
47	9	. .	. .	. .	34.0	47.1	60.0	. .	. .	. .	51 34.14	25.44	1.01	.	2	43.475	42 38.57	19.65	7.85	51 7.69	29 56.1
48	9	. .	. .	. .	. .	9.0	21.5	34.4	. .	. .	52 55.92	25.46	1.00	.	5	39.874	24 15.97	19.79	5.18	52 29.46	11 30.9
49	7	26.4	39.5	52.5	4.8	. .	. .	. .	. .	. .	56 5.15	25.48	1.02	.	1	41.427	49 37.90	20.13	8.88	55 38.65	36 56.9
50	9	. .	. .	. .	16.2	. .	. .	. .	. .	. .	56 16.24	25.48	1.02	.	1	40.335	50 15.60	20.15	8.97	55 49.74	37 34.7
51	6	. .	. .	. .	. .	. .	. .	29.7	. .	. .	59 51.02	25.48	1.01	XI½.	2	36.452	46 40.96	20.21	8.45	55 24.52	33 59.6
52	8	. .	. .	45.3	58.	11.2	. .	. .	. .	. .	4 59 58.16	25.51	1.00	.	3	38.075	36 58.89	20.55	7.03	4 59 31.65	24 16.5
53	9	. .	. .	. .	. .	11.9	25.0	37.5	. .	. .	5 0 59.02	−25.52	−1.01	.	2	42.257	43 20.56	−20.75	− 7.96	5 1 32.49	31 30 39.3

ZONE 161. FEBRUARY 9. MAJ. BELT, 291° 42½′. D₀=−28° 55′ 50″.

8

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	8	. .	. .	24.2	37.2	50.0	. .	. .	. .	. .	4 41 37.12	−30.54	−1.01	IV.	2	39.656	44 47.98	− 3.98	− 5.84	4 41 5.57	29 40 47.7
2	8	. .	33.2	45.7	57.8	11.1	23.5	. .	. .	. .	46 58.25	30.58	1.01	.	2	39.007	45 10.38	4.40	5.88	46 26.66	41 10.9
3	6	. .	. .	. .	17.3	30.4	42.4	. .	. .	. .	49 17.51	30.60	0.98	V.	7	36.290	11 44.55	4.59	1.77	48 45.93	7 40.1
4	6	33.4	46.	58.5	11.2	23.4	36.5	48.5	. .	. .	53 11.07	30.64	0.98	.	7	37.249	11 11.49	4.93	1.71	52 39.45	7 8.3
5	7	. .	. .	. .	37.6	50.0	3.1	. .	. .	. .	54 37.58	30.65	1.02	.	1	36.972	52 10.51	5.05	6.75	54 5.91	48 12.1
6	9	. .	35.	47.2	60.	. .	. .	. .	. .	. .	58 0.00	30.68	0.98	.	7	35.73	12 3.92	5.35	1.81	57 28.34	8 1.4
7	9	. .	45.2	57.2	. .	. .	. .	. .	. .	. .	4 58 10.07	30.68	0.98	.	7	36.732	11 29.29	5.37	1.75	4 57 38.41	7 26.0
8	8	. .	. .	5.	17.4	30.0	. .	. .	. .	. .	5 2 17.53	30.71	0.98	.	6	41.519	14 37.13	5.74	2.12	5 1 45.84	10 35.5
9	9	. .	38.3	51.	3.4	. .	. .	. .	. .	. .	4 3.50	30.73	1.00	.	3	44.168	33 28.19	5.91	4.42	3 31.77	29 28.8
10	8	. .	. .	. .	. .	27.5	40.2	. .	. .	. .	4 14.93	30.73	1.00	.	4	42.174	28 44.96	5.96	3.85	3 43.20	24 44.
11	6	. .	. .	. .	. .	. .	. .	. .	51.	. .	5 54.46	30.74	1.02	.	1	39.29	50 50.51	6.07	6.58	5 22.70	46 53.2
12	6	. .	. .	. .	. .	. .	. .	. .	13.2	. .	6 16.64	30.74	1.02	.	1	42.995	48 42.63	6.12	6.32	5 44.88	44 45.1
13	7	. .	. .	. .	. .	. .	. .	52.4	. .	. .	10 14.48	30.79	1.02	.	2	39.287	45 0.72	6.47	5.86	9 42.68	41 3.0
14	7	. .	. .	. .	. .	. .	. .	37.6	. .	. .	11 59.71	30.79	1.01	.	3	32.60	40 7.45	6.64	5.25	11 27.91	36 9.3
15	6	. .	. .	. .	. .	38.0	51.	3.4	. .	. .	5 13 25.63	−30.80	−0.98	.	7	46.412	5 55.23	− 6.78	− 1.08	5 12 53.85	29 1 53.1

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1849. h.	s.	s.	s.	s.	s.	° ′ ″	r.
Feb. 9, 7	− 30.932	g 0.018	− 1.277	+ 0.755	− 0.694	0 0 1.26	39.340

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1849. h. m.	° ′ ″				″	″	in.	°	°
Zone 160	Jan. 27, 5 0	289 51 2.2	3.2	9.4	4.7	4.91	4.88	30.388	41.5	30.2
Zone 161	Feb. 9, 4 40	291 42 0.5	0.5	8.9	3.0	3.24	3.22	29.972	38.3	26.7
	5 0	. .	. .	. .	. .	. .	. .			
	5 20	. .	. .	. .	. .	. .	. .	. .	. .	26.1
	5 40	. .	. .	. .	. .	. .	. .	. .	. .	25.5
	6 0	. .	. .	. .	. .	. .	. .	29.984	35.2	24.9
	6 20	. .	. .	. .	. .	. .	. .	. .	. .	24.4
	6 30	291 42 2.7	1.7	9.0	4.1	4.40	4.38	. .	. .	23.9

REMARKS.

(160) 53. Minutes assumed as 1 instead of 0.

Zone 161. February 9. Maj. Belt, 291° 42′½. D_o = −28° 55′ 50″—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	″	″	″	h. m. s.	° ′ ″
16	6	48.2	1.3	13.4	25.9	38.1	51.4	4.0	. .	. .	5 15 26.04	−30.82	−1.00	.	4	47.732	25 33.13	− 6.98	− 3.46	5 14 54.22	29 21 33.6
17	8	. .	10.5	23.4	. .	48.3	. .	. .	. .	. .	22 35.83	30.87	1.02	.	1	47.672	46 1.20	7.68	5.98	22 3.94	42 4.9
18	8	. .	. .	. .	. .	. .	33.0	45.2	. .	. .	23 7.51	30.88	1.00	.	3	44.842	33 4.91	7.73	4.38	22 35.63	29 7.0
19	8	. .	. .	. .	. .	26.5	38.2	51.0	. .	. .	23 13.30	30.88	1.00	.	3	45.914	32 27.92	7.74	4.30	22 41.42	28 30.0
20	8	39.8	52.7	5.4	17.6	. .	. .	. .	. .	. .	26 17.86	30.90	1.02	.	1	40.480	50 9.43	8.05	6.50	25 45.94	46 14.0
21	9	. .	44.0	56.2	. .	. .	. .	. .	. .	. .	28 9.05	30.92	1.02	.	1	42.628	48 55.26	8.24	6.34	27 37.11	44 59.8
22	9	. .	. .	. .	. .	. .	. .	49.1	. .	. .	28 11.20	30.92	1.01	.	3	38.762	36 34.44	8.25	4.81	27 39.27	32 37.5
23	6	. .	. .	19.2	32.0	44.2	. .	. .	. .	. .	32 31.89	30.95	0.98	.	7	46.759	5 43.25	8.69	1.05	31 59.96	1 43.0
24	7	. .	. .	47.2	0.0	13.1	. .	. .	. .	. .	34 0.09	30.96	1.02	.	1	37.662	51 46.69	8.85	6.70	33 28.11	47 52.2
25	8	. .	. .	. .	. .	. .	57.2	. .	. .	. .	34 31.82	30.96	1.02	.	2	35.969	46 55.23	8.90	6.09	33 59.84	43 0.2
26	5	. .	. .	. .	. .	50.	3.4	15.7	. .	. .	35 37.70	30.97	1.02	.	1	37.309	51 58.87	9.02	6.73	35 5.71	48 4.6
27	7	. .	11.7	24.0	36.4	49.5	2.0	. .	. .	. .	37 36.71	30.99	1.00	.	5	33.184	28 5.81	9.22	3.77	37 4.72	24 8.8
28	8	. .	. .	8.4	20.8	33.7	. .	. .	. .	. .	38 20.96	30.99	1.01	.	4	30.560	35 25.82	9.30	4.67	37 48.96	31 29.8
29	9	. .	. .	. .	. .	. .	18.4	. .	. .	. .	39 53.06	31.00	1.01	.	3	32.67	40 4.88	9.46	5.25	39 21.05	36 9.6
30	8	. .	. .	. .	. .	. .	. .	12.4	. .	. .	40 34.47	31.01	0.98	.	7	33.67	13 15.01	9.53	1.96	40 2.48	9 16.5
31	7	. .	. .	. .	. .	61.	14.	. .	. .	. .	43 48.70	31.03	0.98	.	7	40.658	9 13.83	9.87	1.47	43 16.69	5 15.2
32	7	. .	. .	. .	. .	. .	. .	46.	. .	. .	44 8.11	31.03	1.01	.	2	47.137	40 29.77	9.91	5.30	43 36.07	36 35.0
33	8	. .	. .	. .	. .	. .	. .	. .	56.	. .	44 59.42	31.04	1.01	.	2	44.41	42 3.89	10.00	5.49	44 27.37	38 9.4
34	5	. .	. .	31.0	44.0	56.8	9.4	21.9	. .	. .	46 43.98	31.05	1.00	.	3	44.524	33 15.89	10.18	4.40	46 11.93	29 20.5
35	.	. .	. .	. .	. .	3.4	. .	. .	. .	. .	48 50.88	31.07	0.98	.	6	45.89	12 6.22	10.41	1.82	48 18.83	29 8 8.4
36	5	. .	. .	. .	. .	. .	22.	35.0	. .	. .	48 56.97	31.07	0.98	.	6	. .	. .	10.42	. .	48 24.92	
37	7	. .	. .	. .	. .	. .	. .	59.5	. .	. .	51 21.57	31.09	0.98	.	6	43.105	13 42.38	10.68	2.01	49 49.50	29 9 45.1
38	8	. .	5.2	17.3	30.	. .	. .	. .	. .	. .	52 30.10	31.09	0.99	.	6	39.068	16 1.72	10.80	2.29	51 58.02	12 4.8
39	8	. .	. .	. .	57.4	10.	22.7	. .	. .	. .	52 57.51	31.09	0.98	.	7	36.599	11 33.93	10.85	1.76	52 25.44	7 36.5
40	7	. .	21.0	33.4	46.1	58.6	. .	. .	. .	. .	54 46.09	31.11	0.99	.	6	37.324	17 1.91	11.05	2.41	54 13.99	13 5.4
41	9	. .	. .	. .	. .	. .	39.2	. .	. .	. .	56 13.90	31.12	1.00	.	3	41.352	35 5.23	11.21	4.63	55 41.78	31 11.1
42	9	. .	. .	. .	. .	. .	. .	7.4	. .	. .	56 29.49	31.12	1.00	.	4	40.597	29 39.07	11.24	3.95	55 57.37	25 44.3
43	7	. .	26.2	38.2	51.2	3.5	. .	. .	. .	. .	5 58 51.08	31.14	0.99	.	5	40.384	23 57.29	11.49	3.26	5 58 18.95	20 2.0
44	4	13.5	26.2	38.8	51.1	4.0	. .	. .	. .	. .	6 0 51.39	31.15	1.02	.	1	43.20	48 35.56	11.72	6.31	6 0 19.22	44 43.6
45	9	. .	. .	. .	. .	. .	47.	59.2	. .	. .	1 21.49	31.15	1.01	.	3	33.004	39 53.36	11.77	5.23	0 49.33	36 0.4
46	8	. .	. .	26.	38.5	51.5	. .	. .	. .	. .	3 38.67	31.17	1.00	.	5	34.644	27 15.41	12.03	3.66	3 6.50	23 21.1
47	7	. .	. .	. .	. .	42.4	. .	7.5	. .	. .	4 29.66	31.17	1.02	.	2	29.877	50 25.49	12.12	6.53	3 57.47	46 34.1
48	7	. .	. .	. .	. .	. .	. .	. .	50.2	. .	4 53.65	31.17	1.02	.	2	28.160	51 24.76	12.17	6.65	4 21.46	47 33.6
49	4	. .	. .	. .	. .	. .	. .	. .	14.2	. .	8 17.64	31.20	0.98	.	5	38.045	25 18.03	12.55	3.43	7 45.46	21 24.0
50	6	. .	. .	. .	. .	. .	. .	53.	. .	. .	9 15.11	31.20	1.01	.	3	37.04	37 34.21	12.66	4.93	8 42.90	33 41.8
51	4	. .	. .	. .	. .	. .	. .	. .	41.5	. .	9 44.96	31.20	0.99	.	5	41.892	23 5.25	12.71	3.15	9 12.77	19 11.1
52	7	. .	. .	. .	. .	. .	. .	. .	39.4	52.5	10 42.86	31.21	1.02	.	1	43.61	48 21.40	12.82	6.27	10 10.63	44 30.5
53	7	. .	. .	. .	54.5	. .	. .	. .	. .	. .	12 54.57	31.23	0.98	.	6	46.83	11 33.81	13.08	1.76	12 22.36	7 38.6
54	7	. .	. .	. .	. .	. .	42.	54.5	. .	. .	13 16.69	31.23	0.99	.	5	42.898	22 30.53	13.13	3.08	12 44.47	18 36.7
55	8	. .	. .	. .	. .	43.	. .	. .	. .	. .	13 30.42	31.23	0.99	.	4	45.80	26 39.80	13.16	3.59	12 58.20	22 46.6
86	8	. .	. .	. .	. .	. .	29.	41.2	. .	. .	15 3.44	31.24	1.02	.	2	38.22	45 37.54	13.32	5.93	14 31.18	41 46.8
57	6	. .	. .	. .	. .	. .	. .	. .	37.4	. .	15 40.82	31.24	1.01	.	3	32.90	39 57.09	13.39	5.24	15 8.57	36 5.7
58	8	. .	. .	. .	. .	. .	. .	42.5	. .	. .	17 4.51	31.25	1.02	.	1	38.818	51 6.80	13.56	6.62	16 32.24	47 17.0
59	6	. .	. .	. .	. .	28.5	41.	. .	. .	. .	18 15.76	31.26	1.02	.	1	39.077	50 57.86	13.70	6.59	17 43.48	47 8.2
60	7	. .	. .	. .	. .	. .	. .	. .	25.3	. .	18 28.85	31.26	0.98	.	6	39.667	15 41.04	13.73	2.25	17 56.61	11 47.0
61	5	. .	. .	13.	25.3	38.4	. .	. .	. .	. .	20 25.56	31.27	1.01	.	2	46.245	41 0.56	13.95	5.36	19 53.28	37 9.9
62	6	. .	. .	. .	. .	. .	. .	39.5	. .	. .	22 1.57	31.28	0.98	.	6	37.457	16 57.33	14.14	2.41	21 29.31	13 3.9
63	9	. .	. .	. .	. .	. .	. .	56.2	. .	. .	23 18.28	31.29	0.98	.	6	39.775	15 36.98	14.30	2.24	22 46.01	11 43.5
64	7	. .	14.2	26.5	39.2	51.5	. .	. .	. .	. .	6 26 39.17	−31.31	−0.98	.	6	39.010	16 3.72	−14.70	− 2.30	6 26 6.88	29 12 10.7

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	*m*	*n*	*c*	Zenith Point.	Mic. Co.
1849.	h.	s.	s.	s.	s.	s.	° ′ ″	r.

REMARKS.

(161) 37. Minutes assumed as 50 instead of 49.
(161) 56. Double.

INSTRUMENT READINGS.

	Date.		CIRCLE.						Barom.	Attached Thermom.	External Thermom.
			A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1849.	h. m.	° ′ ″				″	″	in.	°	°

ZONE 161. FEBRUARY 9. MAJ. BELT, 291° 42′½. D₀=−28° 55′ 50″—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
65	8	. .	. .	. .	. .	. .	35.5	. .	. .	. .	6 27 10.19	−31.31	−1.01	.	3	37.824	37 7.14	−14.76	− 4.88	6 26 37.87	29 33 16.8
66	8	. .	. .	. .	. .	. .	24.	37.2	. .	. .	28 58.97	31.32	1.01	.	3	28.037	42 44.94	14.98	5.57	27 26.64	38 55.5
67	7	. .	. .	. .	. .	. .	17.2	30.	. .	. .	6 28 52.00	−31.32	−1.00	.	4	31.75	34 44.75	−14.97	− 4.58	6 28 19.68	29 30 54.3

ZONE 162. FEBRUARY 10. MAJ. BELT, 291° 5′. D₀=−29° 31′ 50″.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	8	0.0	12.4	25.4	37.5	50.1	3.2	15.5	. .	. .	4 54 37.73	−31.12	--0.99	VI.	6	38.735	16 13.06	−12.02	− 2.22	4 54 5.62	29 48 17.3
2	8	. .	. .	. .	12.0	25.2	. .	. .	. .	. .	56 12.30	31.13	1.02	V.	1	31.761	55 10.34	12.18	7.32	55 40.15	30 27 19.8
3	9	. .	. .	24.1	36.7	49.5	. .	. .	. .	. .	57 36.76	31.15	1.00	.	5	31.629	28 59.47	12.33	3.87	57 4.61	1 5.7
4	9	. .	. .	28.5	41.0	53.8	. .	. .	. .	. .	4 58 41.09	31.16	1.00	.	5	30.757	29 29.57	12.44	3.94	4 58 8.93	1 36.0
5	10	. .	. .	12.5	24.7	37.5	. .	. .	. .	. .	5 4 24.89	31.20	1.00	.	4	39.296	30 24.31	13.03	4.05	5 3 52.69	30 2 31.4
6	8	. .	11.0	23.5	35.9	48.5	. .	. .	. .	. .	5 36.07	31.21	0.99	.	5	40.038	24 10.24	13.16	3.24	5 3.87	29 56 16.6
7	7	. .	29.2	42.	55.2	7.4	. .	. .	. .	. .	5 54.80	31.21	0.99	.	6	41.03	14 54.00	13.21	2.06	5 22.60	46 59.3
8	8	. .	. .	. .	. .	. .	. .	54.5	. .	. .	6 17.24	31.22	0.98	.	6	44.655	12 48.88	13.26	1.79	5 45.04	29 44 53.9
9	7	. .	. .	. .	. .	. .	. .	. .	9.2	22.4	7 12.36	31.23	1.01	.	3	37.165	37 29.90	13.35	4.98	6 40.12	30 9 38.2
10	7	26.5	39.3	52.	. .	. .	. .	. .	. .	. .	10 4.65	31.25	0.99	.	5	40.757	23 44.42	13.67	3.20	9 32.41	29 55 51.3
11	7	. .	. .	. .	. .	27.2	. .	. .	. .	. .	10 14.62	31.25	0.98	.	7	40.83	9 7.89	13.69	1.31	9 42.39	41 12.9
12	9	. .	. .	. .	. .	61.2	14.	26.5	. .	. .	10 48.51	31.25	0.99	.	5	42.002	23 1.45	13.74	3.10	10 16.27	29 55 8.3
13	8	. .	23.5	36.5	48.4	. .	. .	. .	. .	. .	12 48.83	31.27	1.01	.	3	36.652	37 47.59	13.99	5.01	12 16.55	30 9 56.6
14	8	. .	. .	. .	. .	. .	21.7	34.7	. .	. .	12 56.48	31.27	0.98	.	7	35.469	12 12.93	14.00	1.72	12 24.23	29 44 18.6
15	8	45.2	. .	10.4	23.2	. .	. .	. .	. .	. .	15 23.22	31.29	1.00	.	4	35.14	32 47.75	14.30	4.36	14 50.93	30 4 56.4
16	8	. .	. .	. .	56.4	9.4	22.5	. .	. .	. .	15 56.72	31.29	1.01	.	3	30.492	41 20.21	14.36	5.48	15 24.42	13 30.0
17	9	. .	. .	. .	44.2	57.2	. .	. .	. .	. .	19 44.38	31.33	1.01	.	2	39.329	44 59.26	14.81	5.97	19 12.04	30 17 10.0
18	8	58.	10.5	23.4	35.5	. .	. .	. .	. .	. .	22 35.84	31.35	0.98	.	7	39.222	10 3.40	15.15	1.43	22 3.51	29 42 10.0
19	10	. .	. .	. .	. .	. .	23.2	. .	. .	. .	22 57.73	31.35	1.00	.	3	37.97	37 1.96	15.19	4.91	22 25.38	30 9 12.1
20	7	. .	. .	. .	. .	5.9	19.	31.5	. .	. .	23 53.37	31.36	1.01	II.	2	44.082	42 14.44	15.31	5.60	23 21.00	30 14 25.4
21	6	40.2	53.2	5.5	18.2	. .	. .	. .	. .	. .	26 18.28	31.38	0.99	.	6	42.294	14 10.37	15.60	1.97	25 45.91	29 46 17.9
22	8	. .	11.4	24.2	35.5	. .	. .	. .	. .	. .	28 36.37	31.40	1.00	.	4	38.752	30 43.07	15.87	4.09	28 3.97	30 2 53.0
23	6	. .	13.	25.	36.2	. .	. .	. .	. .	. .	28 37.41	31.40	1.00	.	5	38.234	25 11.50	15.87	3.38	28 5.01	29 57 20.8
24	10	. .	. .	. .	. .	. .	45.4	57.7	. .	. .	31 19.72	31.42	1.01	.	2	42.67	43 3.79	16.19	5.71	30 47.29	30 15 15.7
25	10	. .	. .	. .	. .	5.7	19.	31.2	. .	. .	32 53.21	31.43	1.01	.	3	34.739	38 53.58	16.37	5.17	32 20.77	30 11 5.1
26	8	. .	. .	. .	. .	. .	25.4	38.2	. .	. .	34 0.08	31.44	0.99	.	6	39.39	15 50.60	16.50	2.17	33 27.65	29 47 59.3
27	7	. .	. .	. .	. .	. .	. .	10.	. .	. .	34 31.84	31.44	0.98	.	7	37.63	10 58.33	16.56	1.56	33 59.42	43 6.4
28	6	. .	. .	. .	. .	50.7	3.4	15.8	. .	. .	35 37.91	31.45	0.99	.	5	39.077	24 42.40	16.68	3.31	35 5.47	56 52.4
29	7	. .	. .	. .	. .	38.5	51.5	. .	. .	. .	39 25.98	31.48	1.00	.	5	36.129	26 24.16	17.12	3.53	38 53.50	58 34.8
30	9	. .	. .	. .	. .	. .	31.2	44.	. .	. .	40 5.83	31.48	1.00	.	5	36.129	26 24.01	17.20	3.53	39 33.35	58 34.7
31	7	. .	. .	. .	59.	12.	24.5	. .	. .	. .	44 59.26	31.52	0.97	.	7	46.075	6 6.86	17.73	0.94	44 26.77	38 15.5
32	7	. .	. .	. .	8.5	21.2	. .	. .	. .	. .	45 8.62	31.52	0.97	.	7	48.834	4 31.63	17.75	0.74	44 36.13	36 40.1
33	8	. .	. .	. .	. .	34.0	46.7	59.5	. .	. .	45 21.36	31.52	0.99	.	5	44.78	21 25.57	17.77	2.89	44 48.85	29 53 36.2
34	9	. .	20.5	33.2	45.6	. .	. .	. .	. .	. .	48 45.77	31.55	1.00	.	4	40.957	29 26.97	18.15	3.92	48 13.22	30 1 39.0
35	9	. .	. .	. .	. .	. .	10.6	23.5	. .	. .	48 45.32	31.55	0.98	.	6	40.481	15 12.95	18.15	2.10	48 12.79	29 47 23.1
36	7	. .	58.2	11.1	. .	36.	. .	. .	. .	. .	50 23.56	31.56	0.99	.	5	39.201	24 38.13	18.33	3.30	49 51.01	56 49.8
37	8	. .	. .	. .	. .	38.	50.5	3.7	. .	. .	50 25.34	31.56	1.00	.	5	34.26	27 28.67	18.33	3.67	49 52.78	29 59 40.7
38	8	. .	. .	. .	44.5	57.2	10.2	. .	. .	. .	51 44.59	31.57	1.00	.	4	33.932	33 29.43	18.48	4.45	51 12.02	30 5 42.4
39	9	. .	. .	. .	. .	36.0	48.8	. .	. .	. .	55 23.35	31.59	1.00	.	4	34.024	33 26.22	18.84	4.45	54 50.76	30 5 39.5
40	10	. .	. .	. .	. .	. .	. .	22.	. .	. .	55 43.85	31.59	0.99	.	5	40.619	23 48.84	18.87	3.20	55 11.27	29 56 0.9
41	.	. .	. .	. .	. .	. .	. .	6.	. .	. .	56 27.85	31.60	0.99	.	6	30.70	20 50.20	−18.96	− 2.81	55 55.26	29 53 2.0
42	.	. .	. .	. .	. .	. .	. .	22.5	. .	. .	5 56 44.36	−31.60	−1.00	.	.	. .	. . . . .	. .	. .	5 56 11.76	

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1849. h.	s.	s.	s.	s.	s.	° ′ ″	r.
Feb. 10, 6	− 31.371	g 0.017	− 1.277	+ 0.755	− 0.694	0 0 0.00	39.368

REMARKS.

(161) 66. Minutes assumed as 27 instead of 28.
(162) 67. Double.

INSTRUMENT READINGS.

	Date.		CIRCLE.						Barom.	Attached Thermom.	External Thermom.
			A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1849.	h. m.	° ′ ″				″	″	in.	°	°
Zone 162	Feb. 10,	4 45	. .	. .	. .	. .	. .	. .	30.020	37.0	30.5
		4 54	291 5 59.5	59.4	66.8	63.2	62.24	62.22			
		5 20	. .	. .	. .	. .	. .	. .	. .	. .	29.7
		5 51	58.0	59.1	5.1	3.2	61.36	61.35	30.000	35.7	29.2
		6 0	. .	. .	. .	. .	. .	. .	29.988	35.5	29.3
		6 20	. .	. .	. .	. .	. .	. .	. .	. .	29.4
		6 40	291 6 0.4	0.0	4.2	4.4	2.27	2.25	29.980	34.8	29.7

ZONE 162. FEBRUARY 10. MAJ. BELT, 291° 5′. $D_0 = -29° 31′ 50″$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
43	.	. .	. .	. .	. .	. .	. .	. .	3.4	. .	5 57 6.44	−31.61	−1.00	.	5	31.807	28 53.32	−19.01	− 3.86	5 56 33.83	30 1 6.2
44	6	. .	. .	. .	. .	0.0	. .	. .	. .	. .	57 47.35	31.61	1.00	.	5	33.80	27 44.54	19.08	3.70	57 14.74	29 59 57.3
45	8	. .	. .	. .	. .	. .	38.	50.7	. .	. .	5 59 12.65	31.62	0.97	.	7	46.898	5 38.46	19.23	0.87	5 58 40.06	37 48.6
46	4	. .	. .	39.	51.3	4.0	. .	. .	. .	. .	6 0 51.50	31.63	0.98	.	6	44.995	12 37.15	19.40	1.77	6 0 18.89	44 48.3
47	8	16.0	29.2	41.2	54.0	. .	. .	. .	. .	. .	4 54.12	31.66	0.98	.	6	40.112	15 25.68	19.79	2.12	4 21.48	47 37.6
48	10	. .	. .	41.4	54.2	. .	. .	. .	. .	. .	4 54.18	31.66	0.99	.	6	38.44	16 23.39	19.79	2.25	4 21.53	48 35.4
49	10	. .	. .	. .	. .	. .	. .	29.2	. .	. .	5 51.06	31.67	1.00	.	5	34.50	27 20.04	19.87	3.65	5 18.39	29 59 33.6
50	8	. .	. .	. .	. .	25.	. .	. .	. .	. .	7 12.34	31.68	1.02	.	1	32.60	54 41.41	20.03	7.26	6 39.64	30 26 58.7
51	8	. .	. .	. .	1.4	14.4	27.0	39.5	. .	. .	8 1.51	31.68	1.00	.	4	38.657	30 46.35	20.09	4.10	7 28.83	30 3 0.5
52	8	. .	. .	. .	. .	. .	. .	. .	17.4	. .	8 20.56	31.68	0.99	.	6	33.115	19 27.19	20.11	2.63	7 47.89	29 51 39.9
53	9	. .	. .	. .	. .	. .	1.2	13.9	. .	. .	9 35.76	31.69	1.01	.	4	30.488	35 28.31	20.24	4.71	9 3.06	30 7 43.3
54	6	. .	. .	. .	. .	55.7	8.5	. .	. .	. .	10 43.16	31.69	0.98	.	7	35.245	12 20.67	20.35	1.73	10 10.49	29 44 32.8
55	8	. .	17.2	. .	. .	55.6	8.4	20.6	. .	. .	42.74	31.69	0.99	.	6	37.075	17 10.51	20.35	2.36	11 10.06	49 23.2
56	8	. .	. .	. .	. .	56.5	9.2	. .	. .	. .	12 43.90	31.71	0.98	.	6	40.932	14 57.38	20.53	2.07	12 11.21	47 10.0
57	7	. .	35.5	48.2	. .	. .	. .	. .	. .	. .	15 0.86	31.72	1.00	.	5	38.272	25 10.19	20.74	3.38	14 28.14	29 57 24.3
58	2	. .	. .	53.2	6.0	18.4	31.2	44.0	. .	. .	15 5.85	31.72	1.00	.	4	43.705	27 52.13	20.75	3.73	14 33.13	30 0 6.6
59	8	. .	. .	52.0	5.0	17.5	. .	. .	. .	. .	17 4.89	31.73	0.98	.	6	40.779	15 2.66	20.93	2.07	16 32.18	29 47 15.7
60	7	. .	47.2	0.0	12.	. .	. .	. .	. .	. .	18 12.40	31.74	0.99	.	5	39.66	24 22 28	21.03	3.28	17 39.67	56 36.6
61	6	. .	. .	. .	15.	28.3	. .	. .	. .	. .	18 15.38	31.74	0.98	.	6	40.77	15 2.97	21.04	2.07	17 42.66	47 16.1
62	7	48.	0.7	13.3	25.8	. .	. .	. .	. .	. .	21? 25.93	31.76	0.97	.	7	47.83	5 6.29	21.33	0.81	19 53.20	37 18.4
63	8	. .	. .	. .	39.5	52.0	4.7	. .	. .	. .	22 39.43	31.77	0.99	.	5	47.00	20 8.94	21.45	2.72	22 6.67	29 52 23.1
64	10	. .	. .	. .	. .	. .	2.4	15.	. .	. .	23 36.86	31.77	1.02	.	2	38.52	45 27.03	21.54	6.02	23 4.07	30 17 44.6
65	9	. .	. .	. .	. .	. .	. .	22.8	. .	. .	24 44.64	31.78	0.98	.	7	33.092	13 34.63	21.64	1.90	24 11.88	29 45 48.2
66	8	. .	. .	46.5	59.5	11.4	. .	. .	. .	. .	27 59.22	31.80	0.98	.	7	44.909	6 47.10	21.95	1.03	27 26.44	39 0.1
67	9	3.0	15.4	28.4	41.0	. .	. .	. .	. .	. .	28 40.99	31.81	1.00	.	4	46.301	26 22.52	22.02	3.53	29 8.18	29 58 38.1
68	6	52.5	5.3	17.9	30.2	43.5	56.0	8.8	. .	. .	34 30.60	31.84	1.02	.	2	34.924	47 31.29	22.58	6.30	33 57.74	30 19 50.2
69	7	. .	. .	38.9	50.5	3.4	. .	. .	. .	. .	6 39 50.93	−31.87	−1.02	.	1	34.078	53 50.40	−23.10	− 7.14	6 39 18.04	30 26 10.6

ZONE 163. FEBRUARY 16. MAJ. BELT, 294° 50.′ $D_0 = -25° 49′ 30″$.

1	8	. .	. .	. .	. .	. .	26.	38.4	. .	. .	4 48 1.52	−29.76	−1.00	VII.	4	39.609	30 13.19	− 5.34	− 6.02	4 47 30.76	26 19 54.6
2	6	. .	28.5	40.4	52.7	. .	. .	. .	. .	. .	49 52.78	29.77	0.99	.	7	41.767	8 35.55	5.47	3.94	49 22.02	25 58 15.0
3	5	58.	10.4	22.6	34.7	47.0	59.0	11.6	. .	. .	56 34.76	29.83	1.00	IV.	3	33.287	39 43.75	5.95	6.95	56 3.93	26 29 26.7
4	5	. .	. .	6.2	19.0	30.9	. .	. .	. .	. .	58 18.75	29.84	0.99	.	6	38.058	16 36.59	6.07	4.70	57 47.92	6 17.4
5	6	. .	17.2	29.4	41.6	54.0	. .	. .	. .	. .	4 59 41.67	29.85	1.00	.	4	36.905	31 46.82	6.17	6.18	4 59 10.82	21 29.2
6	7	. .	. .	. .	. .	49.4	1.5	. .	. .	. .	5 0 37.00	29.86	1.01	.	1	37.49	51 52.63	6.23	8.14	5 0 6.13	41 37.0
7	7	33.2	45.7	57.7	9.7	. .	. .	. .	. .	. .	5 9.94	29.90	0.99	.	6	38.582	16 18.49	6.57	4.68	4 39.05	5 59.7
8	8	. .	. .	37.2	49.	. .	. .	. .	. .	. .	6 49.20	29.91	1.01	.	1	33.494	54 10.55	6.69	8.37	6 18.28	43 55.6
9	8	. .	. .	. .	. .	. .	. .	. .	59.	. .	6 4.04	29.91	1.00	12.	5	34.11	27 33.18	6.63	5.76	5 33.13	17 15.6
10	8	. .	. .	. .	. .	. .	. .	9.8	. .	. .	7 32.97	29.92	1.00	.	6	28.	22	6.	5.	7 2.05	12
11	6	. .	. .	. .	. .	. .	. .	33.5	. .	. .	8 56.69	29.92	1.00	.	4	34.518	33 9.22	6.84	6.31	8 25.77	22 52.4
12	8	. .	. .	. .	. .	. .	. .	44.4	. .	. .	10 7.55	29.93	1.01	.	2	35.80	47 1.06	6.93	7.67	9 36.61	36 45.7
13	8	. .	. .	. .	. .	. .	34.	46.5	. .	. .	11 9.54	29.94	1.00	.	3	31.868	40 32.71	7.01	7.03	10 38.60	30 16.7
14	9	29.8	. .	. .	. .	. .	. .	. .	. .	. .	14 6.58	29.96	1.00	.	6	32.005	20 5.20	7.23	5.04	13 35.62	9 47.5
15	7	. .	. .	0.0	12.	24.2	36.4	. .	. .	. .	14 12.08	29.96	0.99	.	6	40.054	16 2.21	7.24	4.64	13 41.13	5 44.1
16	8	. .	. .	. .	. .	. .	16.4	28.0	. .	. .	14 51.41	29.96	1.01	.	1	34.539	53 34.48	7.29	8.32	14 20.44	43 20.1
17	8	. .	29.	42.0	53.7	6.5	. .	. .	. .	. .	21 53.96	30.02	1.01	.	1	35.531	53 0.25	7.82	8.26	21 22.93	42 46.3
18	8	. .	. .	. .	. .	. .	55.0	7.2	. .	. .	5 22 30.42	−30.02	−1.00	.	5	32.89	28 15.95	− 7.87	− 5.83	5 21 59.40	26 17 59.6

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1849. h.	s.	s.	s.	s.	s.	° ′ ″	r.
Feb. 16, 6	−31.467	l 0.009	− 0.710	+ 0.140	− 0.480	359 59 59.42	39.311

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1849. h. m.	° ′ ″				″	″	in.	°	°
Zone 163	Feb. 16, 4 45	294 50 61.1	55.9	62.5	61.1	60.15	60.15			
	4 46	. .	. .	. .	. .	. .	. .	29.924	27.0	19.3
	5 0	. .	. .	. .	. .	. .	. .	. .	. .	18.9
	5 20	. .	. .	. .	. .	. .	. .	. .	. .	18.6
	5 37	60.2	56.8	63.9	63.9	61.20	61.20	29.926	25.	18.2
		. .	. .	. .	. .	. .	. .	. .	. .	17.9
	6 13	. .	. .	. .	. .	. .	. .	29.928	24.	17.8

REMARKS.

(162) 55. Minutes assumed as 11.
(162) 62. Minutes assumed as 20 instead of 19.
(162) 67. Minutes assumed as 29 instead of 28.
(163) 15. Micrometer reading assumed as $39^r.054$ instead of $40^r.054$.

Zone 163. February 16. Maj. Belt, 294° 50′. $D_\circ = -25^\circ\ 49'\ 30''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
19	9	. .	60.	11.9	. .	. .	. .	. .	. .	. .	5 24 24.33	−30.04	−1.00	.	4	31.414	34 56.32	− 8.02	− 6.48	5 23 53.29	26 24 40.8
20	9	. .	. .	. .	25.0	37.5	. .	. .	. .	. .	24 25.12	30.04	1.00	.	5	33.234	28 4.08	8.02	5.80	23 54.08	17 47.9
21	9	. .	. .	. .	. .	. .	46.4	59.3	. .	. .	25 22.18	30.04	1.00	.	5	33.788	27 44.84	8.10	5.77	24 51.14	17 28.7
22	8	43.5	56.2	8.4	20.3	. .	. .	. .	. .	. .	27 20.50	30.06	1.00	.	4	35.532	32 34.21	8.25	6.25	26 49.44	22 18.7
23	8	. .	. .	. .	. .	. .	2.2	. .	. .	. .	27 37.53	30.06	1.01	.	1	40.287	50 16.14	8.28	7.99	27 6.46	26 40 2.4
24	7	. .	37.5	50.	2.0	14.4	. .	. .	. .	. .	31 2.12	30.08	0.99	.	7	46.518	5 51.58	8.56	3.69	30 31.05	25 55 33.8
25	9	11.	23.2	35.4	47.4	. .	12.	24.7	. .	. .	35 47.66	30.12	1.00	.	3	40.195	35 45.31	8.97	6.56	35 16.54	26 25 30.8
26	11	. .	. .	. .	. .	. .	13.	25.2	. .	. .	35 48.40	30.12	1.00	.	3	39.505	36 8.99	8.97	6.60	35 17.28	25 54.6
27	8	. .	. .	43.7	56.0	8.4	. .	. .	. .	. .	37 56.05	30.13	1.00	.	5	41.757	23 9.91	9.15	5.34	37 24.92	12 54.4
28	8	. .	. .	24.7	. .	. .	. .	. .	. .	. .	40 36.85	30.15	1.01	.	1	38.495	51 17.95	9.39	8.09	40 5.69	41 5.4
29	8	. .	. .	. .	. .	10.3	22.6	. .	. .	. .	40 58.05	30.15	1.00	.	3	39.117	36 22.51	9.43	6.62	40 26.90	26 8.6
30	7	. .	. .	. .	. .	. .	2.5	14.8	. .	. .	41 37.97	30.16	1.00	.	4	41.534	29 7.04	9.49	5.91	41 6.81	18 52.4
31	9	. .	. .	. .	. .	. .	10.2	. .	. .	. .	42 45.72	30.16	1.00	.	5	44.179	21 46.18	9.60	5.20	42 14.56	11 31.0
32	8	. .	. .	. .	5.0	18.0	30.	. .	. .	. .	44 5.39	30.17	1.00	.	3	43.442	33 53.23	9.73	6.38	43 34.22	26 23 39.3
33	7	. .	. .	. .	26.5	39.	. .	. .	. .	. .	45 26.74	30.18	0.99	.	7	47.437	5 19.86	9.85	3.64	44 55.57	25 55 3.4
34	7	. .	. .	21.	33.	. .	. .	. .	. .	. .	46 33.19	30.19	0.99	.	7	40.548	9 17.63	9.97	4.00	46 2.01	25 59 1.6
35	8	. .	. .	. .	53.	5.4	. .	. .	. .	. .	46 53.07	30.19	1.00	.	4	39.992	30 0.28	10.00	6.00	46 21.88	26 19 46.3
36	7	33.5	46.	58.2	10.	. .	. .	. .	. .	. .	49 10.36	30.21	1.01	.	1	38.73	51 9.83	10.22	8.07	48 39.14	40 58.1
37	8	. .	39.	50.	3.2	15.7	27.5	. .	. .	. .	51 3.06	30.22	1.01	.	2	42.731	43 1.84	10.42	7.28	50 31.83	32 49.5
38	9	. .	. .	. .	. .	. .	12.2	24.4	. .	. .	52 47.64	30.23	1.00	.	5	41.202	23 28.94	10.61	5.37	52 16.41	13 14.9
39	9	2.	14.7	27.	38.8	. .	. .	. .	. .	. .	55 39.07	30.25	1.01	.	1	40.56	50 6.67	10.93	7.97	55 7.81	39 55.6
40	9	. .	. .	. .	14.5	. .	. .	. .	. .	. .	57 14.53	30.26	1.01	.	1	41.49	49 34.57	11.11	7.92	56 43.26	39 23.6
41	4	. .	. .	. .	43.9	56.	8.2	21.	. .	. .	5 57 43.88	30.26	1.00	.	4	44.498	27 24.76	11.17	5.74	57 12.62	17 11.7
42	8	. .	. .	. .	5.2	17.2	29.7	. .	. .	. .	6 0 5.10	30.28	1.00	.	4	41.768	28 58.98	11.43	5.90	5 59 33.82	18 46.3
43	9	. .	43.2	55.	7.4	. .	. .	. .	. .	. .	2 7.47	30.29	1.01	.	2	36.96	46 21.02	11.66	7.60	6 1 36.17	36 10.3
44	.	42.	54.1	6.2	18.4	. .	. .	. .	. .	. .	4 18.61	30.30	1.01	.	1	39.398	50 46.79	11.92	8.03	3 47.30	40 36.7
45	5	7.	19.5	31.5	43.4	56.2	. .	. .	. .	. .	5 43.80	30.31	1.00	.	3	37.57	37 15.91	12.08	6.71	5 12.49	27 4.7
46	8	. .	. .	. .	. .	. .	42.4	. .	. .	. .	6 17.72	30.32	1.01	.	1	37.042	52 8.09	12.14	8.17	5 46.39	41 58.4
47	8	. .	22.4	. .	46.4	. .	. .	. .	. .	. .	8 46.62	30.33	0.99	.	6	36.48	17 31.04	12.43	4.79	8 15.30	7 18.3
48	8	. .	41.2	. .	. .	. .	. .	. .	. .	. .	9 5.62	30.33	0.99	.	6	32.342	19 53.86	12.47	5.02	8 34.30	9 41.4
49	9	. .	. .	. .	. .	. .	3.	15.2	. .	. .	9 38.41	30.34	1.00	.	4	32.37	34 23.22	12.53	6.43	9 7.07	24 12.2
50	9	. .	. .	. .	. .	. .	12.	. .	. .	. .	9 47.38	30.34	1.01	.	3	29.020	42 10.89	12.54	7.20	9 16.03	26 32 0.6
51	8	. .	. .	. .	. .	. .	. .	33.4	. .	. .	6 11 56.54	−30.35	−0.99	.	7	42.04	8 26.13	−12.78	− 3.94	6 11 25.20	25 58 12.8

Zone 164. February 19. Maj. Belt, −299° 12½′. $D_\circ = -21^\circ\ 25'\ 10''$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	6	34.	46.1	57.4	9.3	. .	. .	. .	. .	. .	6 1 9.47	−31.70	−1.00	IV.	5	43.068	22 24.66	− 6.74	− 9.45	6 0 36.77	21 47 50.8
2	9	. .	. .	. .	51.	. .	. .	. .	. .	. .	3 51.04	31.72	1.01	12.	1	37.81	51 40.77	6.87	11.60	3 18.31	22 17 9.2
3	7	. .	. .	. .	54.6	6.3	18.4	. .	. .	. .	3 54.57	31.72	1.01	12.	2	32.365	40 15.56	6.88	10.75	3 21.84	22 5 43.2
4	7	. .	. .	. .	. .	. .	. .	. .	. .	53.2	4 48.00	31.73	1.00	12.	5	27.794	31 11.02	6.92	10.08	4 15.27	21 56 38.0
5	8	. .	. .	. .	. .	. .	. .	22.	. .	. .	6 26.34	31.74	1.02	.	1	31.60	55 15.93	7.06	11.85	5 53.58	22 20 44.8
6	8	. .	25.	37.0	48.	0.5	. .	. .	. .	. .	8 48.56	31.75	1.01	.	2	38.923	45 13.27	7.14	11.11	8 15.80	10 41.5
7	8	. .	. .	43.	54.7	6.5	. .	. .	. .	. .	9 54.73	31.76	1.01	IV.	2	42.226	43 19.28	7.20	10.96	9 21.96	8 47.4
8	8	. .	58.4	10.1	21.7	. .	. .	. .	. .	. .	11 21.93	31.77	1.02	.	1	34.01	53 52.75	7.31	11.74	10 49.14	22 19 21.8
9	8	. .	. .	. .	. .	. .	. .	65.4	. .	. .	11 29.77	31.77	0.99	.	6	39.07	16 1.64	7.32	9.00	10 57.01	21 41 28.0
10	8	. .	. .	. .	. .	. .	15.	27.1	. .	. .	11 51.42	31.77	0.99	.	6	37.774	16 46.38	7.34	9.04	11 18.66	42 12.8
11	9	. .	. .	. .	. .	. .	21.	. .	. .	. .	6 12 57.28	−31.78	−1.00	.	4	41.00	29 25.37	− 7.42	− 9.96	6 12 24.50	21 54 52.8

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1849.	h.	s.	s.	s.	s.	s.	° ′ ″	r.
Feb. 19,	5	−33.867	g 0.015	− 0.149	+ 0.382	− 0.196	359 59 59.01	39.349

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1849. h. m.	° ′ ″				″	″	in.	°	°
Zone 164	Feb. 19, 6 0	. .	. .	. .	. .	. .	. .	30.572	28.	20.5
	6 1	299 11 62.5	58.9	64.5	65.5	62.86	62.85			
	6 20	. .	. .	. .	. .	. .	. .	. .	. .	20.3
	6 25	3.8	0.5	6.	6.0	4.09	4.08			
	6 40	. .	. .	. .	. .	. .	. .	. .	. .	19.8
	6 56	4.4	0.	5.9	5.7	4.01	4.00			
	7 0	. .	. .	. .	. .	. .	. .	30.574	27.	17.9
	7 25	. .	. .	. .	. .	. .	. .	. .	. .	18.

REMARKS.

(163) 33. Declination differs by +1′ from Arg. Z. 323, 101, and −1′ from Mural Z., 1848, January 22.

(163) 42. Transit over T. IV assumed as 5^s.2 instead of 3^s.2.

(164) 3. Micrometer thread 3 instead of 2 assumed to have been used.

ZONE 164. FEBRUARY 19. MAJ. BELT, 299° 12½′. $D_0 = -21° 25' 10''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
12	8	. .	. .	. .	. .	. .	. .	46.3	. .	. .	6 13 10.72	−31.78	−1.00	.	4	34.442	33 11.83	− 7.44	−10.22	6 12 37.94	21 58 39.5
13	6	. .	. .	. .	. .	3.	. .	. .	. .	. .	13 51.20	31.78	1.01	.	3	33.861	37 5.87	7.49	10.51	13 18.41	22 2 33.9
14	8	. .	. .	. .	. .	34.	45.8	. .	. .	. .	15 22.08	31.79	1.01	.	1	39.95	50 57.25	7.60	11.56	14 49.28	16 26.4
15	8	. .	. .	. .	. .	. .	. .	21.6	. .	. .	15 46.04	31.80	1.01	.	2	43.25	42 43.93	7.63	10.92	15 13.23	8 12.5
16	.	. .	. .	. .	. .	. .	54.2	6.	. .	. .	16 30.41	31.80	1.01	.	2	38.86	45 15.33	7.68	11.12	15 57.60	10 44.1
17	.	. .	. .	. .	. .	2.	14.	25.7	. .	. .	16 50.17	31.80	1.01	.	2	36.485	46 37.40	7.70	11.21	16 17.36	12 6.3
18	9	. .	. .	. .	. .	. .	. .	4.5	. .	. .	17 28.92	31.81	1.01	VII.	2	39.35	44 58.30	7.75	11.10	16 56.10	22 10 27.2
19	7	. .	. .	. .	15.	26.4	. .	. .	. .	. .	19 14.79	31.82	1.00	.	5	34.632	27 15.82	7.87	9.80	18 41.97	21 52 43.5
20	7	. .	. .	. .	60.4	12.3	. .	. .	. .	. .	21 0.46	31.83	1.00	.	5	39.17	24 39.19	8.02	9.62	20 27.63	21 50 6.8
21	6	. .	. .	. .	40.5	52.7	16.5	. .	. .	. .	21 40.77	31.83	1.00	.	3	38.59	36 40.71	8.08	10.47	21 7.94	22 2 9.3
22	6	. .	. .	. .	. .	. .	28.5	40.4	. .	. .	22 4.80	31.83	1.00	.	4	41.171	29 19.58	8.12	9.95	21 31.97	21 54 47.6
23	7	. .	. .	. .	49.2	1.3	. .	. .	. .	. .	23 49.40	31.84	0.99	.	7	35.183	12 22.81	8.27	8.73	23 16.57	21 37 49.8
24	7	. .	. .	40.	51.5	4.0	15.5	. .	. .	. .	24 51.79	31.85	1.01	.	2	34.415	47 48.87	8.36	11.30	24 18.93	22 13 18.5
25	9	. .	. .	. .	. .	52.7	4.4	. .	. .	. .	25 40.78	31.86	1.00	.	4	38.982	30 35.11	8.44	10.04	25 7.92	21 56 3.6
26	8	. .	. .	. .	. .	23.4	34.9	. .	. .	. .	29 12.14	31.88	1.00	.	5	34.601	27 16.90	8.76	9.80	28 39.26	52 45.5
27	6	. .	. .	. .	43.	55.0	. .	. .	. .	. .	43.09	31.88	1.00	.	4	33.149	33 56.46	8.80	10.27	(29) 10.21	21 59 25.5
28	8	. .	. .	56.5	8.2	20.3	32.3	. .	. .	. .	31 8.37	31.89	1.01	.	2	42.65	43 4.63	8.95	10.95	30 35.47	22 8 34.5
29	8	. .	. .	. .	60.7	13.	. .	. .	. .	. .	32 1.00	31.89	0.99	11.	6	43.48	13 28.89	9.05	8.80	31 28.12	21 38 56.7
30	8	. .	. .	. .	. .	. .	16.4	. .	. .	. .	31 52.72	31.89	1.00	12.	5	39.72	24 20.14	9.04	9.60	31 19.83	49 48.8
31	8	. .	. .	. .	. .	51.3	3.2	15.3	. .	. .	33 39.59	31.90	0.99	.	7	32.815	13 44.53	9.23	8.81	33 6.70	21 39 12.6
32	8	. .	. .	21.2	33.	. .	. .	. .	. .	. .	35 33.00	31.91	1.00	.	3	34.625	38 57.56	9.43	10.64	35 0.09	22 4 27.6
33	6	4.5	16.2	. .	39.8	51.5	. .	. .	. .	. .	35 39.88	31.91	1.00	.	4	35.815	32 24.45	9.44	10.17	35 6.97	21 57 54.1
34	7	. .	. .	. .	. .	. .	46.	. .	. .	. .	36 22.16	31.91	1.01	.	1	36.195	52 37.33	9.52	11.66	35 49.24	22 18 8.5
35	7	. .	. .	. .	59.4	. .	. .	. .	. .	. .	36 59.44	31.92	1.01	.	1	35.480	53 2.01	9.61	11.70	36 26.51	22 18 33.3
36	6	. .	. .	. .	. .	. .	. .	. .	. .	45.	37 40.01	31.92	0.99	.	6	36.405	17 33.63	9.66	9.09	37 7.10	21 43 2.4
37	8	23.2	35.3	47.4	59.	. .	. .	. .	. .	. .	41 59.02	31.94	1.00	.	3	41.58	34 57.51	10.17	10.36	41 26.08	22 0 28.0
38	8	. .	. .	. .	. .	39.	50.9	2.3	. .	. .	42 27.05	31.95	0.99	.	5	48.923	19 2.57	10.23	9.21	41 54.11	21 44 32.0
39	10	. .	. .	54.8	6.2	. .	. .	. .	. .	. .	44 6.39	31.96	1.01	.	1	35.03	52 43.02	10.44	11.69	43 33.42	22 18 15.2
40	7	32.	43.7	55.7	. .	. .	. .	. .	. .	. .	46 7.53	31.97	1.01	.	2	44.39	42 4.58	10.70	10.88	45 34.55	7 36.2
41	10	. .	. .	. .	34.	46.4	58.3	. .	. .	. .	46 34.38	31.97	1.00	.	3	40.155	35 46.69	10.77	10.42	46 1.41	22 1 17.9
42	9	. .	. .	. .	. .	. .	3.4	15.	. .	. .	46 39.55	31.97	1.00	.	5	35.214	26 55.62	10.78	9.78	46 6.58	21 52 26.2
43	8	. .	. .	. .	0.0	. .	23.8	. .	. .	. .	48 0.10	31.98	0.99	.	6	38.462	16 22.63	10.95	9.02	47 27.13	41 52.6
44	9	. .	. .	. .	. .	33.5	. .	. .	. .	. .	49 21.74	31.99	0.99	.	6	39.98	15 30.21	11.11	8.96	48 48.76	41 0.3
45	7	. .	. .	. .	. .	. .	7.5	18.	. .	. .	49 43.10	31.99	1.00	.	5	37.97	25 20.62	11.17	9.66	49 10.11	21 50 51.4
46	6	. .	2.7	14.1	25.7	. .	. .	. .	. .	. .	51 26.00	31.99	1.00	.	3	41.734	34 52.19	11.40	10.35	50 53.01	22 0 23.9
47	.	. .	. .	. .	18.1	30.	41.7	. .	. .	. .	52 18.15	32.00	0.99	.	6	41.26	14 46.07	11.52	8.90	51 45.16	21 40 16.5
48	10	. .	. .	. .	61.4	. .	. .	. .	. .	. .	54 1.38	32.01	1.00	.	3	38.328	36 49.75	11.75	10.48	53 28.37	22 2 22.0
49	7	. .	. .	. .	. .	. .	57.6	5.7	. .	. .	54 33.50	32.01	1.00	.	4	41.34	29 13.74	11.83	9.94	54 0.49	21 54 45.5
50	.	. .	. .	. .	. .	13.5	. .	. .	. .	. .	1.70	32.01	1.01	.	2	39.71	44 46.09	11.89	11.09	54 28.68	22 10 19.1
51	7	. .	. .	. .	. .	. .	. .	. .	. .	19.	55 13.98	32.01	0.99	.	6	32.309	19 55.00	11.91	9.27	54 40.98	21 45 26.2
52	7	. .	. .	. .	. .	2.1	14.	26.	. .	. .	56 50.34	32.02	0.99	.	5	41.83	23 7.39	12.14	9.50	56 17.33	48 39.0
53	7	. .	. .	. .	. .	. .	10.7	. .	. .	. .	57 47.06	32.02	0.99	.	6	38.305	16 28.05	12.27	9.02	57 14.05	41 59.3
54	7	. .	. .	. .	. .	. .	. .	45.	. .	. .	58 9.34	32.03	0.98	.	7	43.375	7 40.06	12.31	8.37	57 36.33	33 10.7
55	6	. .	. .	. .	. .	. .	. .	32.4	. .	. .	6 58 56.80	32.03	0.99	.	5	42.185	22 55.14	12.43	9.48	6 58 23.78	48 27.0
56	7	. .	20.4	32.5	44.4	. .	. .	. .	. .	. .	7 0 44.27	32.04	0.99	.	5	44.357	21 40.17	12.67	9.40	7 0 11.24	47 12.2
57	10	. .	. .	. .	. .	. .	. .	. .	. .	52.	0 46.82	32.04	0.99	.	4	42.60	28 29.45	12.67	9.88	0 13.79	54 2.0
58	10	. .	. .	. .	. .	35.4	47.5	. .	. .	. .	1 23.68	32.04	1.00	.	3	45.12	32 55.33	12.73	10.20	0 50.64	58 28.3
59	10	. .	. .	. .	. .	. .	. .	68.5	. .	. .	2 32.89	32.05	0.99	.	5	46.852	20 13.81	12.86	9.29	1 59.85	45 46.0
60	8	. .	. .	. .	. .	41.	. .	. .	. .	. .	7 5 29.26	−32.06	−0.98	.	7	42.887	7 56.89	−13.20	− 8.38	7 4 56.22	21 33 28.5

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	*m*	*n*	*c*	Zenith Point.	Mic. Co.
1849. h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1849. h. m.	° ′ ″				″	″	in.	°	°
Zone 164	Feb. 19, 7 40	. .	. .	. .	. .	. .	. .	. .	. .	17.8
	7 49	299 11 3.7	0.0	6.0	5.9	3.91	3.90			
	8 0	. .	. .	. .	. .	. .	. .	30.570	26.	17.

REMARKS.

(164) 13. Micrometer reading assumed as $37^{\mathrm{r}}.861$ instead of $33^{\mathrm{r}}.861$.

(164) 14. Micrometer reading assumed as $39^{\mathrm{r}}.095$ instead of $39^{\mathrm{r}}.95$.

(164) 21. Transit at $16^{\mathrm{s}}.5$ assumed as over T. VII instead of T. VI.

(164) 35. Double.

(164) 36. Edge of field.

(164) 39. Micrometer reading assumed as $36^{\mathrm{r}}.03$ instead of $35^{\mathrm{r}}.03$.

ZONE 164. FEBRUARY 19. MAJ. BELT, 299° 12½′. $D_0 = -21° 25' 10''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″.
61	8	. .	. .	. .	. .	. .	50.	1.7	. .	. .	7 6 26.20	−32.07	−1.00	.	4	41.90	28 54.41	−13.31	− 9.91	7 5 53.13	21 54 27.6
62	11	. .	. .	21.5	. .	. .	. .	. .	. .	. .	8 33.37	32.08	0.99	.	6	36.785	17 20.50	13.55	9.08	8 0.30	42 53.1
63	10	. .	. .	. .	9.	20.5	. .	. .	. .	. .	9 8.90	32.08	0.99	.	7	35.184	12 22.77	13.62	8.73	8 35.83	37 55.1
64	11	. .	16.1	. .	40.	. .	. .	. .	. .	. .	10 39.90	32.09	1.00	.	3	42.51	34 25.41	13.80	10.32	10 6.81	59 59.5
65	10	37.5	50.	. .	. .	. .	. .	. .	. .	. .	12 13.43	32.09	1.00	.	3	45.492	32 42.38	13.98	10.19	11 40.34	21 58 16.5
66	6	. .	. .	. .	21.5	34.	45.5	. .	. .	. .	12 21.81	32.09	1.01	.	3	35.208	38 37.44	13.99	10.62	11 48.71	22 4 12.0
67	9	. .	. .	. .	. .	. .	52.	. .	. .	. .	13 28.34	32.10	0.99	.	6	30.38	21 1.47	14.13	9.35	12 55.25	21 46 35.0
68	8	. .	. .	. .	. .	. .	55.	7.	. .	. .	14 31.36	32.10	0.99	.	6	42.29	14 10.51	14.24	8.87	13 58.27	21 39 43.6
69	7	. .	. .	. .	21.	33.2	45.2	. .	. .	. .	18 21.28	32.12	1.01	.	3	34.94	38 46.68	14.69	10.63	17 48.15	22 4 22.0
70	6	. .	. .	. .	. .	39.	51.2	. .	. .	. .	19 27.40	32.13	0.99	.	6	39.47	15 47.84	14.82	8.98	18 54.28	21 41 21.6
71	9	. .	. .	. .	. .	29.2	41.4	. .	. .	. .	20 17.54	32.13	1.00	.	4	40.349	29 47.93	14.91	9.99	19 44.41	55 22.8
72	8	. .	. .	. .	. .	11.4	23.2	. .	. .	. .	21 59.62	32.14	0.98	.	7	40.94	9 4.09	15.11	8.50	21 26.50	34 37.7
73	7	. .	. .	. .	. .	40.4	. .	. .	. .	. .	23 28.65	32.14	0.98	.	7	42.528	8 9.29	15.29	8.42	22 55.53	33 43.0
74	8	. .	. .	. .	17.2	. .	. .	. .	. .	. .	24 17.28	32.15	0.98	.	7	41.363	8 49.49	15.38	8.47	23 44.15	34 23.3
75	8	. .	. .	. .	. .	. .	. .	. .	44.	. .	24 50.98	32.15	0.99	.	6	40.98	14 55.72	15.44	8.91	24 17.84	40 30.1
76	7	. .	. .	. .	. .	47.6	. .	. .	. .	. .	27 35.80	32.16	1.00	.	4	45.39	26 53.96	15.77	9.77	27 2.64	52 29.5
77	5	. .	. .	. .	. .	. .	34.7	46.4	. .	. .	28 10.89	32.16	1.00	.	4	34.98	32 53.26	15.84	10.20	27 37.73	58 29.3
78	8	. .	46.	. .	9.5	. .	. .	. .	. .	. .	30 9.58	32.17	1.00	.	4	36.05	32 16.34	16.06	10.16	29 36.41	57 52.6
79	7	39.	50.	. .	43.8	. .	. .	49.8	. .	. .	30 14.06	32.17	0.99	.	5	40.99	24 7.14	16.07	9.57	29 40.90	21 49 42.8
80	8	. .	. .	. .	. .	. .	9.4	. .	. .	. .	31 55.73	32.17	1.01	.	1	37.49	51 52.63	16.27	11.60	31 22.55	22 17 30.5
81	10	. .	. .	. .	. .	. .	. .	3.	. .	. .	32 27.41	32.18	1.00	.	4	42.69	28 26.91	16.34	9.88	31 54.23	21 54 3.1
82	8	. .	. .	43.7	55.6	7.5	. .	. .	. .	. .	33 55.62	32.18	1.00	.	5	37.798	25 26.56	16.51	9.67	33 22.44	51 2.7
83	8	. .	. .	. .	. .	42.8	54.4	. .	. .	. .	34 30.89	32.19	0.99	.	6	38.084	16 35.68	16.58	9.03	33 57.71	42 11.3
84	6	. .	. .	. .	. .	41.	53.4	. .	. .	. .	35 29.43	32.19	1.00	.	4	33.445	33 46.24	16.69	10.27	34 56.24	21 59 23.2
85	6	. .	. .	41.	53.8	. .	. .	. .	. .	. .	35 53.30	32.19	1.00	.	3	36.60	37 49.39	16.74	10.56	35 20.11	22 3 26.7
86	6	. .	. .	. .	. .	12.	24.	. .	. .	. .	36 0.31	32.19	0.99	.	7	34.81	12 35.67	16.75	8.74	35 27.13	21 38 11.2
87	8	. .	. .	. .	. .	. .	. .	61.0	. .	. .	37 25.41	32.20	1.00	.	4	38.17	31 3.16	16.92	10.08	36 52.21	56 40.2
88	8	. .	. .	. .	. .	. .	. .	24.	. .	. .	37 48.40	32.20	0.99	.	5	41.88	23 5.66	16.97	9.50	37 15.21	48 42.1
89	8	. .	. .	. .	. .	30.	42.2	53.5	. .	. .	39 18.20	32.20	0.99	.	4	46.675	26 9.61	17.14	9.72	38 45.01	51 46.5
90	8	. .	. .	. .	. .	. .	. .	65.	. .	. .	40 29.42	32.21	1.00	.	3	46.94	31 52.50	17.28	10.13	39 56.21	21 57 29.9
91	4	. .	. .	. .	. .	30.4	42.2	. .	. .	. .	41 18.50	32.21	1.01	.	2	41.90	43 30.51	17.38	10.98	40 45.28	22 9 8.9
92	8	. .	. .	. .	. .	. .	. .	46.	. .	. .	42 10.42	32.21	1.00	.	4	34.592	33 6.66	17.49	10.22	41 37.21	21 58 44.4
93	7	. .	. .	. .	. .	. .	. .	. .	32.5	. .	42 39.50	32.21	0.99	.	7	34.60	12 42.92	17.54	8.75	42 6.30	21 38 19.2
94	8	. .	. .	. .	. .	. .	. .	. .	21.3	. .	43 28.24	32.22	1.01	.	2	37.964	45 46.36	17.65	11.16	42 55.01	22 11 25.2
95	8	. .	. .	. .	. .	. .	11.5	23.4	. .	. .	44 47.82	32.22	0.99	.	6	40.734	15 4.21	17.80	8.93	44 14.61	21 40 40.9
96	8	. .	26.	37.2	49.2	. .	. .	. .	. .	. .	46 49.30	32.23	0.99	.	5	39.031	24 43.99	18.05	9.62	46 16.08	50 21.7
97	7	. .	. .	56.	7.3	. .	. .	. .	. .	. .	48 7.64	32.23	0.98	.	7	45.638	6 21.94	18.21	8.31	47 34.43	31 58.5
98	8	. .	. .	. .	. .	. .	28.4	40.1	. .	. .	48 4.62	32.23	0.98	.	6	44.727	12 46.40	18.21	8.76	47 31.41	38 23.4
99	9	. .	. .	. .	. .	38.	50.	. .	. .	. .	49 26.31	32.24	0.98	.	6	45.805	12 9.17	18.37	8.71	48 53.09	21 37 46.2
100	9	. .	. .	. .	. .	. .	40.4	52.3	. .	. .	50 16.66	32.24	1.01	.	2	41.339	43 49.77	18.48	11.00	49 43.41	22 9 29.2
101	9	. .	. .	. .	. .	. .	41.	52.5	. .	. .	51 17.09	32.25	1.01	.	3	35.86	38 14.81	18.61	10.59	50 43.83	22 3 54.0
102	8	. .	50.4	1.7	13.4	. .	. .	. .	. .	. .	53 13.67	32.25	0.99	.	6	39.625	15 42.49	18.87	8.97	52 40.43	21 41 20.3
103	8	. .	. .	. .	58.5	10.2	. .	. .	. .	. .	53 48.44	32.25	1.00	.	5	35.088	27 0.09	18.96	9.78	53 25.19	52 38.8
104	.	46.2	58.2	10.	21.4	. .	45.2	. .	. .	. .	55 21.68	32.26	1.00	.	4	40.176	29 53.93	19.15	9.99	54 48.42	55 33.1
105	.	. .	. .	13.	. .	. .	. .	. .	. .	. .	55 24.84	32.26	1.00	.	4	40.437	29 44.90	19.16	9.99	54 51.58	55 24.0
106	8	. .	. .	. .	. .	50.5	2.4	. .	. .	. .	56 38.71	32.26	1.00	.	5	38.385	25 6.29	19.32	9.65	56 5.45	21 50 45.3
107	9	. .	. .	. .	54.	6.0	. .	. .	. .	. .	57 54.12	32.27	1.02	.	1	38.908	51 3.69	19.49	11.55	57 20.83	22 16 44.7
108	7	. .	. .	. .	64.2	16.	27.	. .	. .	. .	7 59 3.88	32.27	1.00	.	3	41.504	35 0.13	19.64	10.36	58 30.61	22 0 40.1
109	7	. .	63.4	15.2	26.5	. .	. .	. .	. .	. .	8 0 26.86	−32.27	−0.99	.	5	43.325	22 15.78	−19.82	− 9.44	7 59 53.60	21 47 55.0

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1849. h. m.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
	A.	B.	C.	D.	Corr'd Mean.	Mean.			
1849. h. m.	° ′ ″				″	″	in.	°	°

REMARKS.

(164) 79. Transit over T. IV assumed as at $13^s.8$ instead of $43^s.8$, and micrometer reading as $40^r.099$ instead of $40^r.99$.

(164) 80. Transit over T. VI assumed as at $19^s.4$ instead of $9^s.4$.

(164) 84. Transit over T. III assumed as at 18^s instead of 1^s.

(164) 104. Double.

ZONE 164. FEBRUARY 19. MAJ. BELT, 299° 12½′. $D_0 = -21° 25′ 10″$—Continued.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
110	7	. .	. .	. .	. .	. .	. .	63.2	20.5	. .	8 0 27.53	−32.27	−0.99	.	6	42.954	10 55.01	−19.82	− 8.59	7 59 54.27	21 36 33.4
111	7	. .	. .	. .	12.	24.	. .	47.5	. .	. .	2 12.05	32.28	0.99	.	6	38.214	16 31.19	20.06	9.03	8 1 38.78	21 42 10.3
112	6	42.7	55.	65.	18.2	. .	. .	. .	. .	. .	8 4 18.02	−32.29	−1.01	.	3	33.072	39 51.16	−20.33	−10.72	8 3 44.72	22 5 32.2

ZONE 165. FEBRUARY 23. MAJ. $D_0 = -30° 11′ 0″$.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	7	. .	50.2	3.4	15.8	28.6	41.0	. .	. .	. .	6 2 15.80	−31.29	−1.00	IV.	5	38.202	25 12.61	− 8.85	− 9.34	6 1 43.51	30 36 30.8
2	10	. .	. .	. .	. .	. .	51.5	. .	. .	. .	3 26.00	31.30	0.99	.	6	35.125	18 17.66	9.10	8.39	2 53.71	29 35.2
3	8	. .	. .	. .	. .	. .	47.2	. .	. .	. .	4 21.49	31.30	1.02	.	2	33.227	48 29.87	9.32	12.60	3 49.17	59 51.8
4	8	. .	. .	. .	. .	. .	. .	36.4	. .	. .	4 58.02	31.31	1.01	.	2	45.348	41 31.51	9.47	11.61	4 25.70	52 52.6
5	8	. .	. .	. .	. .	33.	. .	. .	. .	. .	5 20.25	31.31	1.00	.	3	41.715	34 52.85	9.56	10.69	4 47.94	46 13.1
6	.	. .	. .	59.	11.4	24.4	. .	. .	. .	. .	7 11.66	31.32	0.99	.	6	40.175	15 23.51	9.99	7.98	6 39.35	26 41.5
7	.	. .	. .	. .	. .	. .	39.7	. .	. .	. .	7 14.19	31.32	0.99	.	6	31.857	20 10.45	10.00	8.65	6 41.88	31 29.1
8	.	. .	. .	. .	. .	. .	20.2	. .	. .	. .	7 54.68	31.33	0.99	.	6	31.059	20 38.00	10.16	8.70	7 22.36	31 56.9
9	6	. .	21.	33.5	46.2	59.2	. .	. .	. .	. .	9 46.36	31.34	1.01	.	3	37.85	37 6.25	10.60	10.99	9 14.01	48 27.8
10	7	. .	18.	30.3	43.	56.3	. .	. .	. .	. .	12 43.31	31.36	1.01	.	2	37.99	45 45.47	11.29	12.22	12 10.94	57 9.0
11	9	. .	. .	37.	49.2	2.	. .	. .	. .	. .	14 49.47	31.37	0.98	IV.	7	35.727	12 4.03	11.78	7.53	14 17.12	23 23.3
12	6	. .	. .	27.8	40.	52.5	5.4	. .	. .	. .	15 40.05	31.38	0.99	.	5	42.437	22 46.44	11.96	9.01	15 7.68	34 7.4
13	7	. .	. .	39.5	52.	4.2	. .	. .	. .	. .	16 51.95	31.39	0.99	.	6	38.575	16 18.73	12.24	8.11	16 19.57	27 39.1
14	9	. .	. .	3.	15.4	. .	. .	. .	. .	. .	17 15.63	31.39	0.99	.	6	40.595	15 10.34	12.33	7.96	16 43.25	26 30.6
15	6	. .	. .	. .	. .	20.	32.5	45.8	. .	. .	18 7.17	31.40	1.01	.	2	46.657	40 46.33	12.52	11.51	17 34.76	30 52 10.4
16	10	. .	. .	. .	. .	. .	. .	46.4	. .	. .	19 7.90	31.40	1.02	.	1	34.87	53 22.71	12.76	13.30	18 35.48	31 4 48.8
17	9	. .	. .	. .	. .	. .	. .	. .	68.4	. .	20 11.08	31.41	1.00	.	3	38.957	36 27.25	13.00	10.90	19 38.67	30 47 51.2
18	10	. .	. .	. .	. .	. .	35.5	48.4	. .	. .	22 9.96	31.42	1.00	.	4	38.055	31 7.14	13.45	10.15	21 37.54	42 30.7
19	9	. .	. .	. .	. .	. .	. .	58.	. .	. .	23 19.60	31.43	0.99	.	6	35.767	17 55.30	13.72	8.34	22 47.18	30 29 17.4
20	7	. .	. .	. .	. .	5.7	18.1	. .	. .	. .	23 52.66	31.43	1.02	.	1	35.454	53 2.91	13.84	13.24	23 20.21	31 4 30.0
21	10	. .	12.2	24.7	37.1	. .	. .	. .	. .	. .	27 37.43	31.46	0.98	.	7	34.94	12 31.18	14.69	7.59	27 4.99	30 23 53.5
22	9	. .	. .	. .	. .	. .	. .	46.5	. .	. .	28 8.12	31.46	1.00	.	4	33.437	33 46.17	14.80	10.49	27 35.66	45 11.5
23	9	. .	. .	. .	. .	. .	0.0	13.	. .	. .	28 34.56	31.46	0.99	.	6	37.64	16 50.86	14.91	8.18	28 2.11	28 14.0
24	9	. .	. .	. .	. .	. .	20.5	33.	. .	. .	29 54.74	31.47	1.01	.	3	36.79	37 42.68	15.21	11.08	29 22.26	49 9.0
25	9	. .	. .	. .	. .	. .	. .	6.5	. .	. .	30 28.12	31.48	1.00	.	4	33.68	33 37.78	15.34	10.50	29 55.64	45 3.6
26	8	. .	. .	. .	22.2	35.2	. .	. .	. .	. .	32 22.40	31.49	0.98	.	7	38.285	10 35.74	15.77	7.33	31 49.93	21 58.8
27	8	. .	17.	. .	42.5	. .	. .	. .	. .	. .	32 42.50	31.49	0.99	.	6	34.925	18 24.71	15.83	8.41	32 10.02	29 48.9
28	4	. .	. .	17.3	30.4	43.0	55.4	. .	. .	. .	34 30.23	31.50	0.98	.	7	42.302	8 17.08	16.25	7.03	33 57.75	19 40.4
29	8	. .	. .	35.0	47.5	. .	. .	. .	. .	. .	35 47.68	31.51	0.99	.	6	43.62	13 24.60	15.53	7.72	35 15.18	24 47.8
30	7	. .	. .	43.2	56.5	9.	. .	. .	. .	. .	35 56.28	31.51	0.99	.	5	49.111	18 56.09	16.56	8.47	35 23.78	30 21.1
31	9	. .	. .	. .	. .	. .	. .	11.4	30.4	. .	36 33.08	31.51	0.99	.	5	43.122	22 22.44	16.70	8.95	36 0.58	33 48.1
32	9	. .	. .	. .	. .	. .	. .	15.5	. .	. .	37 37.12	31.52	1.00	.	3	43.275	33 58.66	16.94	10.56	37 4.60	45 26.2
33	4	. .	53.2	6.0	18.6	31.5	. .	. .	. .	. .	39 18.73	31.53	1.01	.	2	41.608	43 40.60	17.31	11.92	38 46.19	55 9.8
34	6.9	. .	55.2	8.2	20.3	33.4	46.4	. .	. .	. .	40 20.69	31.54	1.00	.	3	39.575	36 6.70	17.54	10.85	39 48.15	47 35.1
35	9	. .	. .	. .	. .	. .	. .	47.5	. .	. .	41 9.11	31.54	0.99	.	5	41.000	23 35.69	17.73	9.12	40 36.58	35 2.5
36	8	. .	34.	. .	. .	. .	. .	37.5	. .	. .	42 59.35	31.55	1.01	.	3	39.161	36 21.00	18.15	10.88	41 26.79	47 50.0
37	7	. .	. .	. .	. .	. .	. .	25.8	. .	. .	42 47.40	31.55	0.98	.	7	38.247	4 51.90	18.10	6.54	42 14.87	16 16.5
38	9	. .	. .	. .	. .	19.	31.5	. .	. .	. .	44 6.09	31.56	1.00	.	4	41.65	29 3.00	18.39	9.86	43 33.53	30 40 31.2
39	7	. .	. .	. .	. .	42.7	55.1	7.7	. .	. .	45 29.49	31.57	1.02	.	1	32.57	54 42.44	18.71	13.49	44 56.90	31 6 14.6
40	9	. .	. .	. .	. .	. .	. .	. .	. .	43.5	45 33.07	31.57	0.99	.	7	34.442	12 47.24	18.77	− 7.64	45 0.51	30 24 13.6
41	6	. .	. .	. .	. .	. .	. .	34.	. .	. .	46 55.61	31.57	1.00	.	.	.	. . .	19.03	. .	46 23.04	
42	7	20.2	33.	45.	58.2	11.0	23.5	36.4	. .	. .	6 48 58.19	−31.58	−0.99	.	6	42.335	14 8.96	−19.49	− 7.80	6 48 25.62	30 25 36.2

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	*m*	*n*	*c*	Zenith Point.	Mic. Co.
1849.	h.	s.	s.	s.	s.	s.	° ′ ″	r.
Feb. 23,	5	−33.163	*l* 0.008	− 0.149	+ 0.382	− 0.196	0 0 0.16	39.396

INSTRUMENT READINGS.

	Date.	CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1849. h. m.	° ′ ″				″	″	in.	°	°
Zone 165	Feb. 23, 5 58	. .	. .	. .	. .	. .	. .	30.406	39.2	32.4
	6 2	290 26 62.2	57.5	62.1	62.0	60.95	60.95			
	6 20	.	. .	. .	. .	. .	. .	. .	. .	31.
	6 40	. .	. .	. .	. .	. .	. .	. .	. .	30.4
	*6 19	. .	. .	. .	. .	. .	. .	30.398	37.	30.
	7 20	290 26 52.5	49.5	55.0	53.0	52.49	52.50	. .	. .	29.8
	7 40	. .	. .	. .	. .	. .	. .	. .	. .	29.4
	7 52	. .	. .	. .	. .	. .	. .	30.392	. .	29.

REMARKS.

(164) 110. Micrometer reading assumed as $47^r.954$ instead of $42^r.954$.
(164) 111. Transit at $47^s.5$ assumed as over T. VII instead of T. VI.
(165) 21. Double.
(165) 34. Double.
(165) 36. Minutes assumed as 41 instead of 42.
(165) 37. Micrometer reading assumed as $48^r.247$ instead of $38^r.247$.

* Assumed as 7^h 19^m.

ZONE 165. FEBRUARY 23. MAJ. $D_0 = -30° 11' 0''$—Continued.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
43	.	. .	. .	. .	. .	. .	. .	15.9	. .	. .	6 49 37.47	−31.59	−1.01	.	2	37.587	45 59.04	−19.63	−12.25	6 49 4.87	30 57 30.9
44	.	. .	. .	. .	. .	. .	. .	40.0	. .	. .	50 1.61	31.59	1.00	.	.	. .	. . .	19.72	. .	49 29.02	
45	10	. .	. .	. .	48.	1.1	13.7	. .	. .	. .	51 48.14	31.60	1.00	.	4	39.36	30 22.09	20.13	−10.05	51 15.54	30 41 52.3
46	7	. .	. .	42.7	55.4	8.2	. .	. .	. .	. .	52 55.52	31.61	0.98	.	7	45.27	6 34.64	20.38	6.79	52 22.93	18 1.8
47	9	. .	. .	. .	. .	. .	23.2	35.5	. .	. .	52 57.33	31.61	1.01	.	2	47.115	40 30.38	20.39	11.47	52 24.71	52 2.2
48	6	. .	. .	. .	19.8	. .	. .	10.5	. .	. .	53 32.33	−31.61	−1.00	.	3	39.375	36 13.61	20.52	10.87	52 59.72	30 47 45.0
49	.	. .	. .	. .	. .	. .	. .	. .	. .	. .	55	. .	. .	.	1	41.11	49 47.68	20.8	12.80	(53)	31 1 21.3
50	.	. .	. .	. .	. .	. .	. .	30.	. .	. .	54 51.59	−31.62	−1.01	.	2	40.025	44 34.89	20.82	12.05	54 18.96	30 56 7.8
51	.	. .	. .	. .	. .	. .	. .	37.	. .	. .	54 58.62	31.62	1.01	.	2	47.678	40 10.75	−20.85	−11.43	54 25.99	30 51 43.0
52	.	. .	. .	. .	. .	. .	. .	40.2	. .	. .	1.81	31.6	1.0	.	.	. .	. . .	. .	. .	(54) 29.21	
53	7	. .	. .	18.5	31.5	. .	. .	. .	. .	. .	58 31.44	−31.64	0.98	.	6	47.85	10 58.60	−21.65	− 7.39	57 58.82	30 22 27.6
54	.	. .	. .	. .	. .	. .	. .	. .	. .	. .	6 59	. .	0.99	.	5	44.35	21 40.41	21.70	8.87	(58)	33 11.0
55	.	. .	. .	. .	7.	19.3	. .	. .	. .	. .	7 0 6.82	−31.64	0.99	.	5	49.00	18 59.92	−21.79	− 8.48	6 59 34.19	30 30 30.2
56	.	. .	. .	. .	. .	. .	. .	. .	30.5	. .	0 33.16	31.64	0.99	.	.	. .	. . .	. .	. .	7 0 0.53	
57	5	. .	. .	. .	46.	58.7	1.5	. .	. .	. .	0 46.04	31.65	0.99	.	6	42.225	14 12.76	−22.17	− 7.82	0 13.40	30 25 42.8
58	7	. .	. .	. .	57.2	10.2	. .	. .	. .	. .	1 57.34	31.66	0.99	.	5	43.39	22 13.54	22.44	8.93	1 24.69	33 44.9
59	6	. .	. .	. .	. .	. .	56.4	. .	. .	. .	2 30.96	31.66	0.98	.	7	38.697	10 21.51	22.56	7.30	1 58.32	21 51.4
60	9	. .	. .	42.3	54.7	7.6	. .	. .	. .	. .	3 54.86	31.67	1.00	.	3	47.655	31 27.82	22.88	10.20	3 22.19	43 0.9
61	9	. .	43.2	56.5	8.4	. .	. .	. .	. .	. .	5 8.82	31.67	1.01	.	2	47.78	40 7.58	23.16	11.41	4 36.14	51 42.2
62	.	. .	. .	. .	. .	. .	. .	53.4	. .	. .	5 15.00	31.67	0.99	.	6	43.161	13 40.10	23.19	7.76	4 42.34	25 11.1
63	6	. .	. .	. .	50.	2.9	15.5	.	. .	. .	6 50.05	31.68	0.99	.	5	42.258	22 52.62	23.54	9.03	6 17.38	34 25.2
64	.	. .	. .	. .	. .	. .	24.2	37.5	. .	. .	7 58.86	31.68	1.00	.	4	37.74	31 17.85	23.81	10.18	7 26.18	42 51.8
65	.	. .	. .	. .	. .	. .	. .	56.5	. .	. .	8 18.11	31.68	1.00	11.	4	36.31	32 6.57	23.88	10.29	7 45.43	43 40.7
66	6	. .	. .	. .	. .	. .	. .	12.	. .	. .	8 33.62	31.69	1.01	12.	3	36.009	38 9.79	23.94	11.13	8 0.92	49 44.9
67	7	4.1	. .	. .	42.	. .	. .	. .	. .	. .	10 42.25	31.70	1.00	.	5	35.292	26 53.04	24.43	9.58	11 9.55	38 27.0
68	6	4.2	. .	. .	. .	. .	. .	. .	. .	. .	10 42.62	31.70	1.00	.	5	36.467	26 12.49	24.43	9.48	11 9.92	37 46.4
69	7	. .	. .	. .	47.5	0.4	. .	. .	. .	. .	12 47.56	31.71	1.00	.	4	42.517	28 33.13	24.91	9.81	12 14.85	40 7.8
70	6	. .	. .	. .	. .	30.3	43.	. .	. .	. .	13 17.54	31.71	0.99	.	5	47.085	20 6.01	25.03	8.63	12 44.84	31 39.7
71	7	. .	. .	. .	. .	. .	. .	36.	. .	. .	14 57.60	31.72	0.98	.	7	40.189	9 30.02	25.40	7.18	14 24.90	21 2.6
72	7	. .	. .	. .	. .	61.5	. .	. .	. .	. .	15 48.77	31.72	1.00	.	5	36.068	26 26.27	25.59	9.51	15 16.05	38 1.4
73	9	. .	. .	. .	. .	. .	44.5	57.2	. .	. .	16 18.85	31.73	1.00	.	3	40.94	35 19.44	25.71	10.74	15 46.12	46 55.9
74	8	. .	. .	. .	. .	. .	. .	62.5	. .	. .	17 24.07	31.73	1.01	.	2	37.67	45 56.51	25.93	12.24	16 51.33	30 57 34.7
75	8	. .	. .	. .	. .	. .	. .	58.4	. .	. .	18 19.95	31.74	1.02	.	1	42.425	49 2.30	26.17	12.68	17 47.19	31 0 41.2
76	9	. .	. .	. .	. .	. .	. .	48.5	. .	. .	19 10.11	31.74	1.00	.	4	46.11	26 28.76	26.36	9.51	18 37.37	30 38 4.6
77	10	. .	. .	. .	. .	. .	. .	. .	26.	. .	19 28.68	31.74	1.00	.	3	38.97	36 26.80	26.43	10.90	18 55.94	48 4.1
78	9	. .	. .	. .	. .	. .	7.	19.5	. .	. .	20 41.30	31.75	0.99	.	6	37.865	16 43.09	26.64	8.14	20 8.56	28 17.9
79	8	. .	31.4	43.6	56.4	8.9	. .	. .	. .	. .	23 56.48	31.76	0.98	.	7	41.627	8 40.38	27.05	7.08	23 23.74	20 14.5
80	3	47.	60.2	13.	25.4	38.	51.3	3.7	. .	. .	25 25.51	31.77	1.00	.	4	44.46	27 26.06	27.24	9.65	24 52.74	39 2.9
81	9	. .	. .	13.5	25.5	39.3	. .	. .	. .	. .	26 26.02	31.77	1.01	.	2	39.095	45 7.35	−27.37	−12.12	25 53.24	30 56 46.8
82	.	. .	. .	. .	. .	. .	. .	21.	. .	. .	29 42.61	31.79	1.00	.	.	. .	. . .	. .	. .	29 9.82	
83	9	. .	. .	. .	. .	. .	. .	21.9	. .	. .	30 43.50	31.79	0.98	.	7	39.50	9 53.45	−27.92	− 7.23	30 10.73	30 21 28.6
84	9	. .	. .	. .	. .	. .	. .	35.5	. .	. .	30? 57.09	31.80	0.98	.	7	43.175	7 46.61	28.0	6.95	30? 24.31	19 21.6
85	6	. .	. .	. .	. .	. .	. .	38.5	. .	. .	32 0.10	31.80	0.99	.	6	39.344	15 52.18	28.09	8.05	31 27.31	27 28.3
86	9	. .	. .	. .	27.	40.4	. .	. .	. .	. .	33 27.32	31.80	1.01	.	3	37.617	37 14.29	28.28	11.01	32 54.51	48 53.6
87	9	. .	. .	. .	. .	. .	. .	30.5	. .	. .	33 52.11	31.80	1.00	.	5	34.775	27 10.54	28.33	9.62	33 19.31	38 48.5
88	.	. .	. .	. .	. .	. .	29.5	. .	. .	. .	34 3.91	31.81	1.00	.	4	40.052	29 58.06	28.36	10.00	33 31.10	30 41 36.4
89	9	. .	. .	. .	15.2	. .	41.0	. .	. .	. .	36 15.26	31.81	1.02	.	1	39.35	50 48.44	28.64	12.93	35 42.43	31 2 30.0
90	9	. .	. .	. .	. .	. .	. .	28.5	. .	. .	36 50.11	31.81	0.99	.	5	42.625	22 39.60	28.71	8.98	36 17.31	30 34 17.3
91	7	. .	21.	34.	46.	. .	. .	. .	. .	. .	7 38 46.46	−31.82	−1.01	.	2	36.115	46 50.19	−28.96	−12.36	7 38 13.63	30 58 31.5

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1849.	h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.	CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1849. h. m.	° ′ ″				″	″	in.	°	°
Zone 165	Feb. 23, 8 27	290 26 53.7	50.0	54.3	52.3	52.57	52.58			
	8 28	. .	. .	. .	. .	. .	. .	30.384	35.2	28.5

REMARKS.

(165) 48. Transit at 19s.8 assumed to have been over T. III instead of T. IV.
(165) 55. Minutes assumed as 0.
(165) 56. Minutes assumed as 0.
(165) 67. Minutes assumed as 11 instead of 10.
(165) 68. Minutes assumed as 11 instead of 10.
(165) 70. Very close double star.

ZONE 165. FEBRUARY 23. MAJ. $D_0 = -30° 11' 0''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
92	7	. .	21.	34.	. .	. .	. .	. .	. .	. .	7 46.67	−31.82	−1.01	.	3	32.95	39 55.37	−28.96	−11.40	7 38 13.84	30 51 35.7
93	9	. .	. .	. .	. .	. .	. .	14.5	. .	. .	39 36.12	31.83	1.00	.	4	34.017	33 26.16	29.07	10.48	39 3.29	45 5.7
94	9	. .	. .	. .	. .	. .	14.1	27.	. .	. .	40 48.62	31.83	0.99	.	7	33.347	13 26.01	29.22	7.73	40 15.80	25 3.0
95	10	. .	. .	. .	. .	23.4	36.2	. .	. .	. .	42 10.64	31.84	1.00	.	4	38.68	30 45.52	29.40	10.10	41 37.80	42 25.0
96	6	. .	. .	. .	. .	27.	40.	52.7	. .	. .	43 14.39	31.84	0.98	.	7	36.76	11 28.37	29.54	7.46	42 41.57	23 5.4
97	9	. .	. .	. .	45.5	58.2	. .	. .	. .	. .	44 45.48	31.85	1.01	.	2	40.96	44 2.96	29.73	11.98	44 12.62	55 44.7
98	10	. .	29.5	42.	54.7	. .	. .	. .	. .	. .	46 54.83	31.86	0.99	.	6	40.258	15 20.65	30.01	7.98	46 21.98	26 58.6
99	10	. .	. .	. .	. .	. .	57.3	10.2	. .	. .	47 31.76	31.86	1.00	.	4	37.64	31 19.98	30.08	10.18	46 58.90	43 0.2
100	9	. .	. .	. .	. .	. .	. .	63.5	. .	. .	48 25.11	31.86	1.00	.	5	35.33	26 51.38	30.21	9.58	47 52.25	38 31.2
101	9	. .	. .	. .	. .	53.	5.8	. .	. .	. .	49 40.24	31.87	1.00	.	4	38.675	30 45.69	30.37	10.10	49 7.37	42 26.2
102	6	. .	. .	38.	51.	4.	. .	. .	. .	. .	49 50.99	31.87	1.00	.	5	32.357	28 34.35	30.39	9.81	49 18.12	40 14.6
103	9	. .	. .	. .	. .	. .	. .	10.	. .	. .	51 31.61	31.87	1.00	.	5	33.39	27 58.35	30.61	9.73	50 58.74	39 38.7
104	9	. .	. .	. .	. .	. .	. .	22.7	. .	. .	52 44.32	31.87	1.01	.	3	34.112	39 14.91	30.77	11.29	52 11.44	50 57.0
105	9	. .	. .	. .	. .	. .	14.4	27.	. .	. .	53 48.71	31.88	1.00	.	5	32.43	28 31.68	30.90	9.80	53 15.83	40 12.4
106	8	. .	. .	. .	. .	. .	. .	28.5	. .	. .	53 50.10	31.88	0.98	.	7	33.41	13 23.99	30.91	7.71	53 17.24	25 2.6
107	8	. .	. .	. .	. .	. .	43.5	56.5	. .	. .	55 18.02	31.88	1.00	.	5	33.02	28 11.47	31.10	9.76	54 45.14	39 52.3
108	8	. .	. .	. .	. .	51.	. .	. .	. .	. .	56 38.26	31.89	1.00	.	4	37.225	31 35.78	31.27	10.22	55 5.37	43 17.3
109	8	. .	. .	. .	24.7	37.8	. .	. .	. .	. .	57 24.86	31.89	1.01	.	3	39.40	36 12.74	31.37	10.87	55 51.96	47 55.0
110	9	. .	. .	. .	. .	. .	24.2	37.	. .	. .	57 58.69	31.89	0.98	.	7	44.23	7 10.39	31.45	6.86	57 25.82	18 48.7
111	9	. .	. .	. .	. .	. .	. .	33.	. .	. .	58 54.56	31.90	1.02	.	1	45.27	47 23.75	31.57	12.46	58 21.64	59 7.8
112	9	. .	. .	. .	. .	. .	. .	41.2	. .	. .	7 59 2.80	31.90	1.01	.	2	43.96	42 19.07	31.58	11.72	58 29.89	54 2.4
113	8	. .	. .	10.5	22.5	35.7	. .	. .	. .	. .	8 0 22.89	31.90	1.00	.	3	45.69	32 35.65	31.76	10.36	7 59 49.99	30 44 17.8
114	8	. .	. .	22.4	. .	. .	. .	. .	. .	. .	2 35.09	31.91	1.02	.	1	41.698	49 27.39	32.05	12.77	8 2 2.16	31 1 12.2
115	7	. .	. .	. .	58.1	10.5	. .	. .	. .	. .	3 57.92	31.91	1.00	.	4	45.345	26 55.51	32.23	9.56	3 25.01	30 38 37.3
116	8	. .	. .	51.	3.4	16.4	. .	. .	. .	. .	4 3.60	31.91	1.00	.	4	44.88	27 11.56	32.24	9.62	2 30.69	38 53.4
117	8	. .	. .	. .	. .	. .	60.5	13.6	. .	. .	4 35.06	31.91	1.00	.	3	46.057	32 22.99	32.31	10.34	4 2.15	44 5.6
118	8	. .	. .	. .	. .	. .	. .	44.2	3.4	. .	5 6.01	31.91	0.99	.	6	38.57	16 18.90	32.37	8.11	3 33.11	27 59.4
119	9	. .	. .	. .	. .	. .	. .	. .	11.5	. .	7 14.20	31.92	1.00	.	5	36.692	27 3.93	32.65	9.60	6 41.28	38 46.2
120	9	. .	. .	. .	20.2	. .	. .	. .	. .	. .	9 20.25	31.92	0.99	.	6	38.79	16 11.31	32.92	8.09	8 47.34	27 52.3
121	6	. .	. .	. .	32.2	. .	. .	. .	. .	. .	9 32.27	31.92	0.98	.	7	35.165	12 23.43	32.95	7.57	8 59.37	24 3.9
122	7	. .	. .	. .	. .	29.7	. .	55.	. .	. .	10 4.02	31.93	0.99	.	6	38.42	16 24.08	33.05	8.12	9 31.10	28 5.2
123	7	. .	. .	. .	. .	. .	50.	3.	. .	. .	10 24.58	31.93	0.98	.	7	38.39	10 32.11	33.06	7.30	9 51.67	22 12.5
124	8	. .	. .	. .	. .	. .	. .	22.5	. .	. .	12 44.10	31.94	0.98	.	7	38.682	10 22.03	33.36	7.29	12 11.18	22 2.7
125	7	. .	. .	23.2	36.2	49.	. .	. .	. .	. .	14 36.15	31.94	0.99	.	4	47.032	25 57.29	33.61	9.44	14 3.22	37 40.3
126	9	. .	. .	. .	. .	. .	6.	. .	. .	. .	14 40.43	31.94	0.99	.	5	35.537	26 44.43	33.62	9.54	14 7.50	38 27.6
127	9	. .	. .	. .	32.4	45.4	. .	. .	. .	. .	16 32.56	31.94	0.99	.	6	33.19	19 24.60	33.86	8.54	15 59.63	31 7.0
128	4	. .	. .	47.	59.7	12.3	. .	. .	. .	. .	17 59.76	31.95	0.98	.	7	43.57	7 33.32	34.05	6.89	17 26.83	19 14.3
129	9	. .	61.	13.3	26.	. .	. .	. .	. .	. .	19 26.19	31.95	1.00	.	5	37.534	25 35.66	34.23	9.39	18 53.24	37 19.3
130	9	. .	. .	. .	. .	. .	. .	11.	. .	. .	19 32.62	31.95	1.00	.	3	40.372	35 38.85	34.25	10.78	18 59.67	47 23.9
131	9	. .	. .	. .	. .	9.5	22.5	. .	. .	. .	19 56.80	31.95	1.01	.	3	34.467	39 2.97	34.30	11.26	19 23.84	50 48.5
132	9	. .	. .	. .	. .	. .	. .	43.4	. .	. .	21 5.01	31.95	0.99	.	6	28.232	22 15.37	34.45	8.92	20 32.07	33 58.7
133	8	. .	. .	. .	. .	. .	. .	. .	. .	34.7	21 24.20	31.95	1.02	.	2	34.97	47 29.71	34.49	12.47	20 51.23	59 16.7
134	7	. .	. .	. .	25.	37.4	. .	. .	. .	. .	23 24.91	31.96	0.98	.	7	40.31	9 25.84	34.75	7.15	22 51.97	21 7.7
135	6	38.5	51.3	4.1	16.6	. .	. .	. .	. .	. .	25 16.80	31.96	1.00	.	5	36.49	26 11.70	35.00	9.48	24 43.84	37 56.2
136	7	. .	. .	. .	26.4	. .	. .	. .	. .	. .	26 26.42	31.97	0.99	.	5	45.92	20 46.22	35.15	8.72	25 53.46	30 32 30.1
137	6	. .	. .	. .	33.4	46.0	. .	. .	. .	. .	8 27 33.34	−31.97	−1.02	.	1	41.377	49 38.47	−35.29	−12.80	8 27 0.35	31 1 26.6

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1849. h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1849. h. m.	° ′ ″				″	″	in.	°	°

REMARKS.

(165) 103. Observed going out of the field.
(165) 108. Minutes assumed as 55 instead of 56.
(165) 109. Minutes assumed as 56 instead of 57.
(165) 116. Minutes assumed as 3 instead of 4.
(165) 118. Minutes assumed as 4 instead of 5.
(165) 122. Transit over T. VII assumed to have been recorded over T. V, and T. VII rejected.

Zone 166. March 7. Maj. Belt, 287° 20′. $D_0 = -33° 20′ 40″$.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
1	6	42.8	56.5	9.1	22.	35.8	49.	62.0	. .	. .	7 40 22.46	−22.02	−1.00	IV.	4	36.424	32 3.42	− 4.84	− 6.36	7 39 59.44	33 52 54.6
2	9	. .	. .	. .	. .	. .	19.5	. .	. .	. .	41 52.95	22.02	1.01	VII.	3	36.758	37 43.13	5.04	7.41	41 29.92	58 35.6
3	9	. .	. .	. .	. .	. .	47.4	61.	. .	. .	42 21.06	22.02	1.00	VII.	3	38.868	36 30.30	5.11	7.19	41 58.04	57 22.6
4	8	. .	. .	. .	40.2	54.0	6.8	. .	. .	. .	45 40.42	22.04	1.01	I.	3	37.631	37 13.00	5.55	7.32	45 17.37	58 5.9
5	6	. .	. .	. .	. .	. .	. .	17.5	37.4	. .	45 37.98	22.04	0.99	VII.	6	31.435	20 23.46	5.55	4.25	45 14.95	41 13.3
6	7	. .	. .	. .	. .	. .	. .	23.	. .	. .	46 43.27	22.04	0.99	VII.	7	33.31	13 26.77	5.67	3.00	46 20.24	34 15.4
7	6	. .	. .	. .	. .	10.4	23.4	. .	. .	. .	47 57.03	22.05	1.00	IV.	5	35.085	26 59.08	5.83	5.45	47 34.03	47 50.4
8	6	. .	. .	32.	45.7	59.0	. .	. .	. .	. .	48 45.57	22.06	1.00	VI.	5	37.138	25 48.06	5.93	5.23	48 22.51	46 39.2
9	10	. .	. .	. .	. .	. .	10.8	. .	. .	. .	50 44.36	22.07	1.00	VII.	5	38.93	24 45.97	6.20	5.04	50 21.29	45 37.2
10	7	. .	. .	. .	. .	. .	11.2	24.6	. .	. .	51 44.76	22.07	1.01	VI.	3	36.49	37 52.61	6.33	7.46	51 21.68	58 46.4
11	8	. .	. .	. .	44.5	57.2	. .	. .	. .	. .	53 44.35	22.08	0.98	VI.	7	39.984	9 36.65	6.60	2.30	53 21.29	30 25.6
12	8	. .	. .	. .	1.3	14.	28.	. .	. .	. .	55 1.19	22.09	1.00	VI.	4	38.74	30 43.32	6.76	6.13	54 38.10	51 36.2
13	8	. .	. .	. .	7.0	21.	34.	. .	. .	. .	55 7.48	22.09	0.99	VI.	5	43.73	22 0.52	6.77	4.54	54 44.40	42 51.8
14	9	. .	. .	. .	. .	. .	. .	. .	. .	31.	55 18.33	22.09	1.00	12.	5	38.359	25 4.74	6.80	5.11	54 55.24	45 56.6
15	7	. .	. .	. .	. .	. .	. .	. .	. .	52.5	56 39.92	22.09	0.99	12.	5	43.632	22 2.73	6.99	4.54	56 16.84	33 42 54.3
16	7	. .	. .	. .	. .	. .	. .	. .	. .	44.5	57 31.52	22.10	1.01	.	2	36.035	46 50.56	7.10	9.10	57 8.41	34 7 46.8
17	8	. .	. .	. .	. .	54.3	8.	21.0	. .	. .	7 59 41.29	22.11	1.00	.	4	35.438	32 37.47	7.39	6.47	7 59 18.18	33 53 31.3
18	7	. .	. .	. .	36.7	50.	. .	. .	. .	. .	8 2 36.82	22.12	0.99	V.	7	31.847	14 17.62	7.77	3.15	8 2 13.71	35 8.5
19	7	. .	. .	. .	. .	. .	. .	. .	43.4	. .	4 44.26	22.13	0.99	.	7	31.497	14 29.76	8.06	3.18	4 21.14	33 35 21.0
20	7	. .	. .	. .	58.5	12.	. .	. .	. .	. .	6 58.65	22.14	1.01	.	3	30.248	41 28.23	8.35	8.12	6 35.50	34 2 24.7
21	6	. .	. .	29.	41.2	55.3	. .	. .	. .	. .	7 41.82	22.14	1.01	.	2	36.117	46 47.73	8.45	9.10	7 18.67	34 7 45.3
22	9	. .	. .	. .	. .	. .	. .	. .	. .	59.	7 46.19	22.14	1.00	12.	4	37.580	31 22.18	8.46	6.25	7 23.05	33 52 16.9
23	7	. .	. .	. .	19.7	. .	. .	. .	. .	. .	10 19.75	22.15	0.99	.	6	39.038	16 1.44	8.79	3.45	9 56.61	36 53.7
24	9	. .	. .	. .	. .	27.5	. .	. .	. .	. .	11 14.36	22.16	0.99	.	6	31.79	20 11.55	8.91	4.22	10 51.21	33 41 4.7
25	7	. .	. .	. .	. .	. .	9.1	. .	. .	. .	11 42.53	22.16	1.01	.	3	30.708	41 12.35	8.97	8.06	11 19.36	34 2 9.4
26	9	. .	. .	. .	. .	. .	. .	. .	20.	35.	12 21.43	22.16	1.00	.	4	37.403	31 28.73	9.06	6.27	11 58.27	33 52 24.1
27	6	. .	. .	. .	. .	. .	30.7	45.	. .	. .	14 4.64	22.17	1.01	.	2	36.94	46 19.32	9.28	9.01	13 41.46	34 7 17.6
28	9	. .	. .	. .	. .	. .	. .	38.4	. .	. .	14 58.67	22.17	1.01	.	3	36.204	38 2.25	9.40	7.47	14 35.49	33 58 59.1
29	9	. .	. .	. .	. .	. .	26.2	39.4	. .	. .	15 59.66	22.18	1.01	.	3	34.67	38 55.42	9.53	7.63	15 36.47	59 52.6
30	9	. .	. .	. .	. .	31.4	. .	. .	. .	. .	17 18.21	22.18	1.00	.	4	39.987	30 0.40	9.70	6.00	16 55.03	50 56.1
31	8	. .	. .	. .	. .	. .	. .	18.	. .	. .	17 38.27	22.18	0.99	.	5	39.814	24 15.85	9.74	4.96	17 15.10	45 10.6
32	8	11.	24.	37.4	50.2	. .	. .	. .	. .	. .	19 50.50	22.19	1.00	.	4	36.727	31 52.97	10.03	6.34	19 27.31	52 49.3
33	7	. .	. .	. .	. .	26.	39.5	. .	. .	. .	20 12.94	22.19	1.00	.	5	35.56	26 42.68	10.08	5.40	20 49.75	47 38.2
34	7	. .	. .	. .	21.	33.9	47.5	. .	. .	. .	21 20.96	22.20	0.99	.	6	31.818	20 10.64	10.22	4.22	20 57.77	33 41 5.1
35	.	. .	. .	. .	. .	. .	. .	. .	. .	35.	21 22.03	22.20	1.01	.	2	38.614	45 20.20	10.23	8.81	20 58.82	34 6 19.2
36	.	. .	. .	. .	. .	. .	. .	34.	. .	. .	21 54.17	22.20	1.02	.	1	38.398	51 19.74	10.29	9.98	21 30.95	12 20.0
37	6	. .	. .	. .	. .	. .	43.	. .	. .	. .	23 16.34	22.20	1.02	VI.	1	35.164	53 11.59	10.48	10.33	22 53.12	34 14 12.4
38	7	. .	. .	. .	. .	. .	28.2	. .	. .	. .	24 1.76	22.21	1.00	.	5	38.71	24 53.96	10.56	5.07	23 38.55	33 45 49.6
39	7	. .	. .	. .	. .	. .	39.	. .	. .	. .	24 12.66	22.21	0.98	.	6	44.219	13 2.62	10.59	2.91	23 49.47	33 56.1
40	8	. .	. .	. .	. .	. .	. .	. .	. .	44.5	24 31.98	22.21	0.99	.	5	47.587	19 47.57	10.63	4.14	24 8.78	40 42.3
41	8	. .	. .	. .	. .	. .	. .	32.5	. .	. .	25 52.77	22.21	0.98	.	6	46.791	11 33.85	10.81	2.65	25 29.58	33 32 27.3
42	6	. .	. .	16.3	29.4	43.2	. .	. .	. .	. .	27 29.62	22.22	1.01	.	1	46.64	46 35.66	11.01	9.09	27 6.39	34 7 35.7
43	8	. .	. .	. .	55.	8.4	. .	. .	. .	. .	28 55.11	22.22	1.02	.	1	45.298	47 21.98	11.19	9.24	28 31.87	34 8 22.4
44	8	. .	. .	. .	. .	. .	21.8	35.2	. .	. .	28 55.44	22.22	0.99	.	5	47.437	19 52.75	11.19	4.16	28 32.23	33 40 48.1
45	6.7	. .	. .	. .	. .	52.4	5.9	. .	. .	. .	29 39 45	22.23	0.99	.	6 7	39.598 39.598	15 42.12 9 50.16	11.29 11.29	3.40 2.36	29 16.23	36 36.8 30 43.8?
46	9	. .	. .	. .	. .	. .	. .	54.5	. .	. .	30 14.77	22.23	0.98	.	7	36.398	11 40.20	11.36	2.69	29 51.56	32 34.2?
47	8	. .	. .	. .	. .	. .	21.	33.7	. .	. .	32 54.23	22.24	1.00	.	4	34.20	33 20.19	11.69	6.60	32 30.99	54 18.5
48	7	. .	. .	. .	. .	29.	. .	. .	. .	. .	34 15.91	22.24	0.98	.	7	42.814	7 59.14	11.86	2.03	33 52.69	28 53.0
49	7	. .	. .	. .	29.	. .	. .	. .	. .	. .	8 34 29.10	−22.24	−0.98	.	7	41.605	8 40.87	−11.90	− 2.11	8 34 5.88	33 29 34.9

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1849. h.	s.	s.	s.	s.	s.	° ′ ″	r.
Mar. 7, 9	− 23.356	g 0.007	− 0.149	+ 0.382	− 0.196	359 59 59.19	39.465

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1849. h. m.	° ′ ″				″	″	in.	°	°
Zone 166	Mar. 7, 7 40	*287 21 2.3	0.9	3.9	3.1	. .	2.86	29.988	48.4	47.2
	8 0	3.2	1.9	4.1	3.5	. .		. .	. .	46.2
	8 20	. .	. .	. .	. .	. .	. .	30.010	48.	45.1
	8 40	. .	. .	. .	. .	. .	. .	30.012	47.6	45.2
	9 0	. .	. .	. .	. .	. .	. .	30.018	47.4	44.4
	9 10	2.8	2.8	4.0	4.8	3.61	3.60			
	9 20	. .	. .	. .	. .	. .	. .	. .	. .	44.0
	9 17	2.7	2.8	4.2	3.8	3.39	3.38			

REMARKS.

* An error of 3′ suspected in the circle-reading, the vernier being badly adjusted; it ought to be, perhaps, 287° 18′, &c., as was afterward found when observing for the nadir point.

ZONE 166. MARCH 7. MAJ. BELT, 287° 20′. $D_0 = -33° 20′ 40″$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
50	9	. .	. .	. .	. .	11.2	. .	. .	. .	. .	8 39 58.00	−22.26	−1.01	VI.	2	41.349	43 46.28	−12.59	− 8.54	8 39 34.73	34 4 47.4
51	6	. .	. .	62.	15.0	28.	. .	. .	. .	. .	41 14.99	22.26	1.01	.	2	41.827	43 30.64	12.74	8.49	40 51.72	4 31.9
52	6	. .	. .	. .	49.2	3.0	. .	. .	. .	. .	41 49.50	22.26	1.01	.	2	44.278	42 6.06	12.81	8.24	41 26.23	34 3 7.1
53	7	52.5	6.0	19.	31.7	. .	. .	. .	. .	. .	44 32.12	22.27	0.99	.	5	48.148	19 28.22	13.14	4.08	44 8.86	33 40 25.4
54	7	. .	. .	15.3	28.	41.2	54.7	. .	. .	. .	45 28.17	22.27	1.00	.	4	38.749	30 43.18	13.26	6.13	45 4.90	33 51 42.6
55	9	. .	. .	. .	. .	62.4	16.2	. .	. .	. .	47 49.36	22.28	1.02	.	1	33.402	54 12.51	13.54	10.51	47 26.06	34 15 16.6
56	9	. .	. .	. .	. .	. .	. .	66.1	. .	. .	48 26.22	22.28	1.02	.	1	32.98	54 26.73	13.62	10.60	48 2.90	34 15 31.0
57	8	. .	. .	. .	. .	. .	. .	14.	. .	. .	49 34.27	22.29	1.00	.	4	34.645	33 4.83	13.76	6.56	49 10.98	33 54 5.2
58	8	. .	. .	. .	. .	0.0	13.	26.3	. .	. .	49 46.60	22.29	1.01	.	3	33.32	39 42.19	13.79	7.81	49 23.30	34 0 43.8
59	9	. .	. .	. .	35.3	48.4	2.0	. .	. .	. .	52 35.33	22.29	1.00	.	5	31.788	28 52.88	14.13	5.80	52 12.04	33 49 52.8
60	9	29.2	42.5	56.	9.0	. .	. .	. .	. .	. .	55 9.04	22.30	1.01	.	3	36.395	37 56.06	14.41	7.44	54 45.73	58 57.9
61	10	. .	. .	. .	. .	. .	. .	55.2	. .	. .	55 15.47	22.30	1.00	.	4	34.030	33 25.65	14.43	6.61	54 52.17	54 26.7
62	8	. .	. .	. .	. .	. .	10.2	23.3	. .	. .	56 43.70	22.30	0.99	.	6	34.82	18 27.02	14.61	3.88	56 20.41	39 25.5
63	8	. .	. .	. .	. .	. .	. .	17.5	. .	. .	8 57 37.77	22.31	0.99	.	6	39.79	15 35.48	14.71	3.37	57 14.47	36 33.6
64	8	30.4	44.1	57.0	10.2	23.4	36.7	. .	. .	. .	9 0 10.26	22.31	1.00	.	3	41.119	35 13.01	15.01	6.96	8 59 46.95	56 15.0
65	9	. .	. .	. .	. .	42.3	56.	. .	. .	. .	1 29.29	22.31	1.00	.	3	43.000	34 8.03	15.17	6.76	9 1 5.98	55 10.0
66	8	. .	. .	. .	. .	. .	. .	. .	60.0	. .	1 0.96	22.31	0.98	.	7	38.695	10 21.31	15.2	2.41	1 36.67	31 18.9
67	8	. .	. .	. .	. .	50.	. .	22.5	. .	. .	2 42.82	22.32	0.99	.	6	34.343	18 43.49	15.26	3.93	2 19.51	39 42.7
68	9	. .	. .	. .	48.3	. .	. .	. .	. .	. .	4 48.27	22.32	1.00	.	5	34.25	27 27.90	15.36	5.53	4 24.95	33 48 28.8
69	9	. .	. .	. .	. .	. .	47.5	. .	. .	. .	5 20.89	22.32	1.01	.	2	37.916	45 45.47	15.41	8.93	4 57.56	34 6 49.8
70	9	. .	. .	. .	40.4	53.2	6.4	20.	. .	. .	6 40.18	22.32	0.99	.	5	43.537	22 7.35	15.51	4.54	6 16.87	33 43 7.4
71	9	. .	. .	. .	. .	. .	. .	. .	39.3	. .	9 40.04	22.33	0.99	.	5	41.732	23 8.76	15.74	4.72	9 16.72	44 9.2
72	7	. .	28.2	41.	54.3	7.3	. .	. .	. .	. .	12 54.33	22.33	0.98	.	7	44.437	7 3.13	16.05	1.84	12 31.02	28 1.0
73	5	. .	. .	45.2	58.0	11.2	24.1	. .	. .	. .	13 58.13	22.33	0.98	.	7	44.038	7 16.90	16.15	1.88	13 34.82	28 14.9
74	7	. .	15.0	28.4	41.0	54.4	. .	. .	. .	. .	15 41.30	22.34	0.99	.	5	45.42	21 2.37	16.32	4.34	15 17.97	33 42 3.0
75	8	. .	. .	. .	6.	19.4	. .	. .	. .	. .	17 6.12	22.34	1.02	V.	1	35.597	52 56.77	16.46	10.30	16 42.76	34 14 3.5
76	7	. .	. .	. .	50.	3.	16.4	. .	. .	. .	19 49.97	22.35	0.99	.	6	32.75	19 38.47	16.71	4.10	19 26.63	33 40 39.3
77	9	. .	. .	. .	. .	. .	12.	25.2	. .	. .	20 45.47	22.35	1.00	.	3	41.49	35 0.04	16.81	6.92	20 22.12	56 3.8
78	7	. .	. .	. .	. .	. .	. .	. .	21.8	. .	21 22.76	22.35	0.98	.	7	43.248	7 44.18	16.89	1.97	20 59.43	33 28 43.0
79	6	. .	. .	. .	. .	. .	. .	. .	. .	23.	22 9.96	22.35	1.02	12.	1	33.66	54 2.32	16.98	10.51	21 46.59	34 15 9.8
80	6	21.7	35.0	48.	1.2	14.	27.3	40.4	. .	. .	29 1.09	22.36	0.99	.	5	45.513	20 59.17	17.77	4.34	28 37.74	33 42 1.3
81	11	. .	. .	. .	. .	. .	20.5	33.8	. .	. .	29 54.04	22.36	1.00	.	4	41.22	29 17.72	17.87	5.88	29 30.68	33 50 21.5
82	9	. .	. .	. .	36.	49.5	3.	. .	. .	. .	31 36.23	22.36	1.02	.	1	31.528	55 17.26	18.10	10.76	31 12.85	34 16 26.1
83	8	. .	46.4	59.5	12.4	. .	. .	. .	. .	. .	34 12.64	22.36	0.99	.	6	38.22	16 29.68	18.46	3.53	33 49.29	33 37 31.7
84	9	. .	. .	30.3	43.2	56.4	. .	. .	. .	. .	35 43.46	22.36	1.02	.	1	41.37	49 37.55	18.66	9.67	35 20.08	34 10 45.9
85	9	. .	. .	. .	. .	. .	33.5	47.	. .	. .	36 7.03	22.36	1.02	.	1	43.63	48 19.38	18.72	9.42	35 43.65	34 9 27.5
86	9	. .	. .	. .	. .	. .	14.7	28.	. .	. .	39 48.22	22.36	1.00	.	3	38.514	36 42.75	19.22	7.23	39 24.86	33 57 49.2
87	8	. .	47.4	0.5	13.6	. .	. .	. .	. .	. .	43 13.77	22.37	1.02	. .	1	35.824	52 48.97	19.77	10.28	42 50.38	34 13 59.0
88	9	. .	. .	. .	59.	12.2	25.3	. .	. .	. .	43 58.93	22.37	1.00	.	4	38.99	30 34.86	19.90	6.11	43 35.56	33 51 40.9
89	8	. .	. .	. .	. .	. .	44.2	57.2	. .	. .	47 17.70	22.37	0.97	.	7	49.92	3 53.87	20.44	1.27	46 54.36	33 24 55.6
90	7	. .	. .	. .	. .	42.	55.2	8.3	. .	. .	48 28.60	22.37	1.02	VII.	1	39.216	50 51.51	20.64	9.90	48 5.21	34 12 2.0
91	9	. .	. .	. .	. .	. .	14.5	27.2	. .	. .	49 47.74	22.37	1.00	.	5	38.478	25 1.81	20.85	5.09	49 24.37	33 46 7.8
92	7	. .	. .	. .	. .	7.2	20.	33.	. .	. .	50 53.54	22.37	1.01	.	2	38.057	45 40.78	21.03	8.90	50 30.16	34 6 50.7
93	9	. .	. .	. .	. .	. .	. .	. .	39.4	. .	51 40.26	22.37	0.99	.	6	40.885	14 56.79	21.20	3.25	51 16.90	33 36 1.2
94	9	22.5	35.9	49.	2.0	. .	. .	. .	. .	. .	55 2.21	22.37	1.00	.	4	33.822	33 33.22	21.85	6.64	54 38.84	54 41.7
95	9	. .	13.	26.4	39.3	. .	. .	. .	. .	. .	55 39.43	22.37	0.99	.	5	38.64	24 56.38	21.97	5.07	55 16.07	46 3.4
96	5	. .	. .	. .	. .	. .	. .	. .	50.	53.8	55 51.30	22.37	0.98	.	7	45.974	6 10.07	22.01	1.67	55 27.95	33 27 13.8
97	9	. .	. .	. .	. .	58.4	12.	. .	. .	. .	57 45.29	22.37	1.02	.	1	44.674	47 43.46	22.38	9.31	57 21.90	34 8 55.2
98	6	. .	. .	4.	16.4	30.1	. .	. .	. .	. .	9 59 16.82	22.37	1.02	.	1	44.015	48 6.27	22.66	9.39	9 58 53.43	9 18.3
99	9	. .	. .	36.	49.1	2.0	15.5	29.	. .	. .	10 1 49.03	−22.37	−1.02	.	1	44.785	47 39.67	−23.18	− 9.30	10 1 25.64	34 8 52.2

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1849.	h.	s.	s.	s.	s.	s.	° ′ ″	r.

REMARKS.

(166) 66. Minutes assumed as 2.
(166) 67. Time of transit over T. V assumed as 56^s instead of 50^s.
(166) 96. Transit over T. 12 assumed to have been at $3^s.8$ instead of $53^s.8$.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1849. h. m.	° ′ ″				″	″	in.	°	°
Zone 166	Mar. 7, 9 40	. .	. .	. .	. .	. .	. .	. .	. .	43.7
	10	. .	. .	. .	. .	. .	. .	30.028	46.4	43.2

Zone 167. March 8. Maj. Belt, 287° 20′. $D_0=-33° 17' 30''$.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
1	9	. .	. .	. .	. .	41.	. .	. .	. .	. .	5 59 27.80	−21.54	−1.01	VI.	2	38.83	45 13.92	− 2.54	−12.84	5 59 5.25	34 2 59.3
2	9	. .	. .	. .	. .	. .	. .	3.5	. .	. .	5 59 23.87	21.55	1.01	11.	3	35.742	38 17.69	2.52	11.56	59 1.31	33 56 1.8
3	7	. .	. .	. .	. .	. .	. .	2.2	. .	. .	6 0 22.42	21.56	0.99	VII.	7	36.078	11 51.24	2.64	6.71	5 59 59.87	29 30.6
4	7	. .	24.3	37.4	50.4	. .	. .	. .	. .	. .	2 50.56	21.57	0.99	.	6	37.49	17 54.88	2.94	7.79	6 2 28.00	33 35 35.6
5	8	. .	9.5	22.8	35.7	49.4	. .	. .	. .	. .	4 36.00	21.59	1.02	IV.	1	38.102	51 30.35	3.15	14.02	4 13.39	34 9 17.5
6	6	32.	45.5	58.4	11.5	24.7	38.1	51.4	. .	. .	6 11.66	21.60	1.00	IV.	4	35.354	32 40.36	3.34	10.51	5 49.06	33 50 24.2
7	8	. .	43.4	56.7	9.9	23.	. .	. .	. .	. .	11 9.88	21.64	1.01	IV.	2	43.495	42 33.09	3.95	12.35	10 47.23	34 0 19.4
8	8	. .	. .	10.4	23.6	37.	. .	. .	. .	. .	12 23.70	21.65	0.99	.	5	45.288	21 6.94	4.12	8.37	12 1.06	33 38 49.4
9	10	. .	. .	18.	. .	. .	58.	. .	. .	. .	12 31.40	21.65	0.99	.	5	43.625	22 4.32	4.14	8.55	12 8.76	33 39 47.0
10	5	53.4	7.1	20.	33.4	. .	. .	. .	. .	. .	15 33.37	21.68	1.01	III.	2	35.737	47 0.80	4.54	13.18	15 10.68	34 4 48.5
11	8	. .	. .	. .	. .	. .	. .	21.3	. .	. .	15 41.57	21.68	0.99	VII.	7	33.376	13 24.50	4.56	6.98	15 18.90	33 31 6.0
12	9	. .	. .	. .	. .	1.2	14.5	. .	. .	. .	16 47.98	21.69	1.00	.	4	31.654	34 48.01	4.70	10.89	16 25.29	52 33.6
13	8	. .	. .	. .	. .	39.	52.6	6.	. .	. .	17 26.07	21.69	1.00	.	4	39.724	30 9.53	4.80	10.03	17 3.38	47 54.4
14	7	. .	. .	. .	. .	1.	. .	. .	. .	. .	17 47.88	21.69	0.99	.	6	41.259	14 44.79	4.83	7.22	17 25.20	32 26.8
15	8	. .	. .	. .	. .	. .	7.5	21.	. .	. .	18 41.22	21.70	0.98	.	7	37.652	10 57.30	4.96	6.55	18 18.54	33 28 38.8
16	8	. .	. .	. .	. .	0.2	. .	. .	. .	. .	19 47.00	21.71	1.01	.	2	40.780	44 6.79	5.10	12.63	19 24.28	34 1 54.5
17	9	. .	. .	. .	. .	. .	. .	8.5	. .	. .	21 28.77	21.72	1.00	VII.	5	35.892	26 30.82	5.35	9.35	21 6.05	33 44 15.5
18	8	44.6	58.2	11.2	24.1	. .	. .	. .	. .	. .	24 24.41	21.75	1.01	.	2	44.350	42 3.57	5.77	12.24	24 1.65	33 59 51.6
19	9	. .	. .	. .	. .	. .	. .	. .	21.4	. .	27 22.09	21.77	1.02	11.	1	42.633	48 53.06	6.20	13.54	26 59.30	34 6 42.8
20	7	. .	. .	26.	39.	52.5	. .	. .	. .	. .	29 39.16	21.79	1.00	IV.	3	39.99	35 51.97	6.53	11.10	29 16.37	33 53 39.6
21	9	. .	. .	24.	37.1	50.	. .	. .	. .	. .	31 37.12	21.80	0.98	IV.	7	40.712	9 11.69	6.80	6.23	31 14.34	33 26 54.7
22	8	50.2	3.6	16.8	29.6	43.	. .	. .	. .	. .	35 29.92	21.83	1.01	.	2	36.305	46 41.24	7.35	13.12	35 7.08	34 4 31.7
23	8	. .	. .	16.	28.5	42.2	. .	. .	. .	. .	37 28.90	21.84	1.02	IV.	1	31.717	55 10.73	7.63	14.73	37 6.04	13 3.1
24	8	29.5	42.	56.4	9.	. .	. .	. .	. .	. .	41 9.12	21.87	1.01	.	2	35.24	47 18.01	8.13	13.24	40 46.24	34 5 9.4
25	9	. .	. .	. .	51.4	5.3	. .	. .	. .	. .	41 51.74	21.88	1.00	.	4	33.26	33 52.63	8.21	10.74	41 28.86	33 51 41.6
26	8	24.6	38.4	51.	4.2	17.4	30.8	44.1	. .	. .	45 4.36	21.90	1.00	IV.	5	38.455	25 2.77	8.62	9.08	44 41.46	33 42 50.5
27	8	. .	. .	. .	. .	. .	27.	41.	. .	. .	46 0.79	21.90	1.02	.	2	33.625	48 13.74	8.73	13.41	45 37.87	34 6 5.9
28	8	16.5	. .	. .	. .	. .	22.3	35.7	. .	. .	46 56.02	21.91	1.00	.	5	35.802	26 34.32	8.85	9.37	46 33.11	33 44 22.5
29	8	29.8	43.5	56.5	9.4	22.8	. .	. .	. .	. .	49 9.67	21.93	1.01	.	2	40.425	44 19.04	9.14	12.67	48 46.73	34 2 10.8
30	7	. .	2.4	15.5	28.8	42.	54.9	. .	. .	. .	50 28.74	21.94	0.99	IV.	6	33.48	19 13.28	9.30	8.03	50 5.81	33 37 0.6
31	9	. .	. .	. .	. .	6.9	. .	. .	. .	. .	51 53.70	21.95	1.02	.	1	33.738	54 0.92	9.44	14.50	51 30.73	34 11 54.9
32	5	. .	52.0	5.5	18.4	31.3	. .	. .	. .	. .	53 18.42	21.96	1.00	.	3	38.336	36 49.07	9.60	11.27	52 55.46	33 54 39.9
33	10	38.	51.5	4.2	17.7	. .	. .	. .	. .	. .	6 55 17.67	−21.97	−0.99	.	5	43.256	22 17.06	− 9.82	− 8.58	6 54 54.71	33 40 5.5
Zone 168. March 19. Maj. Belt, 285° 27½′. $D_0=-35° 12' 0''$.																					
1	8	. .	. .	. .	14.2	28.2	41.4	. .	. .	. .	8 5 14.37	−26.94	−1.00	VI.	3	41.167	35 11.17	− 8.82	−11.21	8 4 46.43	35 47 31.2
2	9	. .	. .	. .	40.5	. .	. .	. .	. .	. .	7 40.48	26.96	1.00	.	3	42.37	34 29.83	8.87	11.05	7 12.52	46 49.7
3	4	. .	. .	64.3	. .	26.2	. .	. .	. .	. .	9 17.76	26.96	0.99	.	6	41.305	14 43.20	8.88	6.50	7 49.81	26 58.6
4	8	. .	. .	. .	. .	1.?	15.	. .	. .	. .	8 47.64	26.96	1.01	.	2	46.209	40 59.41	8.89	12.56	8 19.67?	53 20.9
5	8	. .	. .	. .	. .	2.?	. .	. .	15.5	. .	8 48.40	26.96	1.01	.	2	48.11	39 53.79	8.89	12.31	8 20.43	52 15.0
6	8	. .	. .	. .	. .	. .	13.2	26.2	. .	. .	10 45.90	26.97	0.99	.	6	41.687	14 30.02	8.95	6.46	10 17.94	26 45.4
7	8	. .	. .	. .	. .	. .	26.2	. .	. .	. .	10 59.26	26.98	0.99	.	6	43.865	13 14.83	8.96	6.20	10 31.29	25 30.0
8	8	. .	. .	. .	. .	. .	. .	. .	. .	28.2	11 13.67	26.98	1.00	.	4	35.99	32 18.41	8.96	10.53	10 45.69	44 37.9
9	8	. .	. .	. .	. .	. .	0.5	14.5	. .	. .	12 33.65	26.98	0.99	.	5	40.414	23 55.15	9.02	8.60	12 5.68	35 36 12.8
10	6	. .	42.	55.5	8.6	. .	. .	. .	. .	. .	16 8.94	27.00	1.02	.	1	43.738	48 15.83	9.16	14.26	15 40.92	36 0 39.2
11	10	. .	. .	. .	14.7	. .	. .	. .	. .	. .	15 14.72	27.00	1.01	.	1	47.755	45 57.18	9.13	13.73	14 46.71	35 58 20.0
12	10	. .	. .	. .	27.	40.5	. .	. .	. .	. .	8 23 27.01	−27.04	−1.02	.	1	39.382	50 46.17	− 9.52	−14.88	8 22 58.95	36 3 10.6

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1849.	h.	s.	s.	s.	s.	s.	° ′ ″	r.
Mar. 8,	5	−23.560	g 0.017	− 0.149	+ 0.382	− 0.196	359 59 59.07	39.451
19,	6	−28.232	g 0.025	− 0.149	+ 0.382	− 0.196	0 0 3.17	39.463

INSTRUMENT READINGS.

	Date.			CIRCLE.						Barom.	Attached Thermom.	External Thermom.
				A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1849.	h.	m.	° ′ ″				″	″	in.	°	°
Zone 167	Mar. 8,	5	59	287 21 1.4	1.5	2.4	10.	1.58	1.58			
		6	0	. .	. .	. .	. .	. .	. .	30.052	46.5	42.5
		6	20	. .	. .	. .	. .	. .	. .	. .	. .	40.9
		6	40	. .	. .	. .	. .	. .	. .	. .	. .	38.8
		6	54	0.5	1.2	2.9	1.1	1.42	1.42			
		7	0	. .	. .	. .	. .	. .	. .	30.056	45.2	38.4
Zone 168	Mar. 19,	8	0	. .	. .	. .	. .	. .	. .	30.222	51.7	42.8
		8	5	285 26 66.0	60.4	60.7	59.5	61.67	61.65			

REMARKS.

(168) 3. Time of transit over T. V assumed as 31ˢ.2 instead of 26ˢ.2.

(168) 5. Transit over T. VI assumed to have been recorded as over T. 11.

(168) 12. Declination differs 1′ from Mural Z. 1849, March 22.

ZONE 168. MARCH 19. MAJ. BELT, 285° 27½′. D₀=−35° 12′ 0″—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
13	10	. .	. .	6.2	19.5	33.2	. .	. .	. .	. .	8 25 19.62	−27.05	−1.02	.	1	37.404	51 54.43	− 9.63	−15.16	8 24 51.55	36 4 19.2
14	10	. .	. .	. .	. .	. .	. .	0.0	. .	. .	26 19.21	27.05	1.02	VII.	1	37.978	51 34.20	9.68	15.08	25 51.14	36 3 59.0
15	7	. .	. .	. .	. .	17.3	31.2	44.4	. .	. .	32 3.91	27.08	0.99	VII.	5	39.287	24 33.59	10.06	8.75	31 35.84	35 36 52.4
16	6	. .	. .	. .	. .	19.5	33.	46.7	. .	. .	34 5.86	27.09	1.02	.	1	36.38	52 29.78	10.21	15.30	33 37.75	36 4 55.3
17	9	. .	25.4	39.	52.2	. .	. .	. .	. .	. .	35 52.39	27.10	1.00	.	4	32.62	34 14.72	10.35	10.98	35 24.29	35 46 36.0
18	9	. .	. .	. .	59.7	13.5	. .	. .	. .	. .	35 59.92	27.10	0.98	.	7	33.875	13 7.67	10.36	6.16	35 31.84	25 24.2
19	6	. .	. .	. .	34.5	48.2	1.6	. .	. .	. .	37 34.67	27.11	0.98	.	7	35.524	12 10.76	10.48	5.95	37 6.58	24 27.2
20	8	37.6	51.2	4.8	18.	31.6	45.2	58.9	. .	. .	39 18.19	27.11	1.00	.	5	37.892	25 22.20	10.61	8.93	38 50.08	37 41.7
21	9	. .	. .	16.	29.2	42.5	. .	. .	. .	. .	43 29.32	27.13	0.98	.	7	43.095	7 49.46	11.02	4.99	43 1.21	35 20 5.5
22	8	. .	. .	. .	. .	. .	. .	. .	. .	38.0	43 23.24	27.13	1.02	.	1	39.88	50 28.98	11.01	14.82	42 55.09	36 2 54.8
23	7	. .	. .	. .	. .	. .	. .	15.	. .	. .	44 34.21	27.14	1.02	.	1	38.58	51 13.85	11.13	14.99	44 6.05	36 3 40.0
24	6	. .	. .	. .	. .	. .	. .	. .	58.5	. .	44 58.09	27.14	0.98	VII½.	7	39.118	10 6.07	11.17	5.47	44 29.97	35 22 22.7
25	7	. .	47.2	1.2	14.5	28.7	. .	. .	. .	. .	47 14.70	27.15	1.01	.	2	36.72	46 26.92	11.39	13.85	46 46.54	58 52.2
26	7	. .	. .	. .	17.	30.2	44.2	. .	. .	. .	48 17.03	27.15	0.99	VI.	6	41.13	14 49.05	11.51	6.52	47 48.89	27 7.1
27	7	. .	. .	. .	25.	38.8	52.5	. .	. .	. .	49 25.31	27.16	0.99	VI.	6	37.722	16 46.87	11.62	6.98	48 57.16	29 5.5
28	10	. .	. .	. .	. .	. .	. .	0.0	. .	. .	52 19.35	27.17	0.98	.	7	34.33	12 51.54	12.00	6.09	51 51.20	25 9.6
29	10	. .	. .	. .	2.2	16.	29.2	43.0	. .	. .	54 2.26	27.18	1.00	.	3	40.442	35 36.37	12.23	11.30	53 34.08	47 59.9
30	9	. .	. .	. .	. .	. .	4.0	17.7	. .	. .	57 36.86	27.19	1.01	.	1	46.34	46 45.82	12.71	13.92	57 8.66	35 59 12.4
31	9	. .	. .	. .	. .	. .	27.8	41.4	. .	. .	8 58 0.56	27.19	1.02	II.	1	38.114	51 28.97	12.77	15.04	57 32.35	36 3 56.8
32	7	. .	58.7	11.4	. .	. .	. .	. .	. .	. .	9 0 25.29	27.20	0.99	.	6	36.438	17 31.19	13.09	7 13	8 59 57.10	35 29 51.4
33	9	. .	. .	. .	. .	54.0	7.6	. .	. .	. .	1 40.49	27.21	1.00	.	4	35.070	32 50.11	13.24	10.64	9 1 12.28	45 14.0
34	9	. .	. .	. .	. .	. .	0.0	14.	. .	. .	3 33.24	27.21	0.98	.	7	44.895	6 47.13	13.47	4.74	3 5.05	19 5.3
35	10	. .	. .	. .	1.2	. .	. .	. .	. .	. .	5 1.28	27.22	0.98	.	7	37.108	11 16.09	13.64	5.75	4 33.08	23 35.5
36	10	. .	. .	. .	3.	. .	. .	. .	. .	. .	3.07	27.22	0.98	.	7	36.67	11 31.20	13.65	5.80	34.87	23 50.6
37	10	. .	. .	. .	. .	. .	. .	. .	19.	. .	5 18.50	27.22	0.99	.	6	39.36	15 49.36	13.68	6.75	4 50.29	28 9.8
38	10	. .	. .	. .	. .	. .	. .	. .	28.	. .	5 27.46	27.22	0.99	.	6	36.74	17 19.80	−13.69	− 7.11	4 59.25	35 29 40.6
39	10	. .	. .	. .	. .	. .	. .	. .	. .	56.4	5 41.90	27.22	1.00	.	.	. .	. . .	. .	. .	5 13.68	
40	10	. .	. .	6.5	19.9	33.7	. .	. .	. .	. .	8 20.03	27.23	1.00	.	4	35.61	32 31.52	−14.04	−10.58	7 51.80	35 44 56.1
41	7	. .	. .	. .	10.4	23.7	37.7	. .	. .	. .	9 10.53	27.23	0.98	.	7	42.54	8 8.60	14.14	5.05	8 42.32	20 27.8
42	9	16.4	30.2	43.4	56.2	. .	. .	. .	. .	. .	11 56.87	27.23	1.00	.	4	35.952	32 19.72	14.43	10.57	11 28.64	44 44.7
43	9	. .	. .	40.6	54.1	7.7	. .	. .	. .	. .	12 54.22	27.24	0.98	.	7	41.025	9 0.89	14.53	5.23	12 26.00	21 20.6
44	8	. .	. .	. .	29.	42.8	56.4	. .	. .	. .	14 29.16	27.25	1.01	.	2	42.042	43 23.23	14.70	13.11	14 0.90	35 55 51.0
45	9	. .	. .	56.4	9.4	23.5	. .	. .	. .	. .	18 9.76	27.26	1.02	.	1	42.637	48 53.82	15.08	14.45	17 41.48	36 1 23.4
46	8	57.5	11.	24.2	. .	. .	. .	. .	. .	. .	19 38.01	27.26	1.00	.	4	34.065	33 24.85	15.23	10.78	19 9.75	35 45 50.9
47	7	. .	54.	7.3	. .	. .	. .	. .	. .	. .	20 20.84	−27.27	−0.98	.	7	44.592	6 57.78	15.30	4.80	19 52.59	19 17.9
48	8	. .	. .	. .	. .	. .	. .	49.2	. .	. .	21	. .	. .	.	7	41.119	8 57.64	15.4	5.23	(20)	21 18.3
49	8	. .	. .	. .	. .	. .	. .	33.2	. .	. .	22	. .	. .	.	5	45.895	20 45.98	15.5	7.86	(21)	33 9.3
50	4	. .	. .	. .	. .	. .	. .	11.9	. .	. .	23 31.25	−27.27	−0.98	VII.	7	47.185	5 27.85	15.71	4.44	23 3.00	17 48.0
51	10	. .	. .	. .	. .	. .	. .	15.8	. .	. .	24 35.12	27.28	1.01	.	2	43.032	42 48.63	15.85	13.00	24 6.83	55 17.5
52	9	. .	. .	. .	. .	. .	. .	. .	1.5	. .	25 0.78	27.28	1.01	.	2	36.255	46 42.01	15.90	13.93	24 32.49	35 59 11.8
53	7	. .	. .	. .	. .	. .	16.4	29.5	. .	. .	25 48.90	27.28	1.02	.	1	35.62	52 56.02	16.00	15.40	25 20.60	36 5 27.4
54	9	. .	. .	. .	. .	. .	53.4	. .	. .	. .	27 26.28	27.29	1.00	.	4	36.477	32 1.41	16.21	10.46	26 57.99	35 44 28.1
55	8	. .	. .	. .	. .	31.7	45.2	58.7	. .	. .	28 18.19	27.29	0.99	.	6	38.797	16 9.76	16.32	6.84	27 49.91	28 32.9
56	8	45.6	59.2	12.4	. .	. .	. .	. .	. .	. .	30 26.02	27.29	0.98	.	7	40.188	9 29.79	16.58	5.32	29 57.75	21 51.7
57	7	57.	11.	24.2	37.5	. .	. .	. .	. .	. .	30 37.72	27.29	1.00	.	5	38.084	25 15.57	16.61	8.90	30 9.43	37 41.1
58	6	. .	. .	28.3	41.5	55.2	8.7	. .	. .	. .	31 41.74	27.30	0.98	.	7	34.057	13 1.40	16.75	6.12	31 13.46	25 24.3
59	9	. .	. .	. .	1.9	15.9	29.	. .	. .	. .	32 2.03	27.30	1.01	.	3	34.97	38 45.24	16.78	12.03	31 33.72	51 14.0
60	9	. .	21.	34.5	47.8	. .	. .	. .	. .	. .	34 47.98	27.30	1.01	.	3	34.555	38 59.57	17.14	12.12	34 19.67	51 28.8
61	7	. .	. .	. .	. .	35.7	49.7	2.6	. .	. .	9 35 22.35	−27.30	−0.98	.	7	41.54	8 43.11	−17.22	− 5.11	9 34 54.07	35 21 5.4

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1849. h.	s.	s.	s.	s.	s.	° ′ ″	r.

REMARKS.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1849. h. m.	° ′ ″				″	″	in.	°	°
Zone 168	Mar. 19, 8 20	. .	. .	. .	. .	. .	. .	. .	. .	42.6
	8 30	285 26 8.5	3.5	3.4	1.4	64.24	64.20			
	8 40	. .	. .	. .	. .	. .	. .	. .	. .	42.8
	8 48	. .	. .	. .	. .	. .	. .	30.224	51.5	42.7
	9 20	. .	. .	. .	. .	. .	. .	. .	. .	42.7
	9 40	8.5	3.5	2.2	2.2	4.14	4.10	. .	. .	42.4
	10 1	. .	. .	. .	. .	. .	. .	. .	. .	42.0
	10 32	. .	. .	. .	. .	. .	. .	30.210	50.	41.2

ZONE 168. MARCH 19. MAJ. BELT, 285° 27½′. $D_0 = -35° 12' 0''$.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
62	9	. .	. .	30.2	43.5	57.5	. .	. .	. .	. .	9 41 43.74	−27.32	−1.00	.	5	35.037	27 0.73	−18.01	− 9.30	9 41 15.42	35 39 28.0
63	11	. .	. .	18.4	. .	. .	. .	. .	. .	. .	43 31.93	27.32	1.00	.	5	36.898	25 56.46	18.25	9.05	43 3.61	38 23.8
64	8	. .	. .	45.	58.5	12.	25.2	. .	. .	. .	43 58.44	27.32	0.99	.	5	44.209	21 44.17	18.30	8.07	43 30.13	34 10.5
65	9	. .	12.	25.2	. .	. .	. .	. .	. .	. .	44 38.86	27.32	0.99	.	5	44.937	21 18.99	18.39	7.98	44 10.55	33 45.4
66	9	. .	. .	34.4	47.	1.5	. .	. .	. .	. .	47 47.63	27.33	1.00	.	4	42.176	28 44.90	18.79	9.69	47 19.30	41 13.4
67	9	. .	. .	. .	. .	. .	. .	50.?	. .	. .	48 9.34	27.33	1.01	.	2	44.43	42 0.38	18.84	12.80	47 41.00	54 32.0
68	9	43.4	57.7	10.7	23.7	36.4	. .	. .	. .	. .	52 23.89	27.34	0.98	.	7	42.48	8 10.67	19.38	5.00	51 55.57	35 20 35.1
69	9	40.4	53.7	7.5	20.5	34.7	. .	. .	. .	. .	54 20.95	27.34	1.02	.	1	43.105	48 37.68	19.63	14.39	53 52.59	36 1 11.7
70	7	. .	. .	. .	. .	. .	. .	. .	. .	23.4	54 9.54	27.34	0.98	.	7	44.111	7 14.38	19.60	4.78	53 41.22	35 19 38.8
71	11	26.	39.5	52.4	. .	. .	. .	. .	. .	. .	58 6.42	27.35	1.01	.	3	34.79	38 51.40	20.11	12.04	57 38.06	51 23.6
72	8	27.7	41.4	54.4	8.	. .	. .	. .	. .	. .	59 8.23	27.35	1.01	.	2	41.129	43 54.74	20.23	13.26	58 39.87	56 28.2
73	7	. .	. .	1.	14.2	28.	. .	. .	. .	. .	9 59 14.41	27.35	1.00	.	4	45.397	26 53.72	20.24	9.28	58 46.06	39 23.2
74	9	. .	. .	. .	11.0	24.6	. .	. .	. .	. .	10 0 11.04	27.35	1.00	.	4	45.397	26 53.72	20.37	9.28	9 59 42.69	39 23.4
75	8	. .	. .	. .	. .	. .	. .	. .	6.5	. .	1 5.79	27.35	1.01	II.	1	48.13	45 43.27	20.49	13.70	10 0 37.43	58 17.5
76	8	. .	. .	. .	. .	. .	. .	0.5	. .	. .	1 19.81	27.35	1.01	II.	1	51.43	43 49.38	20.52	13.26	0 51.45	56 23.2
77	9	. .	. .	. .	. .	37.5	51.5	. .	. .	. .	3 24.26	27.35	0.99	.	5	45.007	21 16.58	20.79	7.97	2 55.92	35 33 45.3
78	9	. .	. .	. .	. .	. .	. .	31.5	. .	. .	3 50.73	27.35	1.02	.	1	41.594	49 29.39	20.85	14.62	3 22.36	36 2 4.9
79	9	. .	. .	. .	. .	. .	. .	16.4	. .	. .	4 35.74	27.35	1.01	.	3	34.657	38 55.61	20.95	12.08	4 7.38	35 51 23.6
80	8	. .	. .	. .	. .	. .	55.0	8.7	. .	. .	5 27.82	27.35	1.02	.	1	38.94	51 1.42	21.06	14.98	4 59.45	36 3 37.5
81	9	. .	. .	. .	. .	. .	59.5	. .	. .	. .	6 32.53	27.36	0.99	.	6	37.314	17 0.76	21.20	7.01	6 4 18	35 29 29.0
82	9	. .	. .	. .	. .	. .	26.4	39.7	. .	. .	7 59.28	27.36	0.98	.	7	43.90	7 21.47	21.39	4.80	7 30.94	19 47.7
83	10	. .	. .	21.2	35.	. .	. .	. .	. .	. .	8 34.84	27.36	1.01	.	2	44.97	41 42.17	21.47	12.71	8 6.47	54 16.4
84	8	. .	. .	. .	14.5	28.7	42.	. .	. .	. .	9 14.84	27.36	1.00	.	3	43.517	33 50.24	21.55	10.89	8 46.48	46 22.7
85	9	. .	. .	39.4	52.8	6.8	. .	. .	. .	. .	10 52.99	27.36	1.01	.	3	37.725	37 10.16	21.76	11.66	10 24.62	35 49 43.6
86	7	50.5	4.	17.7	30.8	44.7	. .	. .	. .	. .	12 31.14	27.36	1.02	III.	1	39.508	50 41.78	21.96	14.91	12 2.76	36 3 18.7
87	8	. .	. .	. .	. .	. .	. .	31.5	. .	. .	12 50.84	27.36	1.00	.	5	35.39	26 48.55	22.00	9.26	12 22.48	35 39 19.8
88	9	. .	. .	. .	. .	. .	39.2	52.4	. .	. .	14 12.00	27.36	0.99	.	7	31.315	14 35.85	22.19	6.47	13 43.65	27 4.5
89	11	. .	. .	. .	. .	. .	41.4	55.2	. .	. .	15 14.36	27.36	1.01	.	2	43.38	42 36.86	22.32	12.96	14 45.99	55 12.1
90	7	. .	. .	. .	. .	. .	. .	. .	50.6	. .	15 50.10	27.36	0.99	.	6	39.707	15 38.35	22.40	6.70	15 21.75	28 7.4
91	8	20.	33.7	47.4	60.5	14.	27.4	40.9	. .	. .	22 0.56	27.37	0.99	.	6	41.21	14 46.48	23.20	6.52	21 32.20	27 16.2
92	8	. .	. .	. .	. .	. .	31.	44.7	. .	. .	23 3.92	27.37	1.01	.	3	31.908	40 30.92	23.34	12.46	22 35.54	53 6.7
93	9	. .	. .	. .	. .	. .	. .	37.6	57.5	. .	23 56.85	27.37	1.01	.	2	43.077	42 47.08	23.45	13.00	23 28.47	55 23.5
94	9	. .	. .	. .	. .	. .	. .	37.5	. .	. .	24 56.85	27.37	0.99	.	6	41.125	14 48.99	23.58	6.53	24 28.49	27 19.1
95	7	. .	. .	. .	24.5	38.4	. .	. .	. .	. .	26 24.68	27.37	1.00	.	4	42.272	28 41.58	23.77	9.70	25 56.31	41 15.1
96	9	. .	. .	. .	. .	. .	. .	. .	27.4	. .	26 26.68	27.37	1.00	.	4	37.72	31 17.73	23.77	10.30	25 58.31	35 43 51.8
97	9	. .	6.5	20.4	33.5	47.4	. .	. .	. .	. .	29 33.75	27.37	1.02	.	2	33.897	48 7.11	24.17	14.28	29 5.36	36 0 45.6
98	8	. .	. .	. .	. .	33.0	46.2	60.	. .	. .	30 19.19	27.37	1.02	.	1	35.922	52 46.59	24.27	15.41	29 50.80	36 5 26.3
99	7	16.5	30.5	44.	57.4	11.0	. .	. .	. .	. .	32 57.46	27.37	1.01	.	2	45.75	41 15.24	24.60	12.64	32 29.08	35 53 52.5
100	9	56.	9.4	23.3	36.5	. .	. .	. .	. .	. .	35 36.60	27.37	1.00	.	4	48.028	25 22.92	24.93	8.93	35 8.23	35 37 56.9
101	9	. .	. .	. .	. .	. .	. .	. .	4.5	. .	37 3.79	27.37	1.02	.	1	43.587	48 20.08	25.11	14.35	36 35.40	36 0 59.5
102	9	. .	. .	. .	54.5	. .	. .	. .	. .	. .	37 54.54	27.37	1.02	.	1	41.082	49 47.49	25.22	14.69	37 26.15	36 2 27.4
103	8	29.2	43.	56.4	9.7	. .	. .	. .	. .	. .	40 9.84	27.37	0.99	.	6	37.605	16 50.91	25.50	6.97	39 41.48	35 29 23.4
104	7	. .	. .	. .	. .	47.	. .	15.9	. .	. .	40 34.43	27.37	0.98	.	7	46.305	5 58.65	25.55	4.54	40 6.08	18 28.7
105	7	. .	. .	57.	11.	. .	. .	. .	. .	. .	41 10.84	27.37	0.98	.	7	43.374	7 39.82	25.62	4.88	40 42.49	20 10.3
106	10	. .	. .	. .	. .	. .	. .	25.4	. .	. .	43 44.69	27.37	1.01	.	2	37.613	45 55.66	25.92	13.74	43 16.31	58 35.3
107	10	. .	. .	. .	. .	. .	. .	32.5	. .	. .	43 51.84	27.37	1.00	.	4	39.48	30 17.52	25.93	10.07	43 23.47	42 53.5
108	9	. .	. .	12.5	25.5	39.4	53.	. .	. .	. .	46 25.79	27.37	1.01	.	2	43.262	42 41.13	26.24	12.97	45 57.41	55 20.3
109	6	. .	. .	. .	29.5	43.2	56.7	. .	. .	. .	47 29.61	27.37	1.00	.	4	45.129	27 2.97	26.36	9.30	47 1.24	35 39 38.6
110	9	. .	. .	. .	52.6	6.5	. .	. .	. .	. .	10 48 52.80	−27.36	−1.02	.	1	41.753	49 24.33	−26.53	−14.60	10 48 24.42	36 2 5.5

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1849. h.	s.	s.	s.	s.	s.	° ′ ″	r.

REMARKS.

INSTRUMENT READINGS.

	Date.	CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1849. h. m.	° ′ ″				″	″	in.	°	°
Zone 168	Mar. 19, 10 35	285 26 7.5	2.9	2.2	2.1	3.71	3.68			
	11 4	. .	. .	. .	. .	. .	. .	30.190	48.2	40.2

Zone 168. March 19. Maj. Belt, 285° 27½′. $D_0=-35° 12' 0''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
111	8	. .	. .	. .	. .	. .	43.2	56.5	. .	. .	10 49 15.92	−27.36	−1.01	.	3	32.504	40 10.35	−26.57	−12.40	10 48 47.55	35 52 49.3
112	8	. .	. .	. .	. .	. .	. .	50.5	. .	. .	50 9.84	27.36	1.00	.	4	32.194	34 29.42	26.68	11.06	49 41.48	47 7.2
113	7	. .	. .	. .	. .	. .	. .	. .	42.5	. .	50 42.04	27.36	0.98	.	7	35.187	12 22.40	26.74	5.92	50 13.70	24 55.1
114	7	. .	. .	24.7	38.	51.7	5.5	. .	. .	. .	52 38.19	27.36	1.00	.	4	40.89	29 29.28	26.93	9.88	52 9.83	42 6.1
115	10	. .	. .	. .	. .	28.	. .	. .	. .	. .	54 14.49	27.36	1.01	.	2	46.312	40 55.80	27.12	12.57	53 46.12	53 35.5
116	9	. .	25.2	38.	51.5	5.	. .	. .	. .	. .	55 51.70	27.36	0.99	.	6	43.218	13 37.17	27.30	6.18	55 23.35	26 10.6
117	9	. .	. .	. .	60.	13.5	. .	. .	. .	. .	57 0.00	27.36	1.01	.	3	34.94	38 46.27	27.42	12.09	56 31.63	35 51 25.8
118	8	. .	. .	. .	. .	54.	7.4	. .	. .	. .	57 40.31	27.36	1.02	.	1	42.145	49 10.81	27.50	14.56	57 11.93	36 1 52.9
119	7	. .	. .	. .	. .	56.	9.3	. .	. .	. .	10 57 42.29	27.36	1.01	.	2	44.067	42 13.34	27.50	12.84	10 57 13.92	35 54 53.7
120	7	. .	. .	. .	. .	55.3	59.	. .	. .	. .	11 3 42.03	27.35	0.98	.	7	48.97	4 26.67	28.15	4.16	11 3 13.70	16 59.0
121	7	. .	. .	. .	. .	49.2	2.8	. .	. .	. .	11 4 35.82	−27.35	−0.98	.	6	45.752	12 9.71	−28.25	− 5.97	11 4 7.49	35 24 43.9

Zone 169. March 22. Maj. Belt, 287° 20′. $D_0=-33° 17' 30''$.

1	7	. .	. .	. .	. .	37.4	50.4	4.0	. .	. .	6 53 34.11	−27.63	−1.00	.	3	38.357	36 48.34	−10.77	−11.27	6 52 55.48	33 54 40.4
2	9	. .	. .	. .	. .	. .	49.	2.5	. .	. .	55 22.78	27.64	0.99	.	5	43.23	22 17.78	10.96	8.57	54 54.05	40 7.3
3	8	. .	. .	13.0	25.4	39.	. .	. .	. .	. .	58 25.91	27.66	0.98	.	7	48.83	4 31.50	11.25	5.38	57 57.27	33 22 18.1
4	8	. .	. .	. .	. .	. .	. .	64.5	. .	. .	6 59 24.74	27.67	1.01	VII.	1	49.60	44 53.09	11.34	12.78	58 56.06	34 2 47.2
5	8	. .	. .	. .	. .	28.4	41.6	. .	. .	. .	7 0 15.13	27.68	1.01	.	3	37.414	37 20.89	11.42	11.37	6 59 46.44	33 55 13.7
6	8	. .	49.0	2.4	15.2	28.7	. .	. .	. .	. .	6 15.47	27.72	1.02	.	1	39.44	50 44.17	11.91	13.88	7 5 46.73	34 8 40.0
7	8	. .	. .	. .	. .	. .	31.2	44.8	. .	. .	8 4.96	27.73	0.99	.	6	42.249	14 10.62	12.06	7.11	7 36.24	33 31 59.8
8	8	. .	. .	. .	. .	. .	2.9	. .	. .	. .	8 36.62	27.73	0.98	.	7	45.08	6 40.93	12.10	5.77	8 7.91	33 24 28.8
9	8	. .	. .	. .	3.5	17.	30.1	. .	. .	. .	11 3.60	27.75	1.01	.	2	38.34	45 31.00	12.30	12.90	10 34.84	34 3 26.2
10	9	. .	. .	. .	. .	. .	. .	30.5	. .	. .	11 50.68	27.76	1.02	.	1	40.66	50 1.66	12.35	13.75	11 21.90	34 7 57.8
11	8	. .	. .	52.	. .	. .	. .	. .	. .	. .	14 5.25	27.78	0.99	.	6	41.54	14 35.09	12.53	7.18	13 36.48	33 32 24.8
12	6	. .	41.	54.	7.	. .	. .	. .	. .	. .	14 7.20	27.78	0.98	.	7	40.289	9 26.30	12.53	6.25	13 38.44	27 15.1
13	8	. .	. .	2.	15.2	. .	. .	. .	. .	. .	14 15.26	27.78	0.99	.	6	41.64	14 31.64	12.54	7.17	13 46.49	32 21.3
14	8	. .	. .	. .	. .	46.2	. .	. .	. .	. .	15 33.00	27.79	1.00	.	3	40.349	35 39.58	12.65	11.06	15 4.21	53 33.3
15	8	. .	. .	. .	44.	57.5	. .	. .	. .	. .	15 44.14	27.79	1.00	.	3	39.97	35 52.66	12.66	11.09	15 15.35	33 53 46.4
16	8	. .	. .	. .	. .	. .	. .	. .	46.	. .	15 46.69	27.79	1.01	.	2	39.34	44 56.49	12.66	12.78	15 17.89	34 2 51.9
17	7	. .	. .	. .	. .	. .	. .	46.5	. .	. .	16 6.77	27.79	1.01	.	3	31.595	50 41.73	12.69	12.00	15 37.97	33 58 36.4
18	7	. .	. .	. .	. .	. .	. .	. .	. .	43.	16 30.30	27.79	1.00	.	5	37.008	25 52.72	12.73	9.24	16 1.51	43 44.7
19	8	. .	. .	. .	. .	. .	. .	33.6	. .	. .	17 53.87	27.80	0.99	.	6	34.09	18 52.23	12.84	7.97	17 25.08	36 43.0
20	7	. .	. .	. .	. .	17.	. .	. .	. .	. .	19 3.80	27.81	1.00	.	4	36.36	32 5.63	12.92	10.39	18 34.99	49 58.9
21	7	. .	. .	. .	. .	30.5	. .	. .	. .	. .	19 17.30	27.81	1.01	.	3	30.405	41 22.80	12.94	12.13	18 48.48	33 59 17.9
22	7	. .	. .	. .	. .	36.4	. .	. .	. .	. .	19 23.20	27.81	1.01	.	2	37.407	46 3.20	12.95	13.00	18 54.38	34 3 59.2
23	9	. .	. .	22.	35.4	. .	. .	. .	. .	. .	21 35.28	27.82	1.00	.	4	33.204	33 54.56	13.13	10.72	21 6.46	33 51 48.4
24	6	. .	. .	33.	36.3	. .	. .	. .	. .	. .	21 36.23	27.82	1.00	.	4	35.33	32 41.19	13.13	10.51	21 7.41	33 50 34.8
25	8	. .	. .	. .	. .	. .	. .	35.4	. .	. .	21 55.65	27.82	1.01	.	2	42.275	43 15.19	13.15	12.48	21 26.82	34 1 10.8
26	7	. .	. .	. .	. .	. .	. .	36.3	. .	. .	56.55	27.83	1.01	.	2	42.540	43 6.04	13.15	12.45	(21) 27.71	34 1 1.6
27	8	. .	. .	. .	. .	. .	37.5	50.5	. .	. .	24 10.88	27.84	1.00	.	3	43.317	33 57.14	13.33	10.74	23 42.03	33 51 51.2
28	7	47.	. .	. .	26.2	40.3	. .	. .	. .	. .	25 26.69	27.85	1.00	.	4	41.92	28 53.72	13.43	9.80	24 57.84	46 47.0
29	8	. .	. .	. .	. .	. .	. .	11.2	. .	. .	25 31.47	27.86	0.99	.	6	39.95	15 29.96	13.43	7.35	25 2.62	33 20.7
30	9	. .	. .	55.9	8.7	22.2	. .	. .	. .	. .	27 8.92	27.87	1.00	.	3	41.70	34 52.96	13.56	10.91	26 40.05	52 47.4
31	8	. .	. .	. .	53.4	. .	19.8	. .	. .	. .	27 53.32	27.87	1.01	.	3	40.359	35 39.24	13.62	11.06	27 24.44	53 33.9
32	8	. .	. .	. .	. .	10.4	. .	. .	. .	. .	57.23	27.88	1.00	.	5	36.372	26 14.66	13.62	9.31	(27) 28.35	44 7.6
33	7	. .	. .	. .	. .	. .	23.7	36.5	. .	. .	7 28 57.02	−27.88	−0.99	VII½	5	42.818	22 31.53	−13.71	− 8.62	7 28 28.15	33 40 23.9

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	*m*	*n*	*c*	Zenith Point.	Mic. Co.
1849. h.	s.	s.	s.	s.	s.	° ′ ″	r.
Mar. 22, 11	− 29.583	*g* 0.018	− 0.175	+ 0.465	− 0.196	359 59 56.06	39.508

REMARKS.

(168) 120. Time of transit over T. VI assumed as 9ˢ.0 instead of 59ˢ.

(169) 24. Time of transit over T. III assumed as 23ˢ instead of 33ˢ.

(169) 25, Double.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1849. h. m.	° ′ ″				″	″	in.	°	°
Zone 169	Mar. 22, 6 50	. .	. .	. .	. .	. .	. .	30.290	51.0	45.7
	6 53	287 20 63.7	57.9	60.0	56.9	59.62	59.62			
	7 0	. .	. .	. .	. .	. .	. .	. .	. .	45.5
	7 40	. .	. .	. .	. .	. .	. .	. .	. .	44.4
	8 0	66.6	59.5	61.5	59.7	61.82	61.82	30.314	49.5	43.5
	8 40	. .	. .	. .	. .	. .	. .	. .	. .	41.3
	12 20	. .	. .	. .	. .	. .	. .	30.364	44.8	33.0
	12 35	62.9	54.7	58.7	55.7	58.00	58.00	. .	. .	32.4

ZONE 169. MARCH 22. MAJ. BELT, 287° 20′. $D_0 = -33° 17' 30''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
34	8	. .	26.4	39.7	52.7	. .	. .	. .	. .	. .	7 30 52.85	−27.89	−1.02	.	1	44.622	47 45.31	−13.86	−13.33	7 30 23.94	34 5 42.5
35	7	. .	. .	. .	. .	. .	32.9	46.4	. .	. .	31 6.64	27.89	0.98	.	7	44.92	6 47.45	13.88	5.79	30 37.77	33 24 37.1
36	9	. .	. .	. .	. .	. .	. .	37.	. .	. .	31 57.23	27.90	1.01	.	2	38.565	45 22.84	13.95	12.87	31 28.32	34 3 19.7
37	9	. .	. .	. .	. .	. .	. .	. .	53.7	. .	32 54.65	−27.91	0.98	.	6	48.76	10 24.99	14.02	6.43	32 25.76	33 28 15.4
38	8	. .	. .	. .	. .	. .	. .	. .	. .	. .	34	. .	0.98	.	7	41.04	9 0.37	14.10	6.18	(32)	26 51.6
39	.	. .	. .	. .	. .	. .	. .	6.	. .	. .	34 26.27	−27.92	0.99	.	6	44.14	13 4.95	14.14	− 6.91	33 57.36	33 30 56.0
40	.	. .	. .	. .	. .	22.	35.2	. .	. .	. .	34 8.76	27.92	1.00	.	.	. .	. . .	14.11	. .	33 39.84	
41	9	. .	. .	. .	. .	. .	. .	12.5	. .	. .	35 32.77	27.92	1.00	.	4	48.085	25 20.55	14.23	− 9.14	35 3.85	33 43 13.9
42	9	. .	. .	. .	. .	. .	61.4	. .	. .	. .	36 34.90	27.93	1.00	.	3	45.97	32 25.41	14.32	10.46	36 5.97	50 20.2
43	8	. .	. .	. .	. .	. .	46.4	. .	. .	. .	37 19.98	27.93	0.99	.	5	43.585	22 5.70	14.37	8.55	36 51.06	39 58.6
44	6	. .	. .	. .	. .	18.3	. .	. .	. .	. .	38 5.20	27.94	0.98	.	7	40.837	9 7.38	14.44	6.20	37 36.28	26 58.0
45	9	. .	. .	. .	. .	. .	18.0	. .	. .	. .	38 51.66	27.94	0.99	.	6	43.495	13 27.44	14.50	6.98	38 22.73	31 18.9
46	7	. .	. .	. .	. .	47.2	. .	. .	. .	. .	39 34.10	27.95	0.98	.	7	38.577	10 25.38	14.55	6.43	39 5.17	28 6.4
47	9	. .	. .	. .	. .	24.3	. .	. .	. .	. .	40 11.10	27.95	1.01	.	2	44.79	41 48.33	14.61	12.18	39 42.14	59 45.1
48	5	. .	. .	. .	. .	. .	54.7	8.0	. .	. .	40 28.22	27.95	1.00	.	3	41.587	34 56.86	14.63	10.91	39 59.27	33 52 52.4
49	8	. .	. .	. .	. .	11.	. .	. .	. .	. .	41 57.80	27.96	1.02	.	1	45.06	47 30.19	14.75	13.28	41 28.82	34 5 28.2
50	8	. .	. .	. .	. .	11.8	. .	. .	. .	. .	41 58.60	27.96	1.01	.	2	46.87	40 36.59	14.75	11.97	41 29.63	33 58 33.3
51	8	. .	. .	. .	. .	38.	51.3	. .	. .	. .	43 24.91	27.97	0.99	.	6	39.932	15 30.58	14.87	7.35	42 55.95	33 22.8
52	8	. .	. .	. .	18.4	. .	. .	. .	. .	. .	45 18.49	27.98	0.98	.	7	41.63	8 40.00	15.03	6.12	44 49.53	26 31.2
53	.	7.	. .	. .	. .	57.2	. .	. .	. .	. .	45 ?44.04	27.98	0.99	.	5	41.50	23 17.67	15.06	8.77	45 15.07	41 11.5
54	8	7.	. .	. .	. .	. .	. .	. .	. .	. .	45 46.84	27.98	1.01	.	2	47.58	40 12.09	15.06	11.89	45 17.85	58 9.0
55	8	. .	. .	. .	. .	. .	. .	. .	22.5	. .	46 23.32	27.99	0.99	.	5	48.182	19 27.04	15.12	8.08	45 54.34	37 20.2
56	8	. .	. .	. .	. .	. .	. .	. .	. .	61.8	46 49.36	27.99	0.99	.	6	38.43	16 22.43	15.15	7.51	46 20.38	34 15.1
57	7	. .	. .	. .	. .	. .	. .	42.3	. .	. .	48 2.57	28.00	0.99	.	5	45.05	21 15.15	15.25	8.40	47 33.58	39 8.8
58	7	. .	. .	. .	. .	4.1	. .	18.	. .	. .	48 51.28	28.00	0.99	.	5	47.057	20 5.87	15.31	8.19	48 22.29	37 59.4
59	8	. .	. .	. .	57.3	10.4	23.7	. .	. .	. .	49 57.34	28.01	0.99	.	6	42.595	13 58.68	15.41	7.08	49 28.34	31 51.2
60	8	. .	. .	. .	. .	3.7	16.5	. .	. .	. .	49 50.32	28.01	0.99	.	5	43.812	21 57.86	15.40	8.53	49 21.32	39 51.8
61	9	. .	. .	. .	. .	. .	. .	49.5	. .	. .	51 9.77	28.02	1.01	.	2	46.25	40 57.59	15.52	12.04	50 40.74	58 55.2
62	6	. .	. .	. .	. .	. .	. .	30.	. .	. .	51 50.27	28.02	1.01	.	2	46.457	40 50.85	15.58	12.00	51 21.24	58 48.4
63	8	. .	. .	. .	. .	. .	. .	11.7	. .	. .	52 31.97	28.03	0.99	.	6	39.222	15 55.09	15.63	7.43	52 2.95	33 48.1
64	8	. .	. .	. .	. .	3.2	16.4	. .	. .	. .	53 50.08	28.04	0.98	.	7	34.756	12 37.27	15.74	6.82	53 21.06	30 29.8
65	9	. .	. .	. .	. .	43.8	. .		. .	. .	54 30.62	28.04	1.00	.	5	33.355	27 51.85	15.80	9.59	54 1.58	45 47.2
66	7	. .	. .	. .	. .	20.5	. .	. .	. .	. .	55 7.30	28.04	1.00	.	4	33.615	33 40.37	15.85	10.68	54 38.26	51 36.9
67	.	. .	. .	. .	13.2	. .	. .	53.	. .	. .	55 13.22	28.04	1.00	.	5	38.61	24 57.41	15.86	9.06	54 44.18	42 52.3
68	.	. .	. .	. .	. .	. .	. .	4.	. .	. .	55 24.27	28.04	1.00	.	5	33.34	27 58.91	15.88	9.64	54 55.23	45 54.4
69	8	. .	. .	. .	. .	. .	12.2	25.7	. .	. .	56 45.86	28.05	1.00	.	5	38.45	25 2.94	15.99	9.08	56 16.81	33 42 58.0
70	7	. .	. .	. .	. .	. .	4.	17.	. .	. .	57 37.32	28.06	1.01	.	2	40.902	44 2.57	16.07	12.62	57 8.25	34 2 1.3
71	9	. .	. .	. .	. .	. .	. .	23.	. .	. .	57 43.24	28.06	1.01	.	2	40.612	44 12.18	16.08	12.66	57 14.17	34 2 10.9
72	8	. .	. .	. .	. .	. .	. .	37.	. .	. .	7 57 57.27	28.06	1.01	.	3	33.70	39 29.08	16.10	11.77	7 57 28.20	33 57 26.9
73	7	. .	. .	. .	47.4	0.7	14.2	. .	. .	. .	8 0 47.52	−28.07	−1.00	.	4	30.34	35 33.41	−16.33	−11.02	8 0 18.45	33 53 30.8

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1849.	h.	s.	s.	s.	s.	s.	° ′ ″	r.

REMARKS.

(169) 58. Transit at 18^s assumed to have been over T. VI instead of T. VII.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1849. h. m.	° ′ ″				″	″	in.	°	°

ZONE 170. MARCH 22. MAJ. BELT, 287° 20′. $D_0 = -33° 18′ 20″$.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	″	″	″	h. m. s.	° ′ ″
1	8	. .	. .	. .	23.5	36.4	49.5	. .	. .	. .	12 35 23.36	−28.32	−0.99	IV.	7	39.645	9 48.53	− 7.27	− 1.10	12 34 54.05	33 28 16.9
2	8	. .	. .	. .	. .	. .	55.4	8.8	. .	. .	39 28.95	28.31	1.01	VII.	3	31.72	40 37.01	7.52	7.09	38 59.63	59 11.6
3	7	. .	. .	. .	53.2	7.2	20.	. .	. .	. .	41 53.55	28.30	1.01	.	3	33.22	39 45.65	7.66	6.92	41 24.24	33 58 20.2
4	6	. .	29.4	42.6	55.4	9.	. .	. .	. .	. .	47 55.74	28.27	1.01	.	2	42.785	42 57.59	7.99	7.47	47 26.46	34 1 33.0
5	.	. .	. .	. .	. .	. .	. .	54.5	. .	. .	49 14.77	28.27	0.99	II.	7	39.842	9 40.82	8.07	1.08	48 45.51	33 28 10.0
6	8	. .	. .	. .	. .	. .	44.	57.4	. .	. .	51 17.66	28.26	0.99	.	6	40.59	15 7.88	8.18	2.11	50 48.41	33 38.2
7	8	7.5	19.8	33.1	45.8	. .	. .	. .	. .	. .	53 46.37	28.24	0.99	.	5	43.514	22 8.15	8.31	3.45	53 17.14	40 39.9
8	8	. .	. .	34.2	46.8	. .	. .	. .	. .	. .	54 47.08	28.24	1.00	.	3	40.002	35 51.56	8.37	6.16	54 17.84	33 54 26.1
9	9	. .	. .	. .	. .	. .	15.5	. .	. .	. .	54 48.90	28.24	1.01	VII.	2	40.098	44 29.94	8.37	7.86	54 19.65	34 3 6.2
10	6	. .	. .	. .	. .	. .	42.4	. .	. .	. .	56 16.08	28.23	0.99	VII.	7	38.357	10 32.58	8.43	1.22	55 46.86	33 29 2.2
11	6	. .	. .	. .	. .	. .	25.7	39.1	. .	. .	12 55 59.39	28.23	0.99	II.	7	42.51	8 8.74	8.42	0.76	12 55 30.17	26 37.9
12	7	31.	44.7	57.6	10.7	23.6	36.6	50.2	. .	. .	13 1 10.63	28.21	0.99	IV.	6	42.197	14 12.41	8.68	1.91	13 0 41.43	32 43.0
13	8	. .	. .	. .	30.	43.5	56.8	10.	. .	. .	2 30.20	28.20	1.01	.	3	32.609	40 6.73	8.75	7.00	2 0.99	58 42.5
14	8	63.4	16.6	29.7	42.7	56.3	9.2	. .	. .	. .	4 42.94	28.19	1.00	.	3	36.88	37 39.31	8.85	6.51	4 13.75	33 56 14.7
15	9	. .	. .	. .	. .	. .	46.2	. .	. .	. .	5 19.54	28.19	1.01	.	1	34.814	53 23.66	8.88	9.66	4 50.34	34 12 2.2
16	7	. .	. .	. .	. .	. .	22.8	36.	. .	. .	5 56.28	28.18	1.00	.	4	32.89	34 5.40	8.91	5.80	5 27.10	33 52 40.1
17	9	. .	. .	. .	. .	. .	. .	. .	17.5	. .	6 18.17	28.18	1.00	.	4	31.693	34 45.82	8.93	5.93	5 48.99	53 20.7
18	6	. .	. .	. .	14.5	28.	. .	. .	. .	. .	7 14.63	28.18	1.00	.	4	37.285	31 33.71	8.97	5.32	6 45.45	50 8.0
19	7	. .	. .	. .	36.5	49.7	. .	. .	. .	. .	8 36.60	28.17	0.99	.	7	39.385	9 57.50	9.03	1.14	8 7.44	28 27.7
20	8	. .	. .	. .	. .	. .	27.8	40.	. .	. .	9 0.80	28.17	1.00	.	4	40.565	29 40.50	9.05	4.93	8 31.63	48 14.5
21	8	. .	. .	. .	. .	26.	. .	. .	. .	. .	10 12.80	28.16	1.00	.	3	44.026	33 32.68	9.11	5.70	9 43.64	52 7.5
22	8	. .	. .	. .	28.2	. .	. .	7.6	. .	. .	10 28.01	28.16	1.00	.	4	40.252	29 51.30	9.12	4.97	9 58.85	48 25.4
23	8	. .	. .	. .	. .	. .	38.6	. .	. .	. .	11 12.12	28.16	1.00	.	4	41.594	29 4.98	9.16	4.82	10 42.96	47 39.0
24	8	. .	. .	. .	. .	. .	35.4	48.7	. .	. .	12 8.95	28.15	1.00	.	4	42.080	28 48.21	9.19	4.76	11 39.80	33 47 22.2
25	8	. .	. .	30.5	43.2	56.8	. .	. .	. .	. .	13 43.49	28.14	1.01	.	1	44.465	47 50.73	9.25	8.54	13 14.34	34 6 28.5
26	8	. .	. .	. .	47.2	60.5	14.	. .	. .	. .	14 47.31	28.14	1.00	.	2	46.91	40 35.21	9.30	7.10	14 18.17	33 59 11.6
27	7	. .	. .	. .	41.	55.6	. .	. .	. .	. .	15 41.74	28.13	1.00	I.	5	46.34	20 30.21	9.34	3.14	15 12.61	39 2.7
28	6	. .	24.	. .	. .	. .	. .	. .	. .	. .	16 50.27	28.12	0.99	.	6	46.292	11 51.07	9.39	1.48	16 21.16	30 21.9
29	7	. .	. .	36.3	. .	. .	. .	. .	. .	. .	16 49.50	28.12	1.00	.	3	45.915	32 27.48	9.39	5.48	16 20.38	51 2.4
30	8	. .	. .	. .	. .	22.7	36.	. .	. .	. .	21 9.63	28.10	0.99	.	6	45.225	12 27.91	9.56	1.59	20 40.54	33 30 59.1
31	9	. .	. .	. .	. .	. .	. .	. .	18.5	. .	21 19.19	28.10	1.01	.	1	47.99	45 48.17	9.57	8.14	20 50.08	34 4 25.9
32	9	. .	. .	17.9	30.5	44.2	. .	. .	. .	. .	24 30.86	28.08	1.01	.	2	37.375	46 4.31	9.70	8.20	24 1.77	34 4 42.2
33	7	32.	45.7	58.7	12.	. .	. .	. .	. .	. .	26 11.91	28.08	1.00	.	6	34.978	18 21.58	9.76	2.71	25 42.83	33 36 54.0
34	8	. .	. .	1.9	14.9	28.7	. .	. .	. .	. .	26 15.16	28.08	1.00	.	3	33.682	39 29.70	9.76	6.88	25 46.08	58 6.3
35	9	. .	. .	. .	. .	14.3	. .	. .	. .	. .	28 1.17	28.08	0.99	.	6	36.19	17 39.69	9.83	2.58	27 32.10	36 12.1
36	6	. .	. .	. .	45.	58.7	11.4	25.2	. .	. .	28 45.25	28.07	1.00	.	5	41.50	23 17.67	9.86	3.70	28 16.18	41 51.2
37	8	. .	. .	. .	. .	. .	. .	13.4	. .	. .	29 33.67	28.06	0.99	.	6	42.898	13 48.22	9.89	1.84	29 4.62	33 32 19.9
38	8	. .	. .	. .	. .	. .	. .	. .	. .	61.3	29 48.32	28.06	1.01	.	2	37.357	46 4.93	9.90	8.19	29 19.25	34 5 43.0
39	6	. .	57.8	. .	. .	. .	. .	. .	. .	. .	32 24.13	28.04	0.99	.	6	37.134	17 7.16	10.00	2.47	31 55.10	33 35 39.6
40	6	. .	27.3	40.9	54.2	. .	. .	. .	. .	. .	32 54.00	28.04	1.00	.	5	41.90	23 3.86	10.01	3.63	32 24.96	33 41 37.5
41	8	. .	. .	30.3	43.2	56.8	. .	. .	. .	. .	33 43.42	28.03	1.00	.	2	43.665	42 27.22	10.04	7.47	33 14.39	34 1 4.7
42	9	. .	. .	69.3	. .	35.8	. .	. .	. .	. .	35 22.63	28.02	0.99	.	7	38.964	10 12.02	10.10	1.14	34 53.62	33 28 43.3
43	.	. .	9.4	22.5	35.4	. .	. .	. .	. .	. .	37 35.67	28.01	1.00	.	3	31.46	40 46.38	10.18	7.15	37 6.66	59 23.7
44	4	35.8	49.2	2.0	15.3	28.4	41.	54.8	. .	. .	41 15.21	27.99	1.00	.	5	41.388	23 21.54	10.31	3.66	40 46.22	41 55.5
45	10	. .	. .	. .	31.3	44.2	58.2	. .	. .	. .	43 31.31	27.97	1.00	.	3	38.604	36 39.81	10.37	6.30	43 2.34	55 16.5
46	8	. .	. .	. .	. .	. .	46.2	. .	. .	. .	44 19.84	27.97	0.99	.	6	39.28	15 52.92	10.40	2.22	43 50.88	34 25.5
47	.	. .	. .	. .	. .	. .	26.8	. .	. .	. .	45 0.29	27.96	1.00	.	4	34.39	33 13.46	10.42	5.72	44 31.33	51 49.6
48	.	. .	. .	. .	. .	27.	. .	53.	. .	. .	45 13.53	27.96	1.00	.	4	33.052	33 59.76	10.42	5.80	44 44.57	52 36.0
49	.	. .	. .	. .	. .	. .	54.	. .	. .	. .	13 46 27.46	−27.95	−1.00	.	3	38.398	36 50.21	−10.46	− 6.37	13 45 58.51	33 55 27.0

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1849. h.	s.	s.	s.	s.	s.	° ′ ″	r.

REMARKS.

INSTRUMENT READINGS.

	Date.	CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1849. h. m.	° ′ ″				″	″	in.	°	°
Zone 170	Mar. 22, 12 40	287 20 62.9	54.7	58.7	55.7	. .	. .	30.364	44.8	32.9
	13 13	. .	. .	. .	. .	. .	. .	30.350	43.4	33.8
	13 20	. .	. .	. .	. .	. .	. .	. .	. .	32.7
	13 40	. .	. .	. .	. .	. .	. .	. .	. .	33.4
	14	287 20 62.4	56.8	59.4	56.9	58.88	58.88	30.344	42.	32.8
	14 20	. .	. .	. .	. .	. .	. .	. .	. .	33.2
	14 40	62.4	56.4	59.4	55.5	58.42	58.42	30.344	41.5	33.4

Zone 170. March 22. Maj. Belt, 287° 20′. D₀=−33° 18′ 20″—Continued.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
50	5	. .	. .	. .	. .	. .	. .	3.5	. .	. .	13 46 23.77	−27.95	−1.00	.	4	35.357	32 40.26	−10.46	− 5.33	13 45 54.82	33 51 16.1
51	7	. .	. .	. .	. .	. .	17.5	. .	. .	. .	48 50.85	27.94	1.01	.	1	38.38	51 20.75	10.53	9.27	48 21.90	34 10 0.6
52	7	. .	. .	. .	. .	. .	9.2	. .	. .	. .	49 42.90	27.93	0.99	.	7	41.28	8 52.09	10.56	0.90	49 13.98	33 27 23.6
53	7	. .	. .	. .	. .	. .	18.	. .	. .	. .	49 51.60	27.93	1.00	.	5	45.50	20 59.61	10.56	3.28	49 22.67	39 33.4
54	7	. .	. .	. .	. .	. .	. .	0.5	. .	. .	50 20.77	27.93	1.00	.	5	45.195	21 10.14	10.58	3.25	49 51.84	39 44.0
55	8	. .	. .	3.2	16.2	29.7	42.8	. .	. .	. .	52 16.33	27.92	1.00	.	3	35.29	38 34.19	10.62	5.72	51 47.41	57 10.5
56	7	. .	. .	33.3	46.5	59.9	. .	. .	. .	. .	54 46.56	27.90	1.00	.	4	39.53	30 16.22	10.69	5.05	54 17.66	48 51.9
57	9	. .	. .	. .	55.5	9.6	23.7	. .	. .	. .	55 56.40	27.90	1.00	.	5	41.285	23 25.10	10.71	3.68	55 27.50	41 59.5
58	8	. .	. .	14.	. .	. .	. .	. .	. .	. .	57 27.26	27.88	0.99	.	7	39.427	9 56.05	10.75	1.08	56 58.39	33 28 27.9
59	7	. .	. .	. .	7.5	21.5	34.6	. .	. .	. .	58 7.93	27.87	1.01	.	1	37.137	52 3.65	10.76	9.40	57 39.05	34 10 43.8
60	7	. .	. .	. .	19.3	32.7	. .	. .	. .	. .	13 59 19.40	27.87	1.01	.	2	42.237	43 16.50	10.80	7.64	13 58 50.52	34 1 54.9
61	8	. .	. .	. .	. .	. .	. .	17.2	. .	. .	14 4 37.47	27.84	1.00	.	3	39.764	35 59.77	10.96	6.20	14 4 8.63	33 54 36.9
62	9	. .	. .	. .	. .	. .	49.8	3.7	. .	. .	6 23.57	27.82	1.00	.	2	41.38	43 45.90	11.02	7.75	5 54.75	34 2 24.7
63	8	. .	. .	. .	. .	53.	6.8	. .	. .	. .	7 40.10	27.82	0.99	.	5	39.575	24 24.10	11.06	3.94	7 11.29	33 42 59.1
64	8	. .	. .	. .	. .	50.2	3.4	. .	. .	. .	8 36.96	27.81	1.00	.	4	37.175	31 37.50	11.09	5.34	8 8.15	33 50 13.9
65	9	. .	. .	. .	. .	. .	. .	. .	. .	16.2	9 3.24	27.81	1.01	.	2	40.51	44 14.77	11.10	7.85	8 34.42	34 2 53.7
66	8	. .	. .	. .	. .	. .	62.1	. .	. .	. .	10 22.37	27.80	1.00	.	5	39.95	24 11.16	11.15	3.87	9 53.57	33 42 46.2
67	6	. .	42.5	55.7	8.7	22.3	. .	. .	. .	. .	12 8.92	27.79	1.00	.	3	31.961	40 29.09	11.23	7.09	11 40.13	59 7.4
68	8	. .	. .	. .	. .	64.2	. .	. .	. .	. .	12 51.08	27.79	0.99	.	7	30.11	15 17.62	11.27	2.12	12 22.30	33 33 51.0
69	5	. .	. .	. .	49.7	3.5	16.7	29.7	. .	. .	13 50.00	27.78	1.01	.	2	35.328	47 14.97	11.31	8.44	13 21.21	34 5 54.7
70	8	. .	60.2	13.2	25.9	. .	. .	. .	. .	. .	17 26.33	27.75	1.00	.	2	46.35	40 54.54	11.46	7.17	16 57.58	33 59 33.2
71	8	. .	. .	58.2	11.1	24.7	. .	. .	. .	. .	21 11.32	27.72	1.01	.	1	45.84	47 3.26	11.62	8.40	20 42.59	34 5 43.3
72	7	59.4	12.2	26.	38.8	. .	. .	. .	. .	. .	22 38.98	27.71	1.00	.	2	44.47	41 59.43	11.67	7.39	22 10.27	34 0 38.5
73	8	. .	. .	37.3	51.	4.0	. .	. .	. .	. .	23 50.77	27.71	1.00	.	4	46.517	26 15.07	11.71	4.26	23 22.06	33 44 51.0
74	9	. .	. .	. .	. .	47.2	0.	. .	. .	. .	24 33.70	27.70	1.01	.	2	42.475	43 8.24	11.73	7.61	24 4.99	34 1 47.6
75	.	. .	. .	. .	. .	. .	2.5	. .	. .	. .	24 35.90	27.70	1.01	.	2	40.15	44 28.36	11.73	7.90	24 7.19	34 3 8.0
76	7	. .	. .	. .	. .	. .	. .	30.2	. .	. .	25 50.47	27.69	1.00	.	3	36.344	37 57.80	11.77	6.58	25 21.78	33 56 36.2
77	7	. .	. .	. .	30.2	43.5	. .	. .	. .	. .	27 30.26	27.68	1.01	.	2	34.50	47 43.54	11.83	8.54	27 1.57	34 6 23.9
78	7	. .	. .	. .	. .	27.3	40.6	53.7	. .	. .	28 13.98	27.67	1.01	VI.	1	41.50	49 32.89	11.85	8.90	27 45.30	34 8 13.6
79	9	. .	. .	. .	. .	. .	. .	36.2	. .	. .	28 56.47	27.67	0.99	VII.	6	34.80	18 27.31	11.87	2.75	28 27.81	33 37 1.9
80	9	58.7	12.2	25.2	. .	. .	. .	. .	. .	. .	32 38.54	27.64	1.00	I.	3	34.052	39 16.53	11.99	6.84	32 9.90	57 55.4
81	9	. .	1.3	. .	27.4	. .	. .	. .	. .	. .	32 27.54	27.64	1.00	.	6	29.262	21 38.87	11.98	3.35	31 58.90	33 40 14.2
82	9	. .	. .	. .	. .	. .	. .	. .	38.7	. .	33 39.39	27.63	1.01	.	2	35.61	47 4.33	12.00	8.41	33 10.75	34 5 44.7
83	9	59.3	12.7	25.7	. .	. .	. .	. .	. .	. .	36 38.95	27.61	0.99	.	6	39.66	15 39.92	12.06	2.19	36 10.35	33 34 14.2
84	9	. .	. .	. .	45.5	. .	. .	. .	. .	. .	37 45.48	27.60	1.00	.	3	40.767	35 25.16	12.08	6.08	37 16.88	33 54 3.3
85	7	. .	. .	44.7	57.7	11.4	. .	. .	. .	. .	14 38 57.92	−27.60	−1.01	.	2	35.185	47 19.91	−12.11	− 8.47	14 38 29.31	34 6 0.5

Zone 171. March 24. Maj. D₀=−35° 48′ 10″.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	6	. .	. .	. .	. .	. .	2.4	16.7	. .	. .	7 7 35.42	−28.83	−1.00	VI.	4	41.224	29 17.56	− 8.57	− 5.83	7 7 5.59	36 17 42.0
2	8	. .	. .	. .	. .	51.5	5.6	. .	. .	. .	10 38.10	28.85	1.00	VII.	4	40.702	29 35.33	8.97	5.91	10 8.25	18 0.2
3	7	. .	. .	45.2	58.7	2.6	. .	. .	. .	. .	11 58.83	28.86	1.00	.	4	37.928	31 11.51	9.14	6.29	11 28.97	19 36.9
4	6	. .	. .	. .	28.	. .	55.3	. .	. .	. .	13 27.96	28.87	1.01	.	3	34.962	39 20.03	9.35	8.28	12 58.08	27 47.7
5	6	. .	. .	34.5	48.2	. .	. .	. .	. .	. .	13 48.14	28.88	1.01	.	3	33.133	39 48.65	9.39	8.40	13 18.25	28 16.4
6	8	. .	. .	12.4	26.	39.9	53.4	. .	. .	. .	18 26.18	28.91	0.99	.	6	41.224	14 46.00	10.00	2.35	17 56.28	3 8.4
7	8	. .	10.5	24.	37.4	51.2	. .	. .	. .	. .	24 37.59	28.96	1.00	.	3	43.115	34 4.11	10.75	7.00	24 7.63	22 31.9
8	6	14.	28.5	41.8	55.4	8.9	22.6	36.2	. .	. .	28 55.34	28.98	0.98	IV.	6	45.19	12 29.11	11.29	1.81	28 25.38	0 52.2
9	8	46.5	0.0	13.3	27.2	40.5	54.6	. .	. .	. .	7 32 27.17	−29.01	−0.99	.	6	38.232	16 29.26	−11.73	− 2.76	7 31 57.17	36 4 53.8

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1849.	h.	s.	s.	s.	s.	s.	° ′ ″	r.
Mar. 24,	8	− 30.547	g 0.021	− 0.175	+ 0.465	− 0.196	0 0 2.20	39.489

REMARKS.

(171) 4. Micrometer reading assumed as 33ʳ.962 instead of 34ʳ.962.

INSTRUMENT READINGS.

	Date.		CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1849.	h. m.	° ′ ″				″	″	in.	°	°
Zone 171	Mar. 24.	7 7	284 50 61.0	52.6	53.2	52.4	. .	54.80			
		7 10	. .	. .	. .	. .	. .	. .	30.158	55.3	53.7
		7 20	. .	. .	. .	. .	. .	. .	. .	. .	53.0
		7 40	. .	. .	. .	. .	. .	. .	. .	. .	52.3
		7 0	. .	. .	. .	. .	. .	. .	30.160	55.	51.9
		8 20	. .	. .	. .	. .	. .	. .	. .	. .	51.8
		8 29	59.5	51.5	52.9	52.4	. .	54.08			

ZONE 171. MARCH 24. MAJ. $D_0 = -35° 48' 10''$—Continued.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
10	7	. .	. .	. .	34.2	47.6	0.7	. .	. .	. .	7 33 47.49	−29.02	−0.99	.	5	45.502	20 59.54	−11.88	− 3.83	7 33 17.48	36 9 25.2
11	9	. .	. .	. .	40.3	54.	. .	. .	. .	. .	34 40.38	29.03	0.99	.	5	45.185	21 10.49	12.01	3.88	34 10.36	9 36.4
12	9	. .	. .	. .	. .	19.2	32.7	46.4	. .	. .	36 5.43	29.04	1.01	VII.	2	43.274	42 40.27	12.18	9.10	35 35.38	31 11.6
13	8	. .	. .	. .	36.9	50.5	4.3	. .	. .	. .	37 37.04	29.04	0.99	VI.	6	44.42	12 55.49	12.37	1.91	37 7.01	1 19.8
14	8	. .	. .	. .	. .	. .	. .	. .	. .	51.	38 35.92	29.05	1.00	12.	3	47.285	31 38.72	12.50	6.38	38 5.87	36 20 7.6
15	5	22.2	36.3	49.4	2.9	16.1	29.5	43.3	. .	. .	48 2.81	29.11	0.98	IV.	7	38.984	10 11.33	13.65	1.27	47 32.72	35 58 36.2
16	8	. .	. .	25.2	38.4	52.	. .	. .	. .	. .	50 38.56	29.13	0.99	VI.	5	42.017	22 59.64	13.96	4.31	50 8.44	36 11 27.9
17	9	. .	. .	16.3	29.7	. .	. .	. .	. .	. .	53 29.87	29.15	0.98	I.	6	44.761	12 43.48	14.31	1.86	52 59.74	1 9.6
18	8	. .	. .	. .	. .	51.2	4.7	18.6	. .	. .	53 37.46	29.15	1.02	VI.	1	44.387	47 53.23	14.32	10.42	53 7.29	36 28.0
19	6	. .	38.	52.5	5.5	19.7	33.1	. .	. .	. .	57 5.75	29.17	1.02	IV.	1	41.538	49 31.75	14.74	10.84	56 35.56	38 7.3
20	8	. .	. .	. .	. .	. .	50.7	4.2	. .	. .	57 23.28	29.17	1.00	VII.	3	38.58	36 40.20	14.78	7.64	56 53.11	25 12.6
21	8	. .	37.2	40.2	54.1	17.5	. .	. .	. .	. .	7 57 54.08	29.17	0.98	.	7	41.078	8 59.06	14.84	0.98	7 57 23.93	36 57 24.9
22	8	. .	. .	. .	. .	. .	30.4	43.7	. .	. .	8 3 3.01	29.21	0.98	.	7	38.17	10 39.43	15.45	1.38	8 2 32.82	35 59 6.3
23	8	. .	. .	. .	. .	. .	0.7	14.5	. .		4 33.44	29.22	1.00	.	3	41.475	35 0.73	15.64	7.22	4 3.22	36 23 33.6
24	8	. .	. .	. .	. .	30.4	44.2	. .	. .	. .	6 16.84	29.23	1.00	.	4	35.072	32 50.09	15.84	6.70	5 46.61	21 22.6
25	7	. .	. .	. .	22.4	37.	50.4	4.3	. .	. .	7 23.02	29.23	1.01	.	2	41.23	43 51.25	15.98	9.40	6 52.78	32 26.6
26	8	. .	. .	. .	. .	. .	. .	. .	. .	44.4	7 29.50	29.23	1.00	.	5	39.147	24 38.88	15.99	4.71	6 59.27	13 9.6
27	8	. .	. .	. .	. .	. .	26.3	39.4		. .	8 58.69	29.24	1.00	.	4	30.312	35 34.38	16.16	7.37	8 28.45	24 7.9
28	8	. .	. .	. .	. .	. .	. .	37.4		. .	9 56.43	29.25	0.99	.	5	41.245	23 26.48	16.27	4.44	9 26.19	11 57.2
29	5	46.1	0.0	13.3	26.7	40.4	54.	7.9	. .	. .	13 26.91	29.27	0.99	IV.	5	41.492	23 17.95	16.69	4.42	12 56.65	11 49.1
30	9	. .	. .	. .	. .	63.5	17.4	. .	. .	. .	14 50.08	29.27	0.99	.	6	32.140	19 59.48	16.85	3.59	14 19.82	8 29.9
31	5	. .	. .	58.	11.2	25.2	38.8	. .	. .	. .	16 11.57	29.28	0.98	.	7	35.658	12 6.14	17.01	1.74	15 41.31	0 34.9
32	8	. .	. .	24.4	37.8	51.2	4.7	32.	. .	. .	18 37.63	29.30	1.00	.	5	37.65	25 30.55	17.30	4.91	18 7.33	14 2.8
33	8	. .	. .	. .	. .	. .	. .	40.5	. .	. .	8 29 59.53	−29.36	−1.00	.	3	41.20	35 10.22	−18.64	− 7.26	8 29 29.17	36 23 46.1

ZONE 172. MARCH 30. MAJ. BELT, 289° 12½′. $D_0 = -31° 26' 40''$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	8	. .	31.5	44.2	57.	. .	. .	. .	. .	. .	11 40 57.16	−32.60	−0.99	IV.	7	45.325	6 32.47	− 2.83	− 6.45	11 40 23.57	31 33 21.7
2	7	5.5	18.4	31.3	44.1	. .	. .	. .	. .	. .	42 44.20	32.60	0.99	IV.	7	39.478	9 54.30	2.89	6.97	42 10.61	36 44.2
3	9	. .	. .	. .	54.	7.2	. .	. .	. .	. .	42 54.20	32.60	0.99	VII.	7	33.121	13 33.33	2.90	7.51	42 20.61	31 40 23.7
4	7	. .	. .	. .	. .	. .	. .	. .	41.8	. .	43 43.74	32.60	1.01	XI½.	1	38.022	51 32.07	2.93	13.35	43 10.13	32 18 28.4
5	8	16.5	29.6	42.4	55.	. .	. .	. .	. .	. .	47 55.36	32.59	1.01	.	2	36.41	46 37.62	3.07	12.60	47 21.76	32 13 33.3
6	9	. .	. .	. .	. .	. .	. .	44.	. .	. .	48 5.10	32.59	0.99	VII.	7	36.612	11 32.83	3.08	7.20	47 31.52	31 38 23.1
7	9	. .	. .	. .	. .	56.2	9.4	. .	. .	. .	48 43.50	32.59	0.99	11.	7	38.743	10 18.82	3.10	7.02	48 9.92	31 37 8.9
8	7	. .	. .	. .	31.5	45.0	. .	. .	. .	. .	50 31.79	32.59	1.01	IV.	3	31.85	40 32.92	3.16	11.63	49 58.19	32 7 27.7
9	9	. .	. .	. .	. .	. .	. .	. .	. .	32.	50 21.06	32.59	0.99	12.	7	28.885	15 58.65	3.15	7.87	49 47.48	31 42 49.7
10	8	. .	. .	. .	. .	. .	42.2	55.	. .	. .	52 16.28	32.59	0.99	VII.	7	44.372	7 5.00	3.23	6.55	51 42.70	33 54.8
11	9	. .	11.6	24.	37.	. .	. .	. .	. .	. .	53 37.13	32.59	0.99	IV.	5	46.162	20 36.76	3.28	8.57	53 3.55	47 28.6
12	9	. .	. .	. .	. .	28.3	41.2	. .	. .	. .	55 15.44	32.58	0.99	VI.	6	43.82	13 16.22	3.34	7.46	54 41.87	40 7.0
13	8	. .	. .	. .	31.5	. .	57.0	. .	. .	. .	56 31.42	32.58	0.99	.	7	43.317	7 41.79	3.39	6.63	55 57.85	34 31.8
14	7	. .	. .	30.	42.	. .	. .	. .	. .	. .	56 42.53	32.58	0.99	.	7	38.87	10 15.27	3.40	7.01	56 8.96	37 5.7
15	8	. .	. .	. .	. .	. .	. .	21.4	. .	. .	57 42.50	32.58	1.00	.	4	38.987	30 34.96	3.43	10.10	57 8.92	31 57 28.5
16	7	. .	. .	. .	. .	10.2	23.4	36.1	. .	. .	58 57.29	32.58	1.01	.	3	32.445	40 12.39	3.48	11.58	58 23.70	32 7 7.4
17	9	. .	. .	. .	. .	. .	. .	. .	. .	23.	11 59 12.00	32.58	0.99	.	6	35.278	18 9.97	3.49	8.23	58 38.43	31 45 1.7
18	7	. .	. .	. .	13.5	. .	. .	52.5	. .	. .	12 0 13.55	32.58	0.99	.	5	42.574	22 40.59	3.53	8.88	11 59 39.98	31 49 33.0
19	9	. .	. .	. .	. .	. .	20.8	34.	. .	. .	1 54.88	32.57	1.01	.	1	43.088	48 38.11	3.60	12.90	12 1 21.30	32 15 34.6
20	8	. .	44.	. .	9.5	22.2	. .	. .	. .	. .	5 9.55	32.57	0.99	.	5	45.333	21 5.38	3.74	8.65	4 35.99	31 47 57.8
21	6	11.5	24.6	37.	49.9	3.0	15.7	28.7	. .	. .	12 6 50.06	−32.57	−0.99	.	7	45.743	6 18.05	− 3.81	− 6.42	12 6 16.50	31 33 8.3

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1849. h.	s.	s.	s.	s.	s.	° ′ ″	r.
Mar. 30, 8	− 33.717	g 0.020	− 0.175	+ 0.465	− 0.196	359 59 59.99	39.429

REMARKS.

(171) 10. Transits over T.'s III–V assumed as recorded over T.'s IV–VI.

(171) 32. Transit over T. VII assumed as at $13^s.2$ instead of 32^s.

INSTRUMENT READINGS.

	Date.	CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1849. h. m.	° ′ ″				″	″	in.	°	°
Zone 172	Mar. 30, 11 38	. .	. .	. .	. .	. .	. .	30.070	55.0	49.2
	11 40	289 12 0.0	1.5	4.3	2.9	. .	2.18			
	12 0	. .	. .	. .	. .	. .	. .	. .	. .	49.7
	12 15	1.5	1.4	6.0	5.7	. .	3.65			
	12 20	. .	. .	. .	. .	. .	. .	. .	. .	49.3
	12 40	. .	. .	. .	. .	. .	. .	30.060	53.8	49.1
	13 0	. .	. .	. .	. .	. .	. .	30.052	. .	48.9
	13 20	. .	. .	. .	. .	. .	. .	. .	. .	48.8

ZONE 172. MARCH 30. MAJ. BELT, 289° 12½′. D₀=−31° 26′ 40″—Continued.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
22	8	. .	. .	32.5	45.5	57.4	. .	. .	. .	. .	12 8 45.22	−32.56	−0.99	.	7	45.828	6 15.11	− 3.89	− 6.42	12 8 11.67	31 33 5.4
23	9	. .	. .	. .	. .	. .	49.5	. .	. .	. .	9 23.74	32.56	0.99	.	6	49.53	9 59.15	3.92	6.97	8 50.19	36 50.0
24	7	. .	. .	. .	41.	. .	. .	. .	. .	. .	9 41.12	32.56	0.98	.	7	49.30	4 15.27	3.94	6.11	9 7.58	31 5.3
25	6	37.5	50.3	. .	16.4	30.	. .	. .	. .	. .	12 16.49	32.55	0.99	.	6	34.808	18 27.44	4.04	8.27	11 42.95	45 19.7
26	8	54.2	7.8	. .	33.5	. .	. .	. .	. .	. .	24 33.41	32.54	0.99	V.	5	40.76	23 43.17	4.76	9.05	23 59.88	50 37.0
27	6	. .	16.	29.	. .	. .	. .	. .	. .	. .	24 41.86	32.54	0.99	IV.	6	40.18	15 22.03	4.77	7.78	24 8.33	42 14.6
28	6	. .	. .	. .	. .	. .	. .	. .	10.	. .	25 12.14	32.53	0.99	II.	7	37.11	11 15.17	4.81	7.16	24 38.62	38 7.1
29	8	. .	. .	. .	. .	. .	. .	. .	3.5	. .	26 5.64	32.52	0.99	.	7	38.197	10 38.50	4.88	7.06	25 32.13	37 30.4
30	7	. .	. .	. .	. .	54.	. .	19.8	. .	. .	26 41.02	32.52	0.99	.	7	34.777	12 36.54	4.92	7.36	26 7.51	31 39 28.8
31	9	. .	. .	. .	. .	47.	. .	. .	. .	. .	28 34.08	32.52	1.01	.	1	40.418	50 10.38	5.06	13.17	28 0.55	32 17 8.6
32	8	. .	. .	. .	. .	59.5	11.9	24.9	. .	. .	28 46.16	32.52	1.01	VII.	3	33.695	39 28.88	5.07	11.48	28 12.63	32 6 25.4
33	9	. .	. .	. .	. .	. .	51.2	4.6	. .	. .	30 25.56	32.51	0.99	.	7	38.204	10 38.10	5.19	7.04	29 52.06	31 37 30.3
34	9	. .	. .	. .	. .	. .	17.5	31.2	. .	. .	30 52.00	32.51	0.99	.	7	33.305	13 27.18	5.23	7.47	30 18.50	40 19.9
35	8	. .	. .	. .	. .	. .	. .	. .	47.4	. .	31 49.34	32.51	1.00	.	5	35.143	26 57.08	5.29	9.53	31 15.83	31 53 51.9
36	9	. .	. .	. .	. .	26.2	. .	52.5	. .	. .	33 13.44	32.50	1.00	.	4	30.707	35 20.71	5.40	10.83	32 39.94	32 2 16.9
37	8	. .	. .	. .	. .	. .	52.7	5.4	. .	. .	34 26.72	32.50	0.99	.	7	37.70	10 55.65	5.47	7.08	33 53.23	31 37 48.2
38	8	. .	21.4	34.3	47.	. .	. .	. .	. .	. .	36 47.16	32.50	0.99	IV.	7	42.59	8 6.88	5.64	6.67	36 13.67	34 59.2
39	7	48.5	1.7	14.	27.	. .	. .	. .	. .	. .	38 27.17	32.49	0.99	.	7	42.907	7 55.93	5.75	6.63	37 53.69	31 34 48.3
40	10	. .	. .	. .	. .	. .	. .	. .	49.4	. .	38 51.35	32.49	1.01	.	1	39.127	50 54.14	5.78	13.28	38 17.85	32 17 53.2
41	7	. .	. .	. .	. .	59.5	12.	. .	. .	. .	40 46.48	32.49	0.98	VI.	7	50.714	3 26.31	5.91	5.97	40 13.01	31 30 18.2
42	8	. .	. .	. .	. .	. .	. .	14.2	. .	. .	41 35.30	32.49	1.00	.	3	50.63	29 44.73	5.96	9.96	41 1.81	31 56 40.6
43	9	. .	. .	63.7	16.	. .	. .	. .	. .	. .	46 16.30	32.47	1.01	.	1	33.235	54 18.33	6.26	13.82	45 42.82	32 21 18.4
44	8	. .	. .	38.5	51.	4.6	. .	. .	. .	. .	49 51.36	32.45	1.01	.	1	34.538	53 33.36	6.49	13.69	49 17.90	20 33.5
45	8	. .	. .	. .	42.4	55.6	8.4	. .	. .	. .	50 42.49	32.45	1.00	.	3	33.414	39 38.95	6.54	11.51	50 9.04	6 37.0
46	9	. .	. .	16.	28.2	. .	. .	. .	. .	. .	52 28.55	32.45	1.01	II.	2	43.083	42 46.47	6.66	12.01	51 55.09	9 45.1
47	6	. .	. .	43.2	55.7	9.1	. .	. .	. .	. .	52 55.99	32.44	1.01	IV.	2	35.268	47 17.05	6.68	12.71	52 22.54	32 14 16.4
48	8	. .	. .	. .	. .	. .	. .	. .	53.4	. .	54 55.45	32.44	0.99	.	6	35.30	18 10.45	6.80	8.18	54 22.02	31 45 5.4
49	9	. .	37.	. .	2.8	16.	. .	. .	. .	. .	57 2.98	32.43	1.01	.	2	32.30	48 59.47	6.93	12.98	56 29.54	32 15 59.4
50	7	31.	44.	57.2	. .	. .	. .	. .	. .	. .	57 10.05	32.43	1.01	.	1	35.757	52 51.29	6.94	13.59	56 36.61	32 19 51.8
51	9	. .	. .	. .	. .	61.8	14.4	. .	. .	. .	58 48.75	32.42	0.99	.	6	35.97	17 47.29	7.05	8.13	58 15.34	31 44 42.5
52	9	. .	. .	. .	. .	5.7	18.7	31.6	. .	. .	12 59 52.83	32.42	0.99	.	7	38.365	10 32.66	7.11	7.03	12 59 19.42	37 26.8
53	9	57.7	10.4	23.5	35.9	. .	. .	. .	. .	. .	13 2 36.32	32.41	1.00	.	4	35.28	32 42.92	7.25	10.40	13 2 2.91	59 40.6
54	7	. .	. .	. .	43.	56.	9.2	. .	. .	. .	2 43.18	32.41	0.99	.	6	34.83	18 26.68	7.26	8.25	2 9.78	45 22.2
55	8	. .	. .	. .	. .	24.	37.4	. .	. .	. .	4 11.35	32.40	0.99	.	6	36.27	17 36.98	7.37	8.10	3 37.96	44 32.5
56	8	. .	. .	. .	. .	. .	. .	7.4	. .	. .	4 28.50	32.40	0.99	.	7	35.20	12 21.95	7.39	7.30	3 55.11	39 16.6
57	8	. .	. .	45.2	58.	11.	. .	. .	. .	. .	6 58.10	32.39	1.00	.	5	43.94	21 53.44	7.54	8.75	6 24.71	48 49.7
58	8	. .	. .	19.	. .	. .	57.7	. .	. .	. .	9 31.89	32.38	1.00	.	5	44.728	21 26.26	7.69	8.68	8 58.51	31 48 22.6
59	9	. .	. .	. .	. .	. .	15.4	28.4	. .	. .	10 49.36	32.38	1.01	.	1	39.255	50 50.40	7.76	13.27	10 15.97	32 17 51.4
60	8	. .	40.2	52.2	5.7	. .	. .	. .	. .	. .	14 5.62	32.37	0.99	.	7	39.80	9 43.17	7.93	6.90	13 32.26	31 36 38.0
61	7	. .	. .	18.	31.	43.8	. .	. .	. .	. .	14 31.02	32.37	0.99	.	7	43.255	7 43.93	7.95	6.60	13 57.66	31 34 38.5
62	8	. .	. .	. .	. .	. .	. .	. .	48.	61.	14 49.78	32.37	1.00	.	3	38.815	36 32.53	7.96	11.03	14 16.41	32 3 31.5
63	7	. .	. .	38.	51.	3.7	. .	. .	. .	. .	16 50.91	32.36	1.00	.	5	36.58	26 7.48	8.07	9.40	16 17.55	31 53 4.9
64	6	37.8	50.7	4.	16.5	29.7	. .	. .	. .	. .	18 16.69	32.35	0.99	.	6	34.040	18 53.95	8.14	8.30	17 43.35	45 50.4
65	9	. .	. .	11.	24.	37.	49.8	. .	. .	. .	19 23.96	32.34	1.00	. .	4	39.698	30 10.43	8.20	10.03	18 50.62	57 8.7
66	9	. .	. .	. .	. .	. .	. .	. .	. .	39.7	20 28.83	32.34	0.99	.	7	34.492	12 45.13	8.25	7.37	19 55.50	31 39 40.7
67	8	. .	. .	. .	. .	. .	28.	. .	. .	. .	22 2.00	32.33	1.00	.	3	36.82	37 41.38	8.32	11.20	21 28.67	32 4 40.9
68	8	44.	57.2	10.	22.7	. .	. .	. .	. .	. .	24 22.95	32.32	1.01	.	2	40.453	44 18.08	8.42	12.25	23 49.62	11 18.8
69	8	2.6	15.4	28.4	. .	. .	. .	. .	. .	. .	27 41.41	32.31	1.00	.	3	41.73	34 51.92	8.56	10.76	27 8.10	32 1 51.2
70	7	. .	. .	. .	. .	2.5	15.5	28.	. .	. .	13 27 49.50	−32.31	−0.99	IV.	7	40.537	9 17.73	− 8.56	− 6.85	13 27 16.20	31 36 13.1

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1849.	h. m.	s.	s.	s.	s.	s.	° ′ ″	r.

REMARKS.

INSTRUMENT READINGS.

	Date.	CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1849. h. m.	° ′ ″				″	″	in.	°	°
Zone 172	Mar. 30, 13 40	. .	. .	. .	. .	. .	. .	30.044	53.1	49.6
	13 50	. .	. .	. .	. .	. .	. .	30.042	53.	49.7
	14 10	. .	. .	. .	. .	. .	. .	. .	. .	49.8
	14 20	. .	. .	. .	. .	. .	. .	. .	. .	50.6
	14 40	. .	. .	. .	. .	. .	. .	30.036	53.	50.6
	15 0	289 12 1.4	1.9	5.6	5.8	. .	3.68	30.034	53.2	50.5

ZONE 172. MARCH 30. MAJ. BELT, 289° 12½′. D₀=−31° 26′ 40″—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
71	7	. .	. .	37.	49.5	. .	. .	. .	. .	. .	13 49.78	−32.31	−0.99	IV.	7	37.25	11 11.18	− 8.6	− 7.13	13 (28) 16.48	31 38 6.9
72	7	. .	. .	. .	. .	54.4	7.2	20.4	. .	. .	29 41.50	32.30	0.99	VI.	7	41.67	8 38.46	8.65	6.74	29 8.21	31 35 33.9
73	6	. .	. .	. .	. .	. .	17.	30.	. .	. .	30 50.94	32.30	1.01	VII.	1	34.284	53 41.76	8.69	13.73	30 17.63	32 20 44.2
74	8	10.9	24.	36.9	49.2	. .	. .	. .	. .	. .	34 49.68	32.28	1.00	.	5	34.96	27 3.39	8.84	9.54	34 16.40	31 54 1.8
75	9	. .	52.5	. .	. .	. .	. .	. .	. .	. .	37 18.18	32.27	0.99	.	7	44.14	7 13.22	8.93	6.53	36 44.92	31 34 8.7
76	4	. .	. .	30.8	43.6	57.	9.5	23.	. .	. .	37 43.76	32.27	1.01	IV.	1	40.86	49 55.15	8.94	13.12	37 10.48	32 16 57.2
77	9	. .	. .	. .	. .	. .	. .	67.2	. .	. .	38 28.30	32.26	1.00	VII.	4	36.559	31 58.40	8.97	10.30	37 55.04	31 58 57.7
78	9	. .	. .	. .	. .	4.	17.	. .	. .	. .	39 51.18	32.26	0.99	VI.	7	32.825	13 43.75	9.02	7.50	39 17.93	40 40.3
79	9	. .	. .	. .	. .	5.	18.	. .	. .	. .	39 52.18	32.26	0.99	VII.	7	32.895	13 41.13	9.02	7.50	39 18.93	40 37.6
80	7	. .	. .	. .	56.	9.2	22.4	. .	. .	. .	41 56.28	32.25	1.00	VI.	5	43.245	22 17.28	9.09	8.80	41 23.03	31 49 15.2
81	5	5.	18.	31.2	44.	. .	. .	. .	. .	. .	43 44.03	32.24	1.01	III.	2	34.337	47 49.13	9.14	12.81	43 10.78	32 14 51.1
82	7	. .	. .	. .	44.7	. .	. .	. .	. .	. .	43 44.72	32.24	1.01	V.	2	34.228	47 52.90	9.14	12.81	43 11.47	32 14 54.8
83	8	37.	50.	2.5	15.5	28.5	. .	. .	. .	. .	46 15.63	32.22	0.99	.	7	40.158	9 30.82	9.22	6.86	45 42.42	31 36 26.9
84	8	. .	. .	. .	. .	10.5	23.5	. .	. .	. .	46 57.70	32.22	0.99	.	7	39.11	10 6.99	9.25	6.95	46 24.49	37 3.2
85	8	. .	. .	. .	. .	. .	. .	10.	. .	. .	47 31.10	32.22	1.00	II.	4	34.87	32 56.22	9.26	10.47	46 57.88	31 59 56.0
86	8	. .	. .	. .	. .	. .	. .	15.	. .	. .	47 36.10	32.22	1.00	II.	4	30.82	35 16.00	9.26	10.83	47 2.88	32 2 16.1
87	8	. .	. .	. .	. .	. .	. .	30.7	. .	. .	47 51.80	32.21	1.00	II.	4	33.002	34 0.69	9.26	10.63	47 18.59	32 1 0.6
88	10	. .	. .	. .	. .	. .	. .	35.5	. .	. .	52 56.59	32.19	0.99	.	7	43.85	7 23.02	9.42	6.53	52 23.41	31 34 19.0
89	8	33.3	46.6	59.5	12.	25.3	. .	. .	. .	. .	57 12.31	32.17	1.00	.	4	39.424	30 19.88	9.53	10.05	56 39.14	57 19.5
90	9	. .	. .	. .	. .	. .	. .	13.6	. .	. .	57 34.70	32.17	0.99	.	6	41.626	14 31.76	9.53	7.62	57 1.54	41 28.9
91	10	. .	. .	. .	. .	. .	9.	22.	. .	. .	58 43.10	32.16	1.00	.	5	36.21	26 20.09	9.58	9.43	58 9.94	31 53 19.1
92	9	. .	. .	. .	57.4	10.3	23.4	. .	. .	. .	13 59 57.40	32.15	1.00	.	3	39.22	36 18.55	9.61	11.00	59 24.25	32 3 19.2
93	6	. .	. .	. .	21.	34.	. .	. .	. .	. .	14 0 21.06	32.15	1.01	.	1	35.31	53 6.72	9.62	13.65	13 59 47.90	32 20 10.0
94	10	. .	. .	. .	. .	. .	. .	21.5	. .	. .	2 42.60	32.14	0.99	.	7	35.608	12 7.50	9.67	7.25	14 2 9.47	31 39 4.4
95	9	. .	. .	. .	35.5	49.	2.0	. .	. .	. .	4 35.85	32.13	1.01	.	2	42.60	43 3.97	9.72	12.06	4 2.71	32 10 5.8
96	10	. .	. .	. .	. .	. .	. .	41.5	. .	. .	5 2.60	32.13	0.99	.	6	41.352	14 41.21	9.73	7.64	4 29.48	31 41 38.6
97	8	. .	. .	26.8	39.6	52.5	. .	. .	. .	. .	6 39.71	32.12	0.99	.	7	40.995	9 1.93	9.76	6.78	6 6.60	35 58.5
98	9	. .	. .	. .	. .	. .	49.	. .	. .	. .	8 23.28	32.11	0.99	.	7	49.205	4 18.40	9.80	6.07	7 50.18	31 31 14.3
99	8	. .	. .	. .	41.	54.5	7.6	. .	. .	. .	9 41.38	32.10	1.01	.	1	40.24	50 16.56	9.83	13.20	9 8.27	32 17 19.6
100	7.8	. .	. .	. .	. .	. .	52.6	5.3	. .	. .	10 26.60	32.10	0.99	.	6	38.717	16 12.52	9.85	7.90	9 53.51	31 43 10.3
101	8	. .	. .	. .	. .	. .	. .	59.8	. .	. .	11 20.84	32.09	1.01	.	1	44.65	47 44.34	9.86	12.79	10 47.74	32 14 47.0
102	8	. .	55.5	8.2	21.	. .	. .	. .	. .	. .	14 21.16	32.08	0.99	.	7	34.46	12 47.48	9.91	7.35	13 48.09	31 39 44.7
103	9	. .	. .	. .	2.7	16.	. .	. .	. .	. .	15 2.89	32.07	1.00	.	3	31.564	40 42.79	9.93	11.68	14 29.82	32 7 44.4
104	9	. .	. .	. .	. .	. .	. .	51.2	. .	. .	15 12.30	32.07	1.00	.	4	34.615	33 5.49	9.93	10.48	14 39.23	0 5.9
105	7	. .	. .	55.	8.4	22.	. .	. .	. .	. .	17 8.46	32.06	1.01	.	1	40.080	50 22.08	9.97	13.19	16 35.39	32 17 25.2
106	9	. .	. .	. .	. .	. .	. .	26.	. .	. .	17 47.09	32.06	0.99	.	7	44.63	6 56.09	9.97	6.47	17 14.04	31 33 52.5
107	9	. .	. .	. .	. .	. .	30.	42.6	. .	. .	18 3.98	32.06	0.99	.	7	46.172	6 3.08	9.98	6.33	17 30.93	32 59.4
108	10	. .	. .	. .	. .	. .	. .	64.9	. .	. .	19 26.00	32.05	1.00	.	3	49.45	30 25.10	10.01	10.06	18 52.95	57 25.2
109	9	44.	57.4	9.8	22.7	. .	. .	. .	. .	. .	23 22.90	32.03	1.00	.	5	36.437	26 12.42	10.07	9.41	22 49.87	53 11.9
110	9	. .	5.	. .	30.2	. .	. .	. .	. .	. .	23 30.51	32.03	1.00	.	6	31.878	20 8.57	10.07	8.48	22 57.48	31 47 7.1
111	9	. .	. .	. .	. .	44.3	57.5	. .	. .	. .	24 31.41	32.02	1.01	.	2	36.263	46 42.64	10.10	12.64	23 58.38	32 13 45.4
112	9	26.	39.	51.7	4.5	. .	. .	. .	. .	. .	26 4.75	32.01	1.00	.	4	32.657	34 13.44	10.11	10.67	25 31.74	32 1 14.2
113	10	50.	4.	16.7	29.4	. .	. .	. .	. .	. .	28 29.43	31.99	0.99	.	6	34.145	18 50.33	10.14	8.29	27 56.45	31 45 48.8
114	10	. .	. .	. .	. .	. .	17.2	30.	. .	. .	28 51.20	31.99	1.00	.	5	37.968	25 19.42	10.14	9.28	28 18.21	52 18.8
115	9	. .	. .	. .	. .	. .	. .	24.2	. .	. .	29 45.30	31.99	0.99	.	6	40.892	14 57.08	10.17	7.69	29 12.32	41 54.9
116	9	. .	. .	. .	. .	. .	. .	. .	15.5	. .	30 17.66	31.99	0.99	.	7	38.985	10 10.46	10.17	6.95	29 44.68	37 7.6
117	8	. .	. .	12.	25.	37.3	. .	. .	. .	. .	32 24.83	31.97	0.99	.	6	43.15	13 39.51	10.20	7.49	31 51.87	31 40 37.2
118	8	. .	. .	. .	30.6	. .	. .	. .	. .	. .	33 30.60	31.97	1.01	.	2	42.57	43 5.00	10.21	12.06	32 57.62	32 10 7.3
119	6	. .	. .	. .	45.	58.4	11.8	. .	. .	. .	14 33 45.42	−31.97	−1.00	.	2	47.735	40 6.74	−10.21	−11.59	14 33 12.45	32 7 8.5

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1849. h.	s.	s.	s.	s.	s.	° ′ ″	r.

REMARKS.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1849. h. m.	° ′ ″				″	″	in.	°	°

ZONE 172. MARCH 30. MAJ. BELT, 289° 12½′. D₀=−31° 26′ 40″—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
120	9	. .	. .	. .	. .	. .	. .	6.5	. .	. .	14 34 27.59	−31.96	−1.01	.	2	43.39	42 36.34	−10.23	−11.98	14 33 54.62	32 9 38.5
121	8	. .	. .	. .	. .	. .	28.2	41.	. .	. .	38 2.16	31.94	1.00	.	3	34.89	38 48.00	10.27	11.40	37 29.22	32 5 49.7
122	8	. .	. .	. .	. .	. .	. .	58.5	. .	. .	38 19.60	31.94	1.00	.	6	32.70	19 40.20	10.27	8.41	37 46.66	31 46 38.9
123	8	. .	. .	. .	. .	. .	49.4	2.6	. .	. .	39 23.66	31.93	0.99	.	7	39.375	9 57.85	10.29	6.92	38 50.74	36 55.1
124	8	. .	. .	. .	. .	. .	. .	53.7	. .	. .	40 14.80	31.92	1.00	.	4	35.508	32 32.98	10.30	10.39	39 41.88	59 33.7
125	7	. .	. .	. .	. .	30.3	43.	55.6	. .	. .	41 16.89	31.91	1.00	.	5	45.69	20 53.05	10.32	8.60	40 43.98	47 52.0
126	6	. .	42.	55.	. .	. .	. .	. .	. .	. .	42 7.90	31.91	1.00	.	5	41.847	23 5.69	10.32	8.92	41 34.99	50 4.9
127	8	. .	. .	. .	. .	. .	11.8	24.2	. .	. .	42 45.64	31.91	0.99	.	6	34.195	18 48.60	10.32	8.28	42 12.74	45 47.2
128	9	. .	. .	. .	. .	. .	19.6	32.4	. .	. .	43 53.57	31.90	1.00	.	4	36.49	32 0.99	10.35	10.31	43 20.67	31 59 1.6
129	6	17.	30.	43.	. .	. .	. .	. .	. .	. .	47 55.94	31.88	1.00	.	4	32.198	34 29.29	10.40	10.72	47 23.06	32 1 30.4
130	8	. .	. .	. .	. .	57.5	10.2	. .	. .	. .	48 44.36	31.87	1.00	.	2	36.89	46 21.05	10.41	12.60	48 11.49	13 24.1
131	8	. .	39.	52.	. .	18.	. .	. .	. .	. .	4.99	31.87	1.00	.	2	37.00	46 17.25	10.41	12.60	(48) 32.12	13 20.3
132	9	36.	49.6	2.5	15.2	. .	. .	. .	. .	. .	51 15.28	31.85	1.00	.	3	40.498	35 34.45	10.43	10.89	50 42.43	2 35.8
133	8	. .	. .	11.	24.	37.	. .	. .	. .	. .	51 23.99	31.85	1.00	.	1	46.248	46 49.20	10.43	12.68	50 51.14	13 52.3
134	3.4	43.3	56.2	9.2	21.8	35.	48.	0.7	. .	. .	54 22.03	31.83	1.00	.	3	40.073	35 49.11	10.47	10.93	53 49.20	2 50.5
135	10	. .	28.	40.6	53.4	. .	. .	. .	. .	. .	57 53.61	31.81	1.00	.	3	41.77	34 50.54	10.51	10.77	57 20.80	32 1 51.8
136	9	. .	. .	. .	. .	. .	35.6	58.	. .	. .	58 9.79	31.81	1.00	.	6	38.60	16 16.40	10.51	7.86	57 36.98	31 43 14.8
137	6.7	. .	. .	. .	. .	. .	. .	. .	32.	. .	14 58 33.95	−31.81	−1.00	.	1	36.415	52 28.58	−10.52	−13.58	14 58 1.14	32 19 32.7

ZONE 173. APRIL 2. MAJ. BELT, 282° 20′. D₀=−38° 19′ 10″.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	8	. .	. .	20.7	34.	48.0	. .	. .	. .	. .	10 41 34.23	−35.50	−1.01	IV.	3	36.815	37 41.56	− 5.22	−12.72	10 40 57.72	38 57 9.5
2	7	. .	. .	. .	8.2	21.9	. .	. .	. .	. .	43 8.15	35.50	0.97	VI.	7	50.45	3 35.38	5.41	0.95	42 31.68	22 51.7
3	7	. .	23.2	37.	51.1	4.7	. .	. .	. .	. .	45 51.06	35.50	0.98	.	7	44.773	6 51.53	5.80	2.03	45 14.58	38 26 9.4
4	8	. .	. .	. .	. .	. .	. .	55.8	. .	. .	46 13.36	35.50	1.01	VII.	2	39.117	45 3.71	5.85	15.37	45 36.85	39 4 34.9
5	8	. .	47.	1.0	14.5	29.2	43.4	. .	. .	. .	52 15.01	35.51	1.02	VI.	2	34.068	47 58.25	6.51	16.44	51 38.48	39 7 31.2
6	8	. .	. .	59.8	. .	. .	. .	. .	. .	. .	56 13.94	35.51	0.98	IV.	7	46.95	5 36.39	7.02	1.61	55 37.45	38 24 55.0
7	6	. .	. .	49.7	3.9	18.0	32.4	. .	. .	. .	10 58 3.90	35.51	1.01	VI.	2	45.58	41 20.90	7.20	14.03	10 57 27.38	39 0 52.1
8	9	. .	45.	59.	12.4	. .	. .	. .	. .	. .	11 2 12.87	35.51	0.98	V.	6	43.908	13 13.29	7.71	4.18	11 1 36.38	38 32 35.2
9	6	. .	46.1	60.	14.	27.2	. .	. .	. .	. .	2 13.88	35.51	0.98	VII.	6	46.712	11 36.09	7.72	3.63	1 37.39	30 57.4
10	8	. .	. .	. .	. .	9.7	. .	. .	. .	. .	4 55.77	35.51	0.97	VI.	7	48.131	4 55.42	8.01	1.38	4 19.29	38 24 14.8
11	8	. .	. .	. .	. .	. .	. .	12.5	. .	. .	5 30.03	35.51	1.02	VII½.	1	44.865	47 36.14	8.07	16.29	4 53.50	39 7 10.5
12	8	. .	. .	. .	. .	. .	. .	40.5	. .	. .	7 58.03	35.52	1.02	VII., V.	2	35.75	46 57.72	8.37	16.07	7 21.49	39 6 32.2
13	6	. .	. .	. .	. .	52.5	6.2	. .	. .	. .	8 38.26	35.52	0.99	VII.	6	31.64	20 16.30	8.44	6.60	8 1.75	38 39 41.3
14	6	. .	. .	. .	. .	. .	48.	2.2	. .	. .	9 19.90	35.52	0.98	VII., IV.	7	36.624	11 32.55	8.52	3.60	8 43.40	30 54.7
15	9	. .	42.2	55.7	9.9	. .	. .	. .	. .	. .	17 10.01	35.52	0.99	V.	6	39.55	15 43.71	9.42	5.03	16 33.50	35 8.2
16	7	57.2	11.8	25.2	39.5	43.4	. .	. .	. .	. .	19 39.51	35.52	0.99	IV.	6	37.044	17 10.27	9.70	5.54	19 3.00	36 35.5
17	9	. .	7.	. .	34.9	. .	. .	. .	. .	. .	19 35.00	35.52	0.98	11.	6	45.314	12 23.75	9.70	3.91	18 58.50	38 31 47.4
18	8	. .	. .	. .	. .	. .	. .	. .	54.	. .	21 50.69	35.52	1.01	11.	2	41.80	43 30.49	9.94	14.81	21 14.16	39 3 5.2
19	9	. .	. .	. .	. .	. .	. .	53.5	. .	. .	21 11.12	35.52	1.01	12.	3	39.032	36 24.55	9.87	12.27	20 34.59	55 56.7
20	6	. .	. .	. .	. .	. .	. .	45.7	. .	. .	22 3.28	35.52	1.01	VII.	3	25.45	44 13.35	9.96	15.06	21 26.75	39 3 48.4
21	6	. .	. .	. .	. .	. .	. .	44.	. .	. .	24 1.66	35.52	0.98	VII.	7	47.48	5 17.66	10.18	1.51	23 25.16	38 24 39.3
22	8	. .	. .	. .	. .	44.3	58.5	. .	. .	. .	27 30.16	35.52	1.02	VI.	1	45.695	47 8.06	10.57	16.12	26 53.62	39 6 44.8
23	8	. .	. .	30.	44.2	. .	. .	. .	. .	. .	29 44.15	35.52	0.99	IV.	5	41.097	23 31.59	10.82	7.74	29 7.64	38 43 0.2
24	8	. .	. .	. .	22.	36.	. .	. .	. .	. .	30 22.01	35.52	0.99	VI.	6	34.215	18 47.70	10.88	6.02	29 25.50	38 14.6
25	6	. .	18.	32.5	. .	. .	. .	. .	. .	. .	30 46.32	35.52	0.98	IV.	7	35.11	12 25.05	10.93	3.91	30 9.82	38 31 49.9
26	8	. .	. .	. .	. .	24.3	38.5	52.7	. .	. .	32 10.22	35.51	1.01	VI.	2	43.927	42 17.96	11.08	14.36	31 33.70	39 1 53.4
27	7	. .	. .	. .	. .	. .	. .	. .	. .	52.	11 32 34.86	−35.51	−0.99	12.	6	42.817	13 49.39	−11.13	− 4.40	11 31 58.36	38 33 14.9

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1849.	h.	s.	s.	s.	s.	s.	° ′ ″	r.
Apr. 2,	8	−36.210	g 0.040	− 0.175	+ 0.465	− 0.196	0 0 2.25	39.423

INSTRUMENT READINGS.

	Date.			CIRCLE.						Barom.	Attached Thermom.	External Thermom.
				A.	B.	C.	D.	Corr'd Mean.	Mean			
	1849.	h.	m.	° ′ ″				″	″	in.	°	°
Zone 173	Apr. 2,	10	40	282 20 57.6	59.7	65.8	63.0	61.52	61.52	30.144	52.0	43.4
		11	0	. .	. .	. .	. .	. .	. .	30.142	51.3	42.5
		11	20	. .	. .	. .	. .	. .	. .	. .	. .	41.5
		11	40	. .	. .	. .	. .	. .	. .	30.140	50.0	41.1
		12	0	. .	. .	. .	. .	. .	. .	30.140	49.5	40.3
		12	20	. .	. .	. .	. .	. .	. .	. .	. .	39.8
		12	38	57.6	60.0	65.6	65.2	62.10	62.10			
		12	40	. .	. .	. .	. .	. .	. .	30.148	48.5	39.8

REMARKS.

(172) 136. Transit observations incongruous; that over T. VI employed.

ZONE 173. APRIL 2. MAJ. BELT, 282° 20′. $D_0 = -38° 19′ 10″$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
28	8	. .	. .	. .	. .	. .	. .	55.	. .	. .	11 33 12.65	−35.51	−0.99	VII.	6	36.42	17 31.32	−11.20	− 5.66	11 32 36.15	38 36 58.2
29	7	. .	. .	. .	. .	. .	35.4	. .	. .	. .	35 7.38	35.51	0.98	VI.	7	43.23	7 44.58	11.40	2.33	34 30.89	27 8.3
30	7	. .	. .	. .	12.2	26.2	. .	. .	. .	. .	36 12.18	35.51	1.00	VI.	5	41.29	23 24.71	11.52	7.69	35 35.67	42 53.9
31	8	. .	. .	. .	. .	39.3	. .	7.0	. .	. .	36 24.97	35.51	0.99	VI.	6	37.010	17 11.24	11.54	5.55	35 48.47	36 38.3
32	8	. .	. .	. .	. .	. .	. .	. .	. .	59.5	36 41.84	35.51	1.00	12.	4	37.56	31 22.59	11.57	10.49	36 5.33	38 50 54.6
33	9	. .	. .	. .	. .	. .	. .	. .	33.3	. .	37 30.00	35.51	1.01	VII,V.	3	31.122	40 57.27	11.66	13.90	36 53.48	39 0 32.8
34	10	. .	. .	. .	. .	46.	. .	. .	. .	. .	41 31.92	35.51	1.01	.	3	32.095	40 24.42	12.08	13.70	40 55.40	39 0 0.2
35	9	. .	25.5	39.3	53.4	. .	. .	. .	. .	. .	43 53.46	35.50	0.98	IV.	7	45.48	6 27.12	12.33	1.89	43 16.98	38 25 51.3
36	9	. .	. .	. .	38.	52.5	. .	. .	. .	. .	44 38.19	35.50	1.00	VI.	4	39.145	30 29.31	12.41	10.18	44 1.69	50 1.9
37	8	. .	. .	. .	. .	. .	7.	. .	. .	. .	44 38.68	35.50	1.01	VI.	3	35.50	38 26.73	12.41	13.00	44 2.17	58 2.1
38	8	. .	. .	. .	. .	. .	. .	. .	. .	15.	45 57.61	35.50	0.99	12.	5	43.83	21 55.62	12.54	7.18	45 21.12	41 25.3
39	7	. .	. .	. .	. .	. .	. .	. .	. .	6.	46 48.98	35.50	0.98	12.	7	40.88	9 4.27	12.63	2.77	46 12.50	28 29.7
40	7	. .	. .	. .	. .	. .	6.4	20.8	. .	. .	46 38.40	35.50	0.98	.	7	35.132	12 24.29	12.61	3.91	46 1.92	31 50.8
41	9	. .	. .	. .	. .	. .	. .	10.8	. .	. .	48 28.43	35.50	1.00	VII.	5	36.50	26 9.76	12.80	8.66	47 51.93	45 41.2
42	6	. .	. .	. .	55.	. .	23.2	. .	. .	. .	48 54.95	35.50	1.00	.	4	36.89	31 47.34	12.85	10.63	48 18.45	51 20.8
43	8	. .	. .	. .	. .	32.2	46.2	0.2	. .	. .	51 17.98	35.50	1.00	VI.	4	42.667	28 27.74	13.09	9.44	50 41.48	48 0.3
44	9	. .	. .	. .	38.4	52.6	7.0	. .	. .	. .	52 38.62	35.49	0.99	VI.	5	45.43	21 1.82	13.22	6.86	52 2.14	40 31.9
45	8	. .	. .	. .	16.2	31.2	. .	. .	. .	. .	56 16.79	35.49	0.98	VI.	7	46.53	5 50.67	13.58	1.69	55 40.32	25 15.9
46	8	. .	. .	. .	30.4	. .	. .	. .	. .	. .	57 30.51	35.48	0.98	V.	7	45.46	6 27.75	13.70	1.87	56 54.05	25 53.3
47	8	. .	. .	. .	43.	57.1	. .	. .	. .	. .	57 43.15	35.48	0.98	VI.	7	49.132	4 20.86	13.72	1.20	57 6.69	23 45.8
48	7	. .	. .	. .	. .	8.5	23.2	. .	. .	. .	11 58 54.90	35.48	0.98	IV.	7	50.268	3 41.88	13.83	0.96	11 58 18.44	23 6.7
49	8	. .	. .	. .	18.	. .	46.3	60.	. .	. .	12 2 17.87	35.48	1.00	VII.	3	44.265	33 23.95	14.15	11.19	12 1 41.39	52 59.3
50	9	31.5	45.7	59.8	. .	. .	. .	. .	. .	. .	7 13.93	35.47	1.00	IV.	3	43.187	34 1.63	14.60	11.42	6 37.46	38 53 37.6
51	8	. .	. .	. .	. .	64.0	18.	. .	. .	. .	9 49.76	35.46	1.01	.	2	39.817	44 40.03	14.84	15.24	9 13.29	39 4 20.1
52	6	. .	52.	. .	20.	34.2	. .	. .	. .	. .	10 20.18	35.46	1.02	.	1	39.797	50 31.85	14.89	17.39	9 43.70	39 10 14.1
53	7	. .	. .	. .	. .	. .	. .	4.5	. .	. .	11 22.14	35.46	0.99	.	6	39.537	15 44.21	14.98	5.01	10 45.69	38 35 14.2
54	7	. .	. .	. .	. .	. .	. .	. .	11.2	. .	11 8.31	35.46	0.98	.	7	44.685	6 54.57	14.97	2.05	10 31.87	26 21.6
55	7	. .	. .	. .	. .	. .	. .	. .	. .	42.5	12 25.38	35.46	0.99	.	7	33.71	13 13.36	15.07	4.18	11 48.93	32 42.6
56	7	. .	. .	. .	. .	. .	. .	43.4	. .	. .	14 1.05	35.45	0.98	.	7	39.485	9 54.05	15.21	3.04	13 24.62	29 22.3
57	7	. .	. .	. .	. .	13.	. .	. .	. .	. .	14 58.92	35.45	1.00	.	3	43.345	33 56.17	15.29	11.37	14 22.47	53 32.8
58	7	. .	. .	. .	. .	. .	24.5	. .	. .	. .	14 56.35	35.45	0.99	.	5	44.317	21 40.44	15.29	7.10	14 19.91	41 12.8
59	7	. .	. .	. .	. .	. .	34.	. .	. .	. .	15 5.78	35.45	1.00	.	4	43.135	28 11.80	15.30	9.37	14 29.33	47 46.5
60	5	. .	. .	. .	. .	. .	46.4	0.7	. .	. .	16 18.36	35.45	0.98	.	7	41.39	8 48.29	15.41	2.67	15 41.93	38 28 16.4
61	7	. .	14.2	29.	42.6	57.0	. .	. .	. .	. .	18 42.78	35.44	1.02	.	2	34.875	47 30.60	15.62	16.30	18 6.32	39 7 12.5
62	8	. .	. .	. .	61.3	15.5	. .	. .	. .	. .	20 1.45	35.44	0.98	.	7	35.138	12 24.09	15.73	3.89	19 25.03	38 31 53.7
63	7	. .	. .	27.2	41.4	55.6	. .	. .	. .	. .	20 41.44	35.44	0.99	.	6	32.67	19 41.23	15.79	6.40	20 5.01	39 13.4
64	8	. .	. .	45.2	59.4	. .	. .	. .	. .	. .	21 59.32	35.44	1.00	.	4	40.163	29 54.38	15.89	9.96	21 22.88	38 49 30.2
65	5	51.7	6.1	20.2	34.	48.7	2.6	16.4	. .	. .	28 34.24	35.42	1.01	.	2	43.074	42 47.61	16.43	14.58	27 57.81	39 2 28.6
66	6	. .	. .	. .	. .	. .	. .	. .	. .	27.5	29 10.47	35.42	0.98	.	7	38.85	10	16.	3.	28 34.07	38 29
67	6	. .	. .	. .	. .	. .	. .	54.5	16.	. .	31 12.60	35.41	0.98	.	7	41.59	8 41.39	16.64	2.60	30 36.21	28 10.6
68	8	. .	. .	. .	. .	. .	. .	8.	. .	. .	31 25.62	35.41	1.00	.	4	39.338	30 22.86	16.65	10.12	30 49.21	38 49 59.6
69	3	. .	. .	. .	. .	. .	. .	5.4	. .	. .	32 22.97	35.41	1.02	11.	2	40.713	49 59.15	16.74	17.23	31 46.54	39 9 43.1
70	8	. .	. .	. .	. .	23.7	38.2	52.1	. .	. .	34 9.75	35.40	1.00	VI.	3	41.653	34 54.37	16.87	11.73	33 33.35	38 54 33.0
71	8	. .	. .	. .	. .	31.5	45.7	. .	. .	. .	35 17.58	35.40	0.99	.	6	44.11	13 6.38	16.96	4.14	34 41.19	32 37.5
72	8	. .	. .	. .	. .	. .	. .	31.5	. .	. .	39 49.15	35.39	0.99	.	6	47.365	11 14.03	17.31	3.50	39 12.77	30 44.8
73	8	. .	. .	19.3	33.0	47.4	. .	. .	. .	. .	41 33.22	35.38	1.00	.	3	42.78	34 15.68	17.44	11.51	40 56.84	38 53 54.6
74	8	. .	. .	. .	67.4	21.7	36.	. .	. .	. .	43 7.55	35.37	1.01	.	2	41.693	43 35.27	17.56	14.85	42 31.17	39 3 17.7
75	4	. .	. .	4.4	18.4	32.4	. .	. .	. .	. .	44 18.39	35.37	1.00	IV.	4	36.214	32 10.67	17.65	10.76	43 42.02	38 51 49.1
76	7	. .	. .	. .	. .	21.5	35.7	. .	. .	. .	12 45 7.60	−35.37	−0.98	.	7	38.84	10 16.30	−17.71	− 3.12	12 44 31.25	38 29 47.1

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1849. h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1849. h. m.	° ′ ″				″	″	in.	°	°
Zone 173	Apr. 2, 13 0	. .	. .	. .	. .	. .	. .	30.144	48.2	38.8
	13 20	. .	. .	. .	. .	. .	. .	. .	. .	38.3
	13 22	282 20 57.7	61.3	65.4	67.5	62.98	62.98			
	13 40	. .	. .	. .	. .	. .	. .	30.144	47.4	37.8
	14	. .	. .	. .	. .	. .	. .	30.142	46.8	37.6

REMARKS.

(173) 66. Declination worthless.
(173) 69. Micrometer reading assumed as made with thread 1 instead of thread 2.

ZONE 173. APRIL 2., MAJ. BELT, 282° 20′. D₀=−38° 19′ 10″—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
77	4.5	. .	. .	. .	34.	47.8	. .	. .	. .	. .	12 45 33.94	−35.37	−0.99	.	6	40.905	14 57.00	−17.74	− 4.77	12 41 57.58	38 34 29.5
78	8	. .	. .	. .	. .	. .	13.	26.5	. .	. .	46 44.48	35.36	0.99	.	6	31.538	20 20.30	17.83	6.60	46 8.13	39 54.7
79	7	. .	. .	. .	. .	17.2	. .	45.4	. .	. .	47 3.10	35.36	0.99	.	6	28.58	22 2.40	17.85	7.17	46 26.75	41 37.4
80	7	. .	58.2	12.2	25.9	. .	. .	. .	. .	. .	49 26.21	35.35	1.01	.	3	35.057	38 42.24	18.03	13.09	48 49.85	58 23.4
81	6	. .	. .	. .	21.4	35.7	49.7	. .	. .	. .	50 21.65	35.35	0.98	.	7	43.130	7 48.24	18.09	2.34	49 45.32	27 18.7
82	6	19.	33.2	47.5	1.4	. .	. .	. .	. .	. .	53 1.34	35.34	0.98	.	7	40.022	9 35.51	18.28	2.90	52 25.02	29 6.7
83	6	. .	34.8	49.	3.0	17.	31.3	. .	. .	. .	54 3.00	35.34	1.00	.	4	41.85	28 56.14	18.35	9.62	53 26.66	48 34.1
84	8	. .	. .	52.	6.	20.	34.0	. .	. .	. .	58 5.99	35.32	0.99	.	5	46.504	20 24.95	18.64	6.63	57 29.68	40 0.2
85	8	. .	. .	7.8	. .	35.7	. .	. .	. .	. .	12 58 21.80	35.32	0.99	.	5	47.188	20 1.35	18.66	6.51	12 57 45.49	38 39 36.5
86	7	. .	. .	. .	. .	14.	28.	. .	. .	. .	13 0 59.72	35.31	1.02	.	1	32.54	54 42.32	18.85	18.95	13 0 23.39	39 14 30.1
87	.	. .	. .	. .	. .	53.2	7.	21.3	. .	. .	0 38.85	35.31	1.01	.	2	35.65	47 3.79	18.83	16.14	0 2.53	6 48.8
88	.	. .	. .	4.5	. .	32.5	. .	. .	. .	. .	1 18.48	35.31	1.01	.	2	40.40	44 19.90	18.87	15.15	0 42.16	39 4 3.9
89	8	. .	. .	. .	61.3	14.7	. .	. .	. .	. .	3 1.04	35.30	0.99	.	6	43.008	13 44.42	18.98	4.35	2 24.75	38 33 17.8
90	9	. .	. .	. .	. .	. .	24.6	. .	. .	. .	2 56.39	35.30	1.00	.	4	44.662	27 19.09	18.98	9.05	2 20.09	46 57.1
91	8	. .	. .	. .	42.5	57.0	11.1	. .	. .	. .	4 42.74	35.30	1.00	.	3	43.202	34 1.11	19.09	11.42	4 6.44	53 41.6
92	9	. .	. .	. .	60.4	14.6	28.7	. .	. .	. .	6 0.43	35.29	1.01	.	3	35.93	38 12.10	19.18	12.91	5 24.13	57 54.2
93	9	. .	. .	. .	. .	. .	46.2	. .	. .	. .	7 17.95	35.28	1.00	.	4	37.994	31 9.02	19.27	10.40	6 41.67	50 48.7
94	9	. .	. .	. .	. .	. .	2.0	. .	. .	. .	7 33.72	35.28	1.00	.	3	43.058	34 5.88	19.29	11.46	6 57.44	38 53 46.6
95	8	. .	42.	56.	. .	. .	. .	. .	. .	. .	13 10.22	35.26	1.01	.	1	38.198	51 27.04	19.65	17.76	12 33.95	39 11 14.4
96	7	41.	55.	. .	23.	. .	. .	. .	. .	. .	13 23.34	35.26	1.01	.	1	36.767	52 16.43	19.67	18.04	12 47.07	39 12 4.1
97	7	. .	55.5	9.4	23.	37.7	. .	. .	. .	. .	15 23.44	35.25	1.00	.	4	38.452	30 53.40	19.80	10.32	14 47.19	38 50 33.5
98	8	. .	. .	. .	22.5	36.5	10.4	. .	. .	. .	16 22.41	35.25	0.99	.	6	31.609	20 17.85	19.86	6.58	15 46.17	39 54.3
99	5	20.7	35.3	49.2	2.8	17.1	31.3	45.5	. .	. .	18 3.13	35.24	1.01	.	3	35.338	38 32.54	19.96	13.03	17 26.88	58 15.5
100	9	43.2	57.7	11.	25.2	39.7	. .	. .	. .	. .	21 25.49	35.23	1.00	.	4	33.164	33 55.94	20.17	11.38	20 49.26	53 37.5
101	9	. .	. .	35.3	49.	. .	. .	. .	. .	. .	22 49.18	35.22	1.00	.	5	33.90	27 39.98	20.26	9.18	22 12.96	47 19.4
102	3	. .	30.	44.	. .	11.5	26.	. .	. .	. .	22 57.89	35.22	0.99	.	6	35.089	18 17.74	20.27	5.90	22 21.68	38 37 53.9
103	7	. .	. .	. .	53.4	8.6	22.4	. .	. .	. .	24 53.97	35.21	1.01	.	1	37.060	52 6.31	20.39	18.00	24 17.75	39 11 54.7
104	6	. .	. .	26.3	40.4	55.0	. .	. .	. .	. .	25 40.56	35.21	1.01	.	1	39.602	50 38.58	20.43	17.45	25 4.34	39 10 26.5
105	7	. .	. .	41.4	55.5	9.7	. .	. .	. .	. .	28 55.52	35.20	1.01	.	3	35.463	38 28.22	20.62	13.03	28 19.31	38 58 11.9
106	7	47.7	1.7	15.8	29.5	43.8	58.	. .	. .	. .	31 29.83	35.18	1.01	.	3	34.000	39 18.72	20.77	13.32	30 53.64	59 2.8
107	7	. .	. .	31.0	45.0	59.5	. .	. .	. .	. .	32 45.16	35.17	1.00	.	3	36.948	37 36.97	20.85	12.70	32 8.99	57 20.5
108	6	. .	. .	. .	50.5	4.7	. .	. .	. .	. .	33 50.62	35.17	0.99	.	6	37.188	17 5.31	20.91	5.49	33 14.46	36 41.7
109	7	. .	. .	. .	54.2	8.4	22.5	. .	. .	. .	34 54.25	35.16	1.00	.	4	40.418	29 45.58	20.97	9.91	34 18.09	49 26.5
110	6	36.	50.4	. .	. .	. .	. .	0.4	. .	. .	38 18.24	35.14	0.99	.	6	38.24	16 28.99	21.16	5.28	37 42.11	36 5.4
111	9	. .	. .	. .	. .	. .	. .	3.	. .	. .	37 20.64	35.14	0.99	.	6	34.918	18 23.17	21.11	5.93	36 44.51	38 38 0.2
112	5	. .	. .	46.2	0.4	15.0	29.3	. .	. .	. .	42 0.61	35.12	1.01	.	1	41.762	49 24.02	21.37	17.00	41 24.48	39 9 12.4
113	7	27.4	41.4	55.4	9.5	. .	. .	. .	. .	. .	13 45 9.55	−35.11	−0.99	.	6	36.06	17 44.23	21.53	5.69	44 33.45	38 37 21.4
114	9	. .	. .	. .	. .	. .	. .	. .	. .	. .	. . . .	. .	. .	.	6	35.684	17 57.20	21.6	5.76	(45)	37 34.6
115	6	. .	. .	23.5	37.5	51.4	5.7	. .	. .	. .	13 47 37.51	−35.09	−1.00	.	6	30.95	20 40.60	21.67	6.71	47 1.42	40 19.0
116	7	. .	57.	11.0	24.9	38.8	. .	. .	. .	. .	49 24.98	35.08	0.99	.	6	38.514	16 19.53	21.77	5.21	48 48.91	38 35 56.5
117	7	. .	52.7	6.8	20.4	34.8	49.	. .	. .	. .	51 20.73	35.07	1.01	.	1	37.665	51 45.43	21.87	17.87	50 44.65	39 11 35.2
118	7	. .	29.	43.2	56.8	. .	. .	. .	. .	. .	52 57.10	35.06	1.00	.	3	38.584	36 40.50	21.95	12.36	52 21.04	38 56 24.8
119	7	. .	. .	. .	. .	. .	. .	35.4	. .	. .	52 53.05	35.06	0.99	.	7	36.065	11 52.09	21.95	3.68	52 17.00	31 27.7
120	7	. .	. .	. .	. .	. .	49.5	3.9	. .	. .	53 21.43	35.06	1.00	.	5	42.237	22 52.23	21.97	7.48	52 45.37	42 31.7
121	7	. .	. .	. .	. .	. .	. .	28.	. .	. .	54 45.62	35.05	1.00	.	2	49.97	38 49.59	22.05	13.15	54 9.57	38 58 34.8
122	10	. .	. .	43.4	57.3	. .	. .	. .	. .	. .	13 57 57.38	−35.03	−1.01	.	2	38.053	45 40.92	−22.21	−15.62	13 57 21.34	39 5 28.7

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1849. h.	s.	s.	s.	s.	s.	° ′ ″	r.

REMARKS.

(173) 114. Precedes the last about 15ˢ.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1849. h. m.	° ′ ″				″	″	in.	°	°

ZONE 174. APRIL 5. MAJ. BELT, 294° 12½′. $D_0 = -26° 41' 0''$.

[After having filled up this gap the observer found that he had set the circle at 293° 57′ instead of 294° 12½′.]

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
1	6	. .	. .	. .	. .	. .	41.7	. .	. .	. .	8 55 17.08	−37.23	−0.99	V.	6	41.38	14 40.58	− 6.25	− 2.56	8 54 38.87	26 55 49.4
2	8	. .	. .	. .	. .	29.	41.2	. .	. .	. .	56 16.56	37.22	1.00	VI.	4	36.029	32 16.93	5.33	4.20	55 38.34	27 13 26.5
3	9	. .	. .	. .	40.2	52.8	5.0	. .	. .	. .	57 40.29	37.23	1.01	VII.	1	37.685	51 44.43	6.44	6.08	57 2.05	32 57.0
4	8	. .	30.2	43.2	. .	. .	. .	. .	. .	. .	8 59 55.24	37.24	1.01	IV.	2	34.119	47 56.69	6.63	5.70	8 59 16.99	29 9.0
5	8	. .	. .	. .	. .	. .	63.4	15.2	. .	. .	9 0 38.36	37.24	1.01	VII.	3	30.615	41 15.24	6.70	5.07	9 0 0.11	22 27.0
6	8	. .	. .	. .	49.	1.5	14.2	. .	. .	. .	2 49.18	37.26	1.02	VI.	1	32.83	55 32.18	6.91	6.44	2 10.90	36 45.5
7	8	. .	. .	. .	18.	. .	. .	. .	. .	. .	3 18.03	37.26	1.01	V.	2	33.12	48 31.14	6.96	5.77	2 39.76	29 43.9
8	7	. .	. .	. .	. .	. .	. .	28.2	. .	. .	2 51.00	37.26	1.02	VII.	1	36.66	52 19.81	7.03	6.14	3 12.72	33 33.0
9	7	. .	. .	. .	. .	. .	. .	. .	38.2	. .	4 42.86	37.27	1.02	11.	1	35.027	53 16.48	7.10	6.20	4 4.57	34 29.8
10	8	19.	31.5	. .	. .	8.	. .	. .	. .	. .	7 56.06	37.28	1.01	IV.	2	35.461	47 10.38	7.41	5.64	7 17.77	28 23.4
11	8	39.5	. .	. .	16.	. .	. .	. .	. .	. .	8 16.36	37.28	1.01	V.	1	42.984	48 41.84	7.44	5.79	7 38.07	29 55.1
12	9	. .	. .	. .	29.4	42.	. .	. .	. .	. .	9 29.54	37.29	1.01	VI.	2	46.582	40 46.40	7.56	5.02	8 51.24	21 59.0
13	9	. .	. .	. .	. .	. .	26.2	38.5	. .	. .	10 1.30	37.29	1.02	VII.	1	34.307	53 41.02	7.61	6.27	9 22.99	34 54.9
14	8	. .	28.1	40.4	52.4	. .	. .	. .	. .	. .	11 52.63	37.30	1.00	V.	4	34.69	33 3.24	7.80	4.28	11 14.33	14 15.3
15	8	. .	39.	51.2	. .	. .	. .	. .	. .	. .	14 3.60	37.31	1.00	IV.	5	34.32	27 25.48	8.02	3.74	13 25.29	8 37.2
16	10	. .	40.	52.	. .	. .	. .	. .	. .	. .	14 4.50	37.31	1.00	IV.	5	34.208	27 29.36	8.02	3.74	13 26.19	27 8 41.1
17	8	. .	. .	. .	. .	. .	. .	. .	0.5	. .	14 5.24	37.31	0.99	11.	6	38.18	16 30.37	8.02	2.73	13 26.94	26 57 41.1
18	8	. .	. .	. .	. .	48.	0.7	12.8	. .	. .	15 35.78	37.32	1.00	VII.	4	41.58	29 4.96	8.18	3.91	14 57.46	27 10 17.1
19	7	. .	. .	. .	50.7	3.0	. .	. .	. .	. .	17 50.70	37.33	0.99	VI.	5	45.387	21 3.38	8.40	3.16	17 12.38	2 14.9
20	8	. .	. .	. .	36.7	49.5	. .	. .	. .	. .	18 36.94	37.33	1.01	VII.	2	47.207	40 24.66	8.48	4.99	17 58.60	21 38.1
21	8	. .	. .	. .	. .	. .	. .	41.4	. .	. .	19 4.28	37.34	1.01	VII.	2	40.81	44 5.44	8.52	5.34	18 25.93	27 25 19.3
22	7	. .	. .	42.2	54.7	6.4	. .	. .	. .	. .	21 54.51	37.34	0.98	VI.	7	42.409	8 13.16	8.82	1.96	21 16.19	26 49 23.9
23	8	. .	. .	. .	. .	. .	54.	6.4	. .	. .	22 29.26	37.35	1.00	VII.	3	36.368	37 56.68	8.88	4.74	21 50.91	27 19 10.3
24	5	. .	. .	49.2	1.0	. .	. .	. .	. .	. .	24 1.25	37.36	1.02	V.	1	33.805	53 58.62	9.04	6.30	23 22.87	35 14.0
25	7	. .	. .	. .	. .	. .	. .	. .	. .	45.	23 37.14	37.36	0.99	11.	5	42.068	22 57.38	9.00	3.33	22 58.79	4 9.7
26	7	. .	. .	. .	. .	. .	. .	7.2	. .	. .	23 11.91	37.36	0.99	VII.	5	46.795	20 14.60	8.99	3.08	23 33.46	1 26.7
27	7	. .	. .	. .	. .	. .	. .	39.2	. .	. .	26 2.01	37.37	1.02	11.	1	36.782	52 15.22	9.24	6.10	25 23.62	33 30.6
28	7	. .	. .	. .	. .	. .	20.4	32.4	. .	. .	26 55.50	37.37	0.99	VII.	6	32.875	19 33.85	9.33	3.01	26 17.14	27 0 46.2
29	6	. .	37.5	50.2	2.2	14.6	26.6	. .	. .	. .	30 2.25	37.39	0.99	VII.	7	39.368	9 57.77	9.65	2.11	29 23.87	26 51 9.5
30	7	. .	. .	. .	. .	. .	. .	9.2	. .	. .	30 32.10	37.39	1.00	VII.	3	39.195	36 19.10	9.70	4.59	29 53.71	27 17 33.4
31	9	. .	. .	. .	. .	. .	. .	. .	. .	38.	30 29.90	37.39	1.01	12.	2	41.135	43 53.50	9.70	5.33	29 51.50	25 8.5
32	8	. .	. .	. .	29.4	41.5	54.3	. .	. .	. .	32 29.36	37.40	1.01	VI.	3	37.367	37 22.38	9.90	4.68	31 50.95	18 37.0
33	10	. .	. .	. .	1.2	14.	26.	. .	. .	. .	35 1.37	37.41	1.00	VI.	4	41.528	29 7.13	10.16	3.92	34 22.96	10 21.2
34	8	. .	. .	. .	17.7	30.2	43.2	. .	. .	. .	36 17.98	37.41	1.02	VI.	1	37.367	51 55.58	10.29	6.09	35 39.55	33 12.0
35	4	. .	. .	57.2	9.3	21.2	. .	. .	. .	. .	38 9.25	37.42	1.00	IV.	5	40.53	23 51.14	10.47	3.43	37 30.83	27 5 5.0
36	7	. .	19.3	31.5	43.8	. .	. .	. .	. .	. .	38 43.87	37.42	0.99	V.	6	40.292	15 18.16	10.53	2.62	38 5.46	26 56 31.3
37	10	. .	. .	. .	. .	. .	. .	43.2	. .	. .	40 6.09	37.43	1.00	VII.	4	42.558	28 31.41	10.68	3.86	39 27.66	27 9 46.0
38	8	21.	33.4	. .	. .	. .	. .	. .	. .	. .	41 58.16	37.44	1.00	III.	3	40.009	35 51.29	10.87	4.55	41 19.72	17 6.7
39	8	. .	. .	. .	. .	21.3	33.9	. .	. .	. .	42 9.07	37.44	1.00	VI.	4	39.560	30 15.06	10.89	4.02	41 30.63	11 30.0
40	9	. .	. .	. .	. .	. .	. .	20.8	. .	. .	44 43.68	37.45	1.01	VII.	2	41.445	43 43.52	11.15	5.29	44 5.22	27 25 0.0
41	10	. .	. .	. .	. .	. .	. .	. .	22.8	. .	45 27.60	37.45	0.99	11.	7	40.843	9 6.48	11.22	2.05	44 49.16	26 50 19.8
42	6	. .	34.3	46.4	58.6	11.4	. .	. .	. .	. .	47 58.85	37.46	1.00	VI.	3	39.242	36 17.66	11.47	4.59	47 20.39	27 17 33.7
43	9	. .	. .	. .	50.6	2.9	. .	. .	. .	. .	48 50.58	37.46	1.01	VI.	3	31.282	40 52.40	11.56	5.03	48 12.11	27 22 9.0
44	8	. .	. .	. .	47.7	. .	12.7	. .	. .	. .	49 47.92	37.47	0.99	VII.	7	34.032	13 1.94	11.66	2.41	49 9.46	26 54 16.0
45	5	. .	. .	. .	46.	58.	10.4	. .	. .	. .	50 45.91	37.47	0.98	VI.	7	48.60	4 39.31	11.76	1.64	50 7.46	26 45 52.7
46	7	. .	. .	. .	. .	51.3	. .	. .	. .	. .	53 38.98	37.48	1.02	VI.	1	30.442	55 54.60	12.04	6.47	53 0.48	27 37 13.1
47	8	38.4	51.2	3.3	. .	. .	. .	. .	. .	. .	58 15.64	37.50	0.99	IV.	6	34.047	18 53.71	12.51	2.96	57 37.15	0 9.2
48	6	. .	. .	. .	. .	51.3	. .	16.0	. .	. .	58 38.92	37.50	1.01	V.	2	36.718	46 26.96	12.54	5.56	58 0.41	27 45.1
49	6	. .	. .	. .	1.7	. .	. .	38.7	. .	. .	9 59 1.64	−37.50	−1.01	VII.	2	35.895	46 55.09	−12.58	− 5.60	9 58 23.13	27 28 13.3

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1849.	h.	s.	s.	s.	s.	s.	° ′ ″	r.
Apr. 5,	12	− 39.125	g 0.038	− 0.175	+ 0.465	− 0.196	0 0 1.34	39.701

REMARKS.

(174) 3. Multiple star.

(174) 26. Transit over T. 11 assumed to have been recorded as over T. VII, and minutes of transit assumed as 24.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1849. h. m.	° ′ ″				″	″	in.	°	°
Zone 174	Apr. 5, 8 52	. .	. .	. .	. .	. .	. .	30.110	61.0	51.9
	8 55	293 56 58.9	60.7	64.2	63.7	61.88	61.88			
	9 0	. .	. .	. .	. .	. .	. .	. .	. .	52.0
	9 20	. .	. .	. .	. .	. .	. .	. .	. .	50.6
	9 40	. .	. .	. .	. .	. .	. .	30.132	. .	49.8
	10 0	. .	. .	. .	. .	. .	. .	30.140	58.2	48.6
	10 7	59.5	61.5	65.3	65.2	62.88	62.88			
	10 20	. .	. .	. .	. .	. .	. .	30.146	57.2	47.9

ZONE 174. APRIL 5. MAJ. BELT, 294° 12½′. $D_0 = -26°\ 41'\ 0''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
50	8	. .	42.	54.4	6.4	18.8	. .	. .	. .	. .	10 3 6.56	−37.51	−1.00	VI.	4	42.25	28 42.21	−13.00	− 3.88	10 2 28.05	27 9 59.1
51	9	. .	. .	. .	. .	14.4	26.8	39.4	. .	. .	4 2.10	37.52	1.01	VII.	2	36.49	46 34.55	13.08	5.58	3 23.57	27 53.2
52	9	. .	3.7	16.	28.2	40.7	. .	. .	. .	. .	7 28.32	37.53	1.00	VI.	4	36.628	31 56.26	13.43	4.19	6 49.79	13 13.9
53	10	. .	. .	. .	58.4	11.	23.7	. .	. .	. .	8 58.66	37.54	1.00	VI.	4	41.42	29 10.85	13.57	3.92	8 20.12	27 10 28.3
54	8	. .	. .	. .	59.7	11.8	24.6	. .	. .	. .	9 59.74	37.54	0.99	VI.	6	38.143	16 32.21	13.67	2.73	9 21.21	26 57 48.6
55	7	. .	12.2	24.	36.3	48.7	. .	. .	. .	. .	11 36.49	37.55	0.98	V.	7	44.595	6 57.65	13.83	1.86	10 57.96	26 48 13.3
56	9	. .	. .	. .	30.2	42.9	. .	. .	. .	. .	12 30.41	37.55	1.01	V.	1	41.242	49 41.94	13.91	5.88	11 51.85	27 31 1.7
57	7	. .	. .	36.2	49.2	1.2	. .	. .	. .	. .	13 48.95	37.56	0.98	V.	7	45.387	6 30.30	14.05	1.81	13 10.41	26 47 46.2
58	8	42.	54.2	6.5	18 8	. .	. .	. .	. .	. .	15 18.86	37.56	0.99	IV.	7	40.52	9 18.32	14.19	2.07	14 40.31	26 50 34.6
59	7	57.4	9.7	22.2	34.5	. .	. .	. .	. .	. .	16 34.50	37.56	1.00	IV.	3	42.88	34 12.22	14.32	4.40	15 55.94	27 15 30.9
60	9	. .	. .	. .	. .	. .	. .	10.4	. .	. .	16 33.25	37.56	0.99	VII.	6	44.94	12 37.42	14.32	2.36	15 54.70	26 53 54.1
61	8	. .	. .	. .	40.	52.3	. .	. .	. .	. .	18 40.06	37.57	0.99	V.	7	38.472	10 28.98	14.52	2.17	18 1.50	26 51 45.7
62	10	. .	. .	. .	. .	. .	. .	. .	33.	. .	10 18 37.60	−37.57	−1.00	VII.	3	40.867	35 21.39	−14.52	− 4.51	10 17 59.03	27 16 40.4

ZONE 175. APRIL 5. MAJ. $D_0 = -23°\ 56'\ 10''$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	9	. .	. .	. .	. .	. .	. .	55.2	. .	. .	13 25 28.90	−37.53	−1.01	VII., VI.	1	41.772	49 23.30	− 6.27	− 5.66	13 24 50.36	24 45 45.2
2	6	. .	. .	10.5	22.4	34.5	. .	. .	. .	. .	31 22.54	37.51	0.99	VI.	7	40.24	9 27.87	6.40	2.28	30 44.04	5 46.6
3	9	. .	. .	. .	. .	25.3	37.4	49.2	. .	. .	32 13.13	37.51	1.01	VI.	2	42.572	43 4.81	6.41	5.12	31 34.61	39 26.3
4	9	. .	. .	. .	57.1	9.2	. .	. .	. .	. .	33 57.11	37.51	1.00	VI.	4	38.718	30 44.13	6.45	4.06	33 18.60	27 4.6
5	8	. .	12.4	24.5	36.7	48.6	. .	. .	. .	. .	35 36.59	37.50	0.99	V.	6	38.372	16 24.40	6.47	2.85	34 58.10	12 43.7
6	6	27.2	39.8	51.5	3.5	15.5	27.2	39.1	. .	. .	37 3.40	37.50	1.01	IV.	2	33.617	48 14.01	6.50	5.56	36 24.89	44 36.1
7	9	. .	. .	. .	18.3	31.2	. .	. .	. .	. .	38 18.73	37.49	1.00	V.	3	33.898	39 22.25	6.53	4.80	37 40.24	35 43.6
8	10	. .	. .	. .	. .	39.2	. .	. .	. .	. .	39 27.22	37.49	0.99	V.	7	35.952	11 55.96	6.55	2.48	38 48.74	8 15.0
9	9	28.2	40.2	52.5	4.1	16.4	28.5	40.6	. .	. .	42 4.36	37.49	1.00	IV.	3	32.844	39 58.61	6.59	4.85	41 25.87	36 20.0
10	7	. .	. .	. .	. .	. .	27.5	39.4	. .	. .	43 3.27	37.48	0.99	VII.	6	36.208	17 38.86	6.61	2.95	42 24.80	13 58.4
11	9	18.7	. .	18.7	30.	42.5	. .	. .	. .	. . .	47 30.40	37.47	1.00	I.	2	43.085	42 47.24	6.69	5.10	46 51.93	39 9.0
12	9	. .	. .	. .	. .	. .	55.7	7.5	. .	. .	47 31.39	37.47	1.00	VII.	4	37.857	31 13.69	6.69	4.10	46 52.92	27 34.5
13	6	. .	21.	33.2	44.6	57.2	9.2	. .	. .	. .	50 45.06	37.46	1.00	IV.	6	35.845	17 51.64	6.74	2.96	50 6.60	14 11.3
14	6	38.8	51.3	3.3	15.4	26.8	39.2	. .	. .	. .	52 15.18	37.45	1.00	VI.	6	31.879	20 8.41	6.77	3.17	51 36.73	16 28.4
15	10	. .	. .	. .	. .	. .	. .	. .	29.5	. .	52 35.46	37.45	1.01	11.	1	35.574	52 56.99	6.77	5.96	51 57.00	49 19.7
16	9	. .	10.4	21.7	34.3	46.3	58.4	. .	. .	. .	55 34.26	37.44	0.99	V.	7	43.947	7 20.01	6.82	2.09	54 55.83	3 38.9
17	9	. .	. .	. .	. .	. .	54.2	55.7	. .	. .	56 29.65	37.44	1.01	VII.	1	38.84	51 4.60	6.83	5.81	55 51.20	47 27.2
18	6	. .	58.5	10.8	. .	. .	. .	. .	. .	. .	58 22.68	37.43	0.99	IV.	7	48.22	4 52.56	6.87	1.89	57 44.26	1 11.3
19	9	. .	. .	. .	. .	46.2	58.4	10.5	. .	. .	58 34.21	37.43	1.00	VII.	4	40.817	29 31.55	6.87	3.96	57 55.78	25 52.4
20	9	. .	. .	. .	53.2	5.4	. .	. .	. .	. .	13 59 53.28	37.43	1.00	VI.	2	46.195	40 59.77	6.89	4.94	59 14.85	37 21.6
21	8	. .	. .	. .	. .	. .	. .	42.6	. .	. .	14 0 6.33	37.43	1.00	VII.	5	41.778	23 7.81	6.89	3.41	13 59 27.90	19 28.1
22	7	45.2	57.5	9.5	21.3	. .	. .	. .	. .	. .	2 21.52	37.42	1.01	.	2	39.462	44 52.28	6.93	5.27	14 1 43.09	41 14.5
23	8	. .	. .	. .	. .	15.	27.3	39.4	. .	. .	3 3.08	37.42	1.00	.	3	32.54	40 9.11	6.93	4.86	2 24.66	36 30.9
24	8	. .	. .	. .	. .	. .	. .	20.8	. .	. .	3 44.55	37.42	1.00	.	4	36.71	31 53.55	6.94	4.17	3 6.13	28 14.7
25	6	. .	. .	. .	3.4	15.7	. .	. .	. .	. .	5 3.56	37.41	1.01	.	1	38.35	51 21.79	6.96	5.83	4 25.14	47 44.6
26	8	44.5	56.5	8.8	20.5	32.8	45.2	56.7	. .	. .	8 20.71	37.40	1.00	IV.	2	41.88	43 28.81	7.01	5.16	7 42.31	39 51.0
27	8	. .	. .	. .	. .	28.5	41.	53.0	. .	. .	9 16.70	37.40	1.00	VI.	5	38.604	24 57.50	7.03	3.58	8 38.30	21 18.1
28	9	. .	. .	. .	. .	. .	5.8	17.5	. .	. .	9 41.42	37.40	1.00	VII.	3	33.155	39 47.62	7.04	4.84	9 3.02	36 9.5
29	9	. .	. .	. .	. .	. .	. .	. .	. .	22.5	10 15.97	37.40	1.01	.	2	39.21	45 0.07	7.04	5.28	9 37.56	41 22.4
30	9	. .	. .	. .	. .	. .	57.5	9.6	. .	. .	11 33.34	37.39	1.00	.	4	39.175	30 28.36	7.06	4.04	10 54.95	26 49.5
31	8	. .	. .	. .	. .	1.3	13.7	26.2	. .	. .	11 49.58	37.39	1.00	VII., VI.	4	43.080	28 13.33	7.06	3.85	11 11.19	24 34.2
32	9	. .	. .	. .	34.2	46.4	. .	. .	. .	. .	14 14 34.28	−37.38	−1.00	.	2	47.524	40 14.02	− 7.10	− 4.87	14 13 55.90	24 36 36.0

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1849. h.	s.	s.	s.	s.	s.	° ′ ″	r.

REMARKS.

(175) 1. Transit over T. VI assumed as 65ˢ.2 instead of 55ˢ.2.

(175) 17. Time of transit over T. VII assumed as 5ˢ.7 instead of 55ˢ.7.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1849. h. m.	° ′ ″				″	″	in.	°	°
Zone 175	Apr. 5, 13 20	. .	. .	. .	. .	. .	. .	30.188	53.0	44.0
	13 25	296 41 57.0	58.8	63.0	62.4	60.30	60.30			
	13 40	. .	. .	. .	. .	. .	. .	. .	. .	43.5
	14 0	. .	. .	. .	. .	. .	. .	30.188	52.	42.
	14 20	. .	. .	. .	. .	. .	. .	30.192	51.0	41.2
	14 40	. .	. .	. .	. .	. .	. .	30.194	50.5	40.8
	14 44	58.2	60.6	65.7	64.7	62.30	62.30			
	15 0	. .	. .	. .	. .	. .	. .	. .	. .	40.7

ZONE 175. APRIL 5. MAJ. $D_0 = -23° 56' 10''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
33	10	. .	. .	. .	. .	. .	. .	35.8	. .	. .	14 14 59.55	−37.38	−1.00	VII.	3	45.172	32 52.85	− 7.10	− 4.23	14 14 21.17	24 29 14.2
34	5	. .	30.3	41.5	54.0	5.6	17.7	. .	. .	. .	16 53.85	37.37	0.99	.	7	37.60	10 59.10	7.13	2.40	16 15.49	7 18.6
35	8	. .	. .	. .	. .	. .	9.0	20.5	. .	. .	19 44.54	37.36	1.00	.	5	31.554	29 0.95	7.17	3.92	19 6.16	25 22.0
36	9	. .	. .	. .	. .	. .	. .	25.2	. .	. .	20 48.92	37.36	1.00	.	6	31.937	20 6.26	7.17	3.16	20 10.56	16 26.6
37	6.7	26.2	38.5	50.7	2.6	14.8	26.5	. .	. .	. .	23 2.60	37.35	1.00	.	2	44.047	42 14.03	7.17	5.04	22 24.25	38 36.2
38	8	. .	. .	. .	12.4	24.6	36.7	48.7	. .	. .	24 12.48	37.35	1.00	.	4	43.052	28 14.67	7.16	3.84	23 34.13	24 35.7
39	8	. .	. .	14.6	26.	38.1	. .	. .	. .	. .	26 26.24	37.34	1.00	.	2	47.143	40 27.18	7.15	4.89	25 47.90	36 49.2
40	8	. .	. .	35.2	46.7	59.0	11.5	. .	. .	. .	29 47.04	37.32	1.01	.	2	38.808	45 14.85	7.13	5.31	29 8.71	41 37.3
41	6	. .	57.2	9.5	21.	33.0	. .	. .	. .	. .	31 21.20	37.32	1.00	IV.	5	36.434	26 12.52	7.12	3.67	30 42.88	22 33.3
42	9	. .	. .	17.5	29.6	41.0	. .	. .	. .	. .	33 29.44	37.31	0.99	.	7	41.685	8 38.11	7.11	2.17	32 51.14	4 57.4
43	7	32.5	45.2	57.2	8.5	. .	. .	. .	. .	. .	35 8.97	37.30	1.00	IV.	4	37.22	31 35.95	7.10	4.13	34 30.67	27 57.2
44	5	. .	. .	. .	12.	24.2	36.1	. .	. .	. .	35 12.05	37.30	1.00	VII.	5	38.778	24 51.35	7.10	3.57	34 33.75	21 12.0
45	8	. .	. .	. .	. .	47.5	59.8	12.	. .	. .	36 35.62	37.30	1.00	VII.	4	43.054	28 14.33	7.08	3.88	35 57.32	24 35.3
46	5	. .	. .	. .	57.	0.	. .	. .	. .	. .	37 57.50	37.29	1.00	.	1	37.73	51 43.18	7.07	5.83	37 19.21	48 6.1
47	7	. .	. .	. .	57.8	0.5	. .	. .	. .	. .	37 58.15	37.29	1.00	.	1	37.55	51 49.40	7.07	5.83	37 19.86	48 12.3
48	9	. .	. .	. .	. .	. .	. .	. .	. .	49.8	38 55.66	37.28	1.00	.	1	34.87	53 20.99	7.07	6.05	38 17.38	49 44.1
49	6	. .	. .	. .	. .	38.	50.	1.9	. .	. .	40 25.74	37.28	1.00	.	1	31.265	55 26.34	7.06	6.22	39 47.46	51 49.6
50	9	. .	. .	. .	. .	. .	. .	. .	46.2	. .	40 52.10	37.28	1.00	.	2	32.72	48 44.37	7.06	5.63	40 13.82	45 7.1
51	7	. .	. .	. .	. .	. .	. .	69.7	. .	. .	44 33.38	37.26	1.00	.	1	34.937	53 19.59	7.10	6.05	43 55.12	49 42.7
52	9	. .	. .	. .	59.5	. .	. .	. .	. .	. .	45 59.49	37.26	1.00	.	3	34.275	39 9.23	7.11	4.79	45 21.23	35 31.1
53	10	. .	. .	. .	. .	. .	. .	43.8	. .	. .	46 7.54	37.26	1.00	.	5	32.91	28 13.88	7.11	3.84	45 29.28	24 34.8
54	10	. .	. .	. .	. .	. .	. .	31.3	. .	. .	46 55.08	37.25	1.00	.	3	32.25	40 18.85	7.12	4.88	46 16.83	36 40.8
55	9	. .	. .	. .	. .	. .	. .	. .	. .	30.9	47 24.81	37.25	1.00	.	7	34.667	12 40.12	7.12	2.50	46 46.56	8 59.7
56	8	. .	. .	. .	. .	. .	. .	62.5	. .	. .	48 26.19	37.25	1.00	.	7	42.44	8 12.05	7.13	2.12	47 47.94	4 31.3
57	6	. .	. .	. .	. .	. .	49.0	0.5	. .	. .	49 24.44	37.24	1.00	.	1	34.455	53 36.23	7.14	6.07	48 46.20	49 59.4
58	8	25.5	37.4	49.8	1.7	. .	. .	. .	. .	. .	53 1.72	37.23	1.00	.	3	38.827	36 32.11	7.16	4.55	52 23.49	32 53.8
59	8	. .	. .	. .	. .	46.5	. .	. .	. .	. .	53 34.46	37.23	1.00	.	4	36.81	31 50.10	7.17	4.16	52 56.23	28 11.4
60	8	. .	. .	. .	34.5	47.2	. .	. .	. .	. .	54 34.82	37.22	1.00	.	4	34.395	33 13.46	7.18	4.26	53 56.60	29 34.9
61	3	. .	. .	54.	55.6	7.8	20.4	32.4	. .	. .	55 55.94	37.21	1.00	.	2	39.428	44 53.46	7.19	5.28	55 17.73	41 15.9
62	8	. .	17.8	29.8	41.7	54.2	6.2	. .	. .	. .	14 59 41.93	37.20	1.00	.	2	42.87	42 54.65	7.22	5.10	14 59 3.73	39 17.0
63	8	. .	. .	38.6	50.	2.4	14.6	. .	. .	. .	15 0 50.35	37.19	1.00	.	4	36.27	32 8.74	7.23	4.17	15 0 12.16	28 30.2
64	8	. .	. .	. .	. .	. .	. .	. .	13.5	. .	1 19.56	37.19	1.00	.	7	41.743	8 36.11	7.23	2.15	0 41.37	4 55.5
65	9	. .	. .	10.8	. .	. .	. .	. .	. .	. .	3 22.91	37.18	1.00	.	7	39.87	9 40.73	7.25	2.25	2 44.73	6 0.2
66	9	. .	. .	. .	. .	52.3	. .	. .	. .	. .	3 40.34	37.18	1.00	.	7	43.597	7 32.10	7.25	2.07	3 2.16	3 51.4
67	6	. .	. .	9.2	21.	33.4	. .	. .	. .	. .	5 21.20	37.17	1.00	.	1	44.282	47 57.05	7.26	5.58	4 43.03	44 19.9
68	10	. .	. .	. .	. .	. .	. .	. .	. .	26.	5 19.73	37.17	1.00	.	5	44.10	21 47.02	7.26	3.28	4 41.56	18 7.6
69	9	. .	. .	. .	. .	18.6	30.9	43.	. .	. .	7 6.71	37.16	1.00	.	6	36.487	17 29.46	7.28	2.94	6 28.55	13 49.7
70	8	. .	. .	34.3	46.4	58.3	. .	. .	. .	. .	8 46.40	37.15	1.00	.	7	37.10	11 16.36	7.29	2.42	8 8.25	7 36.1
71	7	. .	. .	. .	. .	53.5	5.3	. .	. .	. .	9 41.30	37.15	1.00	.	4	41.09	29 22.38	7.30	3.95	9 3.15	25 43.6
72	.	. .	. .	. .	. .	37.1	49.3	1.4	. .	. .	10 25.11	37.15	1.00	.	4	39.357	30 22.17	7.30	4.03	9 46.96	26 43.5
73	8	. .	. .	. .	1.5	13.6	25.7	. .	. .	. .	12 1.52	37.14	1.00	.	4	41.145	29 20.48	7.32	3.95	11 23.38	25 41.8
74	9	. .	. .	. .	. .	. .	. .	. .	. .	. .	15	37.12	1.00	.	1	34.63	53 30.18	7.34	6.05	(15)	49 53.6
75	7	27.4	39.4	51.3	3.4	15.3	39.7	. .	. .	. .	18 3.79	37.11	1.00	.	4	38.304	30 58.53	7.36	4.08	17 25.68	27 20.0
76	4	. .	. .	. .	. .	45.3	. .	. .	. .	. .	15 19 33.27	−37.10	−1.00	.	2	44.375	42 2.71	− 7.38	− 5.04	15 18 55.17	24 38 25.1

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1849. h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1849. h. m.	° ′ ″				″	″	in.	°	°
Zone 175	Apr. 5, 15 20	. . .	. . .	. . .	. . .	. . .	. . .	30.204	49.4	39.9

REMARKS.

(175) 46. Time of transit over T. V assumed as 10s instead of 0s. "Double star."

(175) 47. Time of transit over T. V assumed as 10s.5 instead of 0s.5.

(175) 48. Transit over T. 11 assumed to have been recorded over T. 12.

ZONE 176. APRIL 10. MAJ. BELT, 296° 5′. D$_0$=−24° 32′ 0″.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
1	8	45.	57.3	9.	21.3	. .	. .	. .	. .	. .	10 56 21.32	−31.01	−0.99	IV.	6	42.444	14 3.88	− 2.34	− 4.71	10 55 49.32	24 46 10.9
2	9	4.2	16.8	. .	40.7	. .	. .	. .	. .	. .	11 2 40.83	31.02	1.01	IV.	3	35.645	38 21.94	2.89	6.69	11 2 8.80	25 10 31.5
3	7	. .	. .	. .	. .	30.	42.2	54.2	. .	. .	3 17.90	31.02	1.00	.	6	40.92	15 30.99	2.94	4.75	2 45.88	24 47 38.7
4	6	. .	20.2	. .	. .	56.	. .	. .	. .	. .	3 44.20	31.02	1.01	.	3	35.11	38 40.40	2.98	6.72	3 12.17	25 10 50.1
5	8	. .	. .	. .	. .	. .	. .	45.2	. .	. .	4 8.76	31.03	1.00	.	5	36.64	26 5.41	3.00	5.68	3 36.73	24 58 14.1
6	7	. .	. .	. .	. .	. .	. .	53.0	. .	. .	5 16.60	31.03	1.01	.	3	32.17	40 21.88	3.11	6.84	4 44.56	25 12 31.8
7	6	. .	. .	. .	. .	. .	35.0	. .	. .	. .	5 10.63	31.03	1.01	12½.	2	35.79	46 57.93	3.10	7.39	4 38.59	19 8.4
8	8	. .	. .	36.5	48.5	0.8	. .	. .	. .	. .	7 48.59	31.03	1.01	IV.	2	42.24	43 16.40	3.33	7.08	7 16.55	25 15 26.8
9	9	. .	. .	. .	. .	. .	. .	53.	. .	. .	8 16.56	31.03	1.00	.	5	38.345	25 6.28	3.37	5.60	7 44.53	24 57 15.3
10	9	. .	. .	44.7	. .	9.2	. .	. .	. .	. .	8 56.92	31.03	1.00	.	5	34.398	27 22.80	3.42	5.78	8 24.89	24 59 32.0
11	9	. .	. .	. .	. .	25.6	37.8	. .	. .	. .	10 13.47	31.03	1.01	.	2	36.50	46 34.48	3.54	7.36	9 41.43	25 18 45.4
12	9	. .	. .	. .	. .	. .	. .	24.4	. .	. .	10 47.92	31.03	1.01	.	1	40.375	50 11.62	3.59	7.66	10 15.88	22 22.9
13	7	60.	12.	24.4	35.7	. .	. .	. .	. .	. .	13 36.25	31.04	1.01	IV.	2	34.337	47 49.17	3.83	7.45	13 4.20	25 20 0.5
14	7	. .	2.	14.5	26.5	38.7	. .	. .	. .	. .	16 26.50	31.04	0.99	.	7	34.363	12 50.83	4.06	4.61	15 54.47	24 44 59.5
15	10	. .	46.5	58.8	. .	. .	. .	. .	. .	. .	18 10.86	31.04	1.01	III.	1	38.502	51 16.51	4.21	7.74	17 38.81	25 23 28.5
16	8	. .	. .	. .	55.2	8.0	. .	. .	. .	. .	18 55.54	31.04	1.00	IV.	3	37.59	37 14.82	4.27	6.59	18 23.50	25 9 25.7
17	8	. .	. .	. .	. .	. .	51.0	3.7	. .	. .	19 27.01	31.04	1.00	.	5	40.90	23 38.37	4.33	5.48	18 54.97	24 55 48.2
18	8	. .	. .	. .	. .	. .	. .	. .	24.0	. .	19 29.62	31.04	1.00	.	3	41.545	34 58.31	4.33	6.41	18 57.58	25 7 9.0
19	6	. .	. .	. .	. .	56.3	8.5	20.5	. .	. .	20 44.16	31.05	1.00	II.	4	39.897	30 2.94	4.43	6.00	20 12.11	25 2 13.4
20	6	. .	. .	. .	. .	. .	50.	1.8	. .	. .	23 25.55	31.05	1.00	V.	5	36.538	26 8.90	4.66	5.68	22 53.50	24 58 19.2
21	7	. .	. .	. .	. .	. .	30.	41.8	. .	. .	24 5.54	31.05	1.00	V.	4	36.148	32 12.93	4.72	6.18	23 33.49	25 4 23.8
22	10	. .	. .	. .	. .	. .	1.5	13.5	. .	. .	26 37.15	31.05	1.00	VII.	5	35.144	26 56.76	4.93	5.74	26 5.10	24 59 7.4
23	9	. .	55.6	7.4	19.6	. .	. .	. .	. .	. .	29 19.65	31.05	1.00	.	5	41.995	23 0.59	5.16	5.43	28 47.60	24 55 11.2
24	10	. .	. .	. .	. .	. .	. .	. .	. .	55.	28 48.21	31.05	1.00	.	3	37.32	37 23.20	5.12	6.60	28 16.16	25 9 34.9
25	9	. .	. .	. .	19.	31.	43.	. .	. .	. .	31 18.96	31.05	0.99	VII.	7	33.265	13 28.45	5.33	4.67	30 46.92	24 45 38.4
26	10	. .	. .	. .	20.5	32.4	. .	. .	. .	. .	31 20.45	31.05	0.99	VII.	7	30.37	15 8.37	5.33	4.80	30 48.41	24 47 18.5
27	7	. .	. .	49.2	1.4	14.4	. .	. .	. .	. .	34 1.66	31.05	1.01	IV.	1	36.945	52 10.28	5.56	7.81	33 29.60	25 24 23.6
28	8	. .	19.2	31.	. .	. .	. .	. .	. .	. .	36 43.24	31.06	0.99	.	6	36.124	17 42.02	5.78	5.00	36 11.19	24 49 52.8
29	9	. .	. .	. .	18.0	30.7	. .	. .	. .	. .	38 18.32	31.06	1.01	.	1	37.268	51 59.14	5.91	7.80	37 46.25	25 24 12.8
30	9	. .	. .	. .	3.0	16.	. .	. .	. .	. .	40 3.44	31.06	1.00	.	3	38.20	36 53.76	6.06	6.56	39 31.38	9 6.4
31	7	. .	. .	. .	. .	30.	. .	. .	. .	. .	40 17.91	31.06	1.00	.	3	40.62	35 30.23	6.09	6.45	39 45.85	7 42.8
32	8	. .	. .	28.2	. .	. .	. .	. .	. .	. .	40 40.30	31.06	1.00	.	3	39.222	36 18.48	6.12	6.51	40 8.24	8 31.1
33	8	. .	. .	. .	. .	. .	. .	70.	. .	. .	41 33.58	31.06	1.00	.	4	36.374	32 5.15	6.19	6.17	41 1.52	4 17.5
34	8	. .	. .	. .	. .	. .	. .	27.4	. .	. .	41 51.00	31.06	1.01	.	3	31.690	40 38.44	6.21	6.87	41 18.97	25 12 51.5
35	10	. .	. .	. .	. .	. .	31.0	. .	. .	. .	46 6.78	31.06	0.99	.	6	29.424	21 33.15	6.57	5.32	45 34.73	24 53 45.0
36	8	. .	. .	. .	. .	. .	10.5	. .	. .	. .	46 46.23	31.06	1.00	.	5	33.545	27 52.24	6.63	5.82	46 14.17	25 0 4.7
37	4.5	. .	. .	. .	. .	. .	61.0	13.0	. .	. .	47 36.66	31.06	0.99	.	5	46.032	20 41.24	6.69	5.25	47 4.61	24 52 53.2
38	8	. .	32.3	44.	56.4	. .	. .	. .	. .	. .	49 56.35	31.06	0.99	.	7	45.43	6 28.85	6.88	4.11	49 24.30	24 38 39.8
39	9	. .	. .	. .	. .	26.	38.5	. .	. .	. .	50 14.02	31.06	1.01	.	1	46.81	46 29.76	6.91	7.35	49 41.95	25 18 44.0
40	5	. .	22.8	35.7	47.6	0.8	12.4	. .	. .	. .	51 47.85	31.06	1.00	.	3	46.465	32 8.49	7.04	6.17	51 15.79	25 4 21.7
41	10	. .	. .	. .	. .	. .	. .	. .	. .	64.5	52 57.80	31.06	1.00	.	4	46.60	23 19.63	7.14	5.69	51 25.74	24 55 52.5
42	10	. .	. .	. .	. .	. .	. .	11.0	. .	. .	53 34.60	31.06	1.00	.	2	50.07	38 45.86	7.18	6.71	53 2.54	25 10 59.8
43	9	. .	. .	. .	. .	. .	25.7	37.7	. .	. .	57 1.35	31.06	1.00	.	5	35.36	26 49.46	7.47	5.73	56 29.29	24 59 2.7
44	9	. .	. .	. .	. .	. .	16.6	28.7	. .	. .	58 52.30	31.06	1.00	.	5	38.50	25 1.09	7.63	5.59	58 20.24	57 14.3
45	7	. .	. .	. .	. .	. .	. .	. .	9.3	. .	11 59 15.08	31.06	0.99	.	7	40.678	9 12.87	7.66	4.33	11 58 43.03	24 41 24.9
46	7	. .	. .	. .	. .	2.6	14.2	. .	. .	. .	12 0 50.16	31.06	1.01	VII.	1	41.057	49 48.08	7.78	7.62	12 0 18.09	25 22 3.5
47	7	. .	. .	. .	. .	. .	. .	49.6	. .	. .	1 13.12	31.06	0.99	VII, III.	7	37.67	10 56.30	7.82	4.46	0 41.07	24 23 8.6
48	8	. .	. .	. .	. .	4.7	. .	29.2	. .	. .	2 52.70	31.06	1.00	.	3	41.944	34 44.53	7.96	6.39	2 20.64	25 6 58.9
49	6	. .	. .	34.6	46.5	58.7	. .	. .	. .	. .	12 4 46.60	−31.06	−1.00	.	3	43.070	34 5.66	− 8.11	− 6.34	12 4 14.54	25 6 20.1

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1849. h.	s.	s.	s.	s.	s.	° ′ ″	r.
Apr. 10, 10	−32.583	+ 0.011	− 0.150	+ 0.513	− 0.196	0 0 2.61	39.719

INSTRUMENT READINGS.

	Date,	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1849. h. m.	° ′ ″				″	″	in.	°	°
Zone 176	Apr. 10, 10 54	. .	. .	. .	. .	. .	. .	29.782	60.2	61.9
	10 56	296 5 57.3	57.5	63.0	62.4	60.05	60.05			
	11 20	. .	. .	. .	. .	. .	. .	29.798	. .	61.0
	11 34	. .	. .	. .	. .	. .	. .	29.808	61.0	61.5
	12 0	. .	. .	. .	. .	. .	. .	29.824	. .	60.4
	12 13	56.0	57.4	63.2	62.8	. .	59.85			
	12 15	. .	. .	. .	. .	. .	. .	29.822	61.0	59.3

REMARKS.

(176) 3. Micrometer reading assumed as 39$^{\text{r}}$.92 instead of 40$^{\text{r}}$.92.

(176) 41. Minutes of transit assumed as 51 instead of 52, and micrometer reading assumed as 51$^{\text{r}}$.60 instead of 46$^{\text{r}}$.60.

ZONE 176. APRIL 10. MAJ. BELT, 296° 5′. D₀=−24° 32′ 0″—Continued.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	c_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
50	9	. .	. .	. .	. .	39.2	. .	51.	. .	. .	12 5 26.91	−31.06	−1.00	.	4	40.984	29 26.00	− 8.16	− 5.95	12 4 54.85	25 1 40.1
51	8	. .	. .	. .	. .	. .	53.	55.0	. .	. .	5 28.65	31.06	1.00	.	4	45.235	26 59.31	8.16	5.75	4 56.59	24 59 13.2
52	8	. .	. .	. .	. .	17.	. .	. .	. .	. .	7 4.91	31.06	1.01	.	2	38.925	45 10.81	8.30	7.24	6 32.84	25 17 26.4
53	8	. .	. .	. .	27.2	39.3	. .	. .	. .	. .	7 27.22	31.06	1.01	.	1	38.675	51 10.57	8.33	7.73	6 55.15	23 26.6
54	8	. .	. .	. .	. .	. .	. .	39.5	. .	. .	8 3.07	31.06	1.00	.	4	42.132	28 46.41	8.38	5.90	7 31.01	1 0.7
55	8	. .	23.2	35.7	. .	. .	. .	. .	. .	. .	9 47.64	31.06	1.00	.	3	39.28	36 16.48	8.52	6.51	9 15.58	25 8 31.5
56	9	. .	. .	. .	. .	. .	. .	. .	. .	58.	10 51.41	31.06	0.99	.	5	44.21	21 43.20	8.61	5.33	10 19.36	24 53 57.1
57	8	. .	. .	. .	. .	53.	5.5	. .	. .	. .	1? 41.00	31.06	1.01	.	1	37.44	51 53.19	8.73	7.79	11 8.93	25 24 9.7
58	8	. .	47.	. .	1.0	. .	. .	. .	. .	. .	1? 11.17	31.06	1.01	.	2	41.185	43 52.81	8.75	7.14	11 39.10	25 16 8.6
59	8	. .	. .	. .	. .	. .	. .	26.4	. .	. .	12 12 49.92	−31.06	−0.99	.	7	36.41	11 40.18	− 8.77	− 4.52	12 12 17.87	24 43 53.5

ZONE 177. APRIL 11. MAJ. D₀=−24° 31′ 50″.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	c_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	9	. .	. .	. .	. .	. .	37.3	49.6	. .	. .	9 40 13.10	−30.48	−1.00	.	4	45.31	26 56.60	− 9.72	− 2.76	9 39 41.62	24 58 59.1
2	8	. .	. .	. .	. .	. .	39.7	52.0	. .	. .	42 15.52	30.49	0.99	.	5	49.352	18 46.66	9.92	2.08	41 44.04	24 50 48.7
3	9	. .	. .	. .	. .	. .	54.2	6.3	. .	. .	43 29.84	30.49	1.01	.	1	45.58	47 12.12	10.03	4.39	42 58.34	25 19 16.5
4	9	. .	. .	. .	. .	12.0	24.	36.	. .	. .	44 59.72	30.50	1.01	.	2	44.43	42 0.78	10.18	3.96	44 28.21	14 4.9
5	9	. .	. .	. .	. .	. .	37.3	. .	. .	. .	45 12.97	30.50	1.01	.	3	34.257	39 9.85	10.20	3.74	44 41.46	25 11 13.8
6	8	11.3	23.7	. .	. .	. .	. .	. .	. .	. .	47 47.74	30.51	0.99	II.	7	32.698	13 48.18	10.45	1.74	47 16.24	24 45 50.4
7	5	. .	. .	. .	56.	8.4	20.4	32.4	. .	. .	47 56.09	30.51	1.01	.	3	29.932	41 39.13	10.47	3.93	47 24.57	25 13 43.5
8	10	. .	46.4	58.3	9.7	22.6	. .	. .	. .	. .	50 10.31	30.52	1.00	VI.	4	34.160	33 21.45	10.68	3.26	49 38.79	25 5 25.4
9	7	. .	. .	. .	. .	. .	. .	. .	14.	. .	50 19.82	30.52	0.98	.	7	47.35	5 22.59	10.69	1.07	49 48.32	24 37 24.3
10	8	. .	45.5	57.6	9.6	21.2	. .	. .	. .	. .	55 9.56	30.53	0.99	.	7	40.303	9 25.81	11.15	1.39	54 38.04	41 28.4
11	7.8	. .	. .	. .	11.2	23.0	35.2	. .	. .	. .	56 11.09	30.53	0.99	.	7	34.778	12 36.51	11.17	1.65	55 39.57	44 39.3
12	6	. .	. .	. .	. .	30.7	42.8	. .	. .	. .	57 18.70	30.54	0.98	.	7	50.507	3 33.62	11.34	0.92	56 47.18	35 35.9
13	9	. .	. .	. .	. .	. .	. .	. .	26.	. .	57 31.75	30.54	0.99	.	6	44.937	12 37.22	11.37	1.65	57 0.22	44 40.2
14	9	. .	. .	. .	. .	17.8	30.	. .	. .	. .	59 5.74	30.55	1.00	.	5	38.065	25 16.20	11.52	2.62	58 34.19	24 57 20.3
15	10	. .	. .	. .	. .	. .	. .	11.0	. .	. .	9 59 34.59	30.55	1.00	.	3	42.384	34 29.06	11.57	3.37	9 59 3.04	25 6 34.0
16	10	42.	54.5	. .	. .	. .	. .	. .	. .	. .	10 2 18.56	30.56	0.99	.	5	43.84	21 56.86	11.83	2.38	10 1 47.01	24 54 1.1
17	10	. .	. .	. .	. .	30.	42.5	. .	. .	. .	2 18.09	30.56	1.00	.	5	39.152	24 38.67	11.83	2.57	1 46.53	24 56 43.1
18	10	. .	. .	. .	. .	. .	. .	19.2	. .	. .	2 42.78	30.56	1.00	.	4	37.479	31 26.73	11.87	3.11	2 11.22	25 3 31.7
19	9	. .	. .	. .	. .	4.	16.4	. .	. .	. .	3 51.96	30.56	1.01	.	2	32.84	48 40.80	11.98	4.50	3 20.39	20 47.3
20	.	. .	. .	. .	. .	. .	. .	53.	. .	. .	4 16.51	30.56	1.01	.	1	37.494	51 51.05	12.02	4.74	3 44.94	25 23 57.8
21	8	. .	. .	. .	. .	. .	. .	39.8	. .	. .	5 3.31	30.56	0.98	.	7	45.774	6 16.97	12.09	1.14	4 31.77	24 38 20.2
22	9	. .	. .	. .	35.	. .	. .	. .	. .	. .	8 35.09	30.57	0.98	.	7	43.698	7 28.64	12.44	1.24	8 3.54	39 32.3
23	7	. .	14.	. .	. .	. .	. .	4.7	. .	. .	8 38.20	30.57	0.99	.	6	38.174	16 31.26	12.45	1.94	8 6.64	48 35.6
24	8	. .	. .	. .	26.0	. .	. .	. .	. .	. .	11 26.06	30.58	0.99	.	7	34.51	12 45.76	12.71	1.66	10 54.49	44 50.1
25	9	. .	. .	. .	14.4	26.4	. .	. .	. .	. .	12 14.34	30.59	1.00	.	5	33.55	27 52.07	12.79	2.83	11 42.75	59 57.7
26	9	. .	. .	. .	. .	. .	. .	. .	29.4	. .	12 35.10	30.59	0.99	.	6	34.304	18 44.21	12.82	2.12	12 3.52	50 49.2
27	6	. .	28.2	40.5	52.8	. .	. .	. .	. .	. .	14 52.61	30.59	0.98	.	7	47.872	5 4.57	13.04	1.05	14 21.04	37 8.7
28	9	. .	. .	. .	. .	20.0	32.0	. .	. .	. .	15 7.90	30.60	0.99	.	6	45.497	12 18.49	13.05	1.62	14 36.31	44 23.2
29	10	. .	19.2	31.	. .	. .	. .	. .	. .	. .	16 43.27	30.60	1.00	.	5	40.91	23 38.00	13.21	2.51	16 11.67	24 55 43.7
30	6.7	. .	. .	. .	2.0	14.4	26.4	. .	. .	. .	17 2.12	30.60	1.00	.	3	37.70	37 11.02	13.23	3.58	16 30.52	25 9 17.8
31	8	. .	. .	. .	. .	9.2	21.4	33.4	. .	. .	17 57.10	30.60	0.99	.	6	38.414	16 22.98	13.32	1.92	17 25.51	24 48 28.2
32	9	. .	. .	. .	. .	. .	. .	. .	11.3	. .	18 17.10	30.60	0.98	.	7	43.94	7 19.66	13.35	1.22	17 45.52	39 24.2
33	9	. .	. .	. .	. .	52.4	4.5	. .	. .	. .	10 19 40.29	−30.61	−1.00	.	5	40.138	24 4.65	−13.48	− 2.53	10 19 8.68	24 56 10.7

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	*m*	*n*	*c*	Zenith Point.	Mic. Co.
1849. Apr. 11,	h. 8	s. −32.288	s. *l* 0.009	s. − 0.150	s. + 0.513	s. − 0.196	° ′ ″ 359 59 57.47	r. 39.704

INSTRUMENT READINGS.

	Date.	CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1849. h. m.	° ′ ″				″	″	in.	°	°
Zone 177	Apr, 11, 9 40	296 5 58.2	59.4	65.8	63.0	. .	61.60	30.152	59.7	53.3
	10 0	. .	. .	. .	. .	. .	. .	. .	. .	52.7
	10 20	. .	. .	. .	. .	. .	. .	. .	. .	50.9
	10 40	. .	. .	. .	. .	. .	. .	30.162	58.2	50.7
	11 0	. .	. .	. .	. .	. .	. .	. .	. .	49.9
	11 20	. .	. .	. .	. .	. .	. .	. .	. .	49.2
	11 40	58.5	59.1	66.4	64.2	. .	62.05	30.166	56.0	48.7
	12 20	. .	. .	. .	. .	. .	. .	30.164	. .	46.4

REMARKS.

(176) 50. Transit at 51^s assumed to have been over T. VI instead of T. VII.

(176) 51. Transit over T. VII assumed to have been at 5^s.0 instead of 55^s.0.

(176) 57. Minutes of transit assumed as 11.

(176) 58. Transit over T. IV assumed to have been at 11^s.0 instead of 1^s.0, and minutes assumed as 12.

ZONE 177. APRIL 11. MAJ. $D_0 = -24° 31' 50''$—Continued.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
34	10	. .	. .	. .	. .	. .	. .	. .	. .	44.4	10 19 37.52	−30.61	−1.01	12.	1	38.78	51 6.02	−13.48	− 4.70	10 19 5.90	25 23 14.2
35	8	. .	16.2	28.4	40.2	52.5	. .	. .	. .	. .	21 40.38	30.61	1.00	.	4	39.065	30 32.28	13.68	3.04	21 8.77	25 2 39.0
36	9	. .	. .	. .	. .	. .	54.0	6.2	. .	. .	22 29.78	30.62	0.99	.	6	39.150	15 57.45	13.75	1.90	21 58.17	24 48 3.1
37	9	. .	. .	. .	. .	. .	. .	7.5	. .	. .	23 31.10	30.62	1.01	.	3	33.50	39 35.70	13.85	3.77	22 59.47	25 11 43.3
38	8	. .	. .	. .	. .	. .	47.5	0.0	. .	. .	24 23.34	30.62	1.01	.	2	34.888	47 30.15	13.95	4.42	23 51.71	19 38.5
39	8	. .	. .	. .	. .	. .	. .	16.8	. .	. .	24 40.40	30.62	1.01	.	3	30.70	41 12.62	13.98	3.92	24 8.77	25 13 20.5
40	9	. .	. .	. .	32.	44.	. .	. .	. .	. .	26 32.00	30.63	0.99	.	6	37.335	17 0.30	14.14	1.97	26 0.38	24 49 6.4
41	9	. .	. .	. .	. .	50.3	2.7	. .	. .	. .	26 38.40	30.63	0.99	.	7	36.56	11 34.97	14.15	1.56	26 6.78	43 40.7
42	9	. .	. .	. .	. .	15.7	. .	. .	. .	. .	26 3.65	30.63	0.99	.	6	36.715	17 21.59	14.10	2.00	25 32.03	49 27.7
43	7	. .	. .	. .	. .	50.7	2.8	. .	. .	. .	28 38.67	30.63	0.99	.	7	40.43	9 21.43	14.34	1.38	28 7.05	24 41 27.2
44	10	. .	. .	. .	55.0	7.3	. .	. .	. .	. .	29 55.08	30.64	1.00	.	4	35.79	32 25.31	14.46	3.19	29 23.44	25 4 33.0
45	10	. .	. .	. .	. .	35.3	47.2	. .	. .	. .	30 23.11	30.64	0.99	.	6	30.042	21 11.91	14.52	2.30	29 51.48	24 53 18.7
46	7	58.3	10.1	22.7	34.	46.6	. .	. .	. .	. .	32 34.49	30.64	1.00	.	4	36.435	32 3.05	14.72	3.16	32 2.85	25 4 10.9
47	9	. .	. .	. .	. .	41.5	. .	. .	. .	. .	33 29.44	30.64	0.99	.	6	30.63	20 51.61	14.80	2.27	32 57.81	24 52 58.7
48	8	. .	48.2	0.3	12.2	. .	. .	. .	. .	. .	35 12.35	30.65	1.00	.	4	35.142	32 47.68	14.96	3.22	34 40.70	25 4 55.9
49	7	. .	. .	. .	17.0	29.4	. .	. .	. .	. .	35 17.16	30.65	1.01	.	2	41.675	43 35.89	14.97	4.10	34 45.50	15 45.0
50	8	. .	. .	. .	. .	45.3	57.7	. .	. .	. .	36 33.30	30.65	1.00	.	4	35.142	32 47.68	15.10	3.22	36 1.65	4 56.0
51	6	31.	43.0	55.2	7.	. .	. .	. .	. .	. .	40 7.28	30.66	1.01	.	2	41.837	43 30.30	15.43	4.11	39 35.61	25 15 39.8
52	6	. .	. .	. .	8.5	21.	. .	. .	. .	. .	40 8.76	30.66	0.99	.	6	45.075	12 33.08	15.43	1.61	39 37.11	24 44 40.1
53	8	. .	38.0	. .	2.0	. .	. .	. .	. .	. .	44 2.09	30.67	0.99	.	6	46.768	11 34.65	15.80	1.55	43 30.43	24 43 42.0
54	9	23.5	36.	48.2	. .	. .	. .	. .	. .	. .	46 0.19	30.67	1.00	.	3	45.055	32 57.14	15.99	3.24	45 28.52	25 5 6.4
55	10	. .	. .	. .	. .	. .	17.4	29.2	. .	. .	45 52 94	30.67	1.00	.	3	35.475	38 27.69	15.98	3.69	45 21.27	25 10 37.4
56	9	. .	. .	48.5	0.7	12.4	25.0	. .	. .	. .	48 0.62	30.67	1.00	.	6	30.37	21 0.62	16.17	2.28	47 28.95	24 53 9.1
57	8	. .	10.2	22.4	34.4	. .	. .	. .	. .	. .	49 34.45	30.68	0.99	.	7	30.675	14 58.12	16.32	1.81	49 2.78	24 47 6.2
58	9	22.0	34.3	46.4	58.	. .	. .	. .	. .	. .	51 58.40	30.68	1.01	.	2	36.855	46 22.26	16.54	4.33	51 26.71	25 18 33.1
59	11	. .	. .	. .	9.0	21.5	. .	. .	. .	. .	52 9.21	30.68	1.01	.	2	38.337	45 31.11	16.56	4.26	51 37.52	25 17 41.9
60	.	. .	. .	. .	. .	. .	42.0	54.2	. .	. .	53 17.76	30.68	1.00	.	5	39.93	24 11.73	16.66	2 54	52 46.08	24 56 20.9
61	.	. .	. .	. .	. .	. .	15.0	27.4	. .	. .	53 50.84	30.69	1.00	.	4	38.445	30 53.55	16.71	3.07	53 19.15	25 3 3.3
62	.	. .	. .	. .	0.4	. .	. .	36.5	. .	. .	54 0.23	30.69	1.00	.	5	42.77	22 33.83	16.72	2.41	53 28.54	24 54 43.0
63	7	. .	. .	. .	57.7	10.4	. .	. .	. .	. .	55 57.99	30.69	1.00	.	3	45.42	32 44.56	16.91	3.22	55 26.30	25 4 54.7
64	6	. .	. .	. .	. .	33.	55.5	. .	. .	. .	56 21.15	30.69	0.99	.	6	42.518	14 1.34	16.95	1.73	55 49.47	24 46 10.0
65	7	. .	. .	. .	. .	7.9	20.	. .	. .	. .	56 55.75	30.69	1.00	.	3	40.875	35 21.43	17.00	3.44	56 24.06	25 7 31.9
66	7	. .	. .	. .	. .	. .	. .	33.6	. .	. .	10 56 57.14	30.70	0.99	.	6	33.717	19 5.10	17.00	2.14	56 25.45	24 51 14.2
67	9	. .	. .	11.6	23.	. .	. .	. .	. .	. .	11 0 23.33	30.70	1.01	.	2	40.26	44 24.74	17.30	4.17	10 59 51.62	25 16 36.2
68	10	. .	. .	. .	. .	. .	0.3	12.5	. .	. .	0 36.04	30.70	1.00	.	3	43.14	34 3.13	17.32	3.33	11 0 4.34	6 13.8
69	9	4.2	17.0	29.2	40.7	. .	. .	. .	. .	. .	2 40.99	30.70	1.00	.	3	35.665	38 21.25	17.51	3.68	2 9.29	10 32.4
70	6.7	. .	20.	32.4	44.3	. .	. .	. .	. .	. .	3 44.36	30.71	1.00	.	3	35.20	38 37.30	17.60	3.70	3 12.65	25 10 48.6
71	8	. .	. .	. .	. .	20.7	. .	. .	. .	. .	4 8.61	30.71	1.00	.	5	36.72	26 2.65	17.63	2.68	3 36.90	24 38 13.0
72	8	. .	. .	. .	. .	. .	54.3	6.4	. .	. .	4 30.00	30.71	1.00	.	3	42.517	34 24.76	17.67	3.36	3 58.29	25 6 35.8
73	6	. .	. .	. .	. .	. .	35.	47.0	. .	. .	5 10.59	30.71	1.01	.	2	35.88	46 55.91	17.73	4.38	4 38.87	25 19 8.0
74	9	. .	. .	. .	. .	. .	. .	37.3	. .	. .	6 0.86	30.71	1.00	.	5	36.395	26 13.59	17.80	2.70	5 29.15	24 58 24.1
75	7	. .	24.4	36.7	48.4	60.5	. .	. .	. .	. .	7 48.58	30.71	1.01	.	2	42.285	43 14.85	17.96	4.08	7 16.86	25 15 26.9
76	10	. .	. .	. .	. .	. .	41.0	53.5	. .	. .	8 16.90	30.72	1.00	.	5	38.347	25 6.37	18.00	2.61	7 45.18	24 57 17.0
77	9	. .	. .	. .	. .	. .	. .	33.2	. .	. .	8 56.77	30.72	1.00	.	5	34.46	27 20.37	18.06	2.79	8 25.05	24 59 31.2
78	9	. .	. .	. .	13.4	25.8	. .	. .	. .	. .	10 13.56	30.72	1.01	.	2	36.515	46 34.00	18.17	4.36	9 41.83	25 18 46.5
79	10	. .	. .	. .	. .	0.4	. .	. .	. .	. .	10 48.31	30.72	1.01	.	1	40.45	50 9.28	18.22	4.65	10 16.58	22 22.1
80	9	. .	. .	. .	. .	. .	37.3	49.4	. .	. .	11 12.99	30.72	1.00	.	3	40.958	35 18.45	18.25	3.43	10 41.27	7 30.1
81	7	59.7	12.	24.0	35.7	. .	. .	. .	. .	. .	13 36.08	30.72	1.01	.	2	34.427	47 46.06	18.45	4.45	13 4.35	25 19 59.0
82	9	. .	. .	14.4	26.2	. .	. .	. .	. .	. .	11 16 26.41	−30.72	−0.99	.	7	34.427	12 48.62	−18.69	− 1.62	11 15 54.70	24 44 58.9

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1849.	h.	s.	s.	s.	s.	s.	° ′ ″	r.

REMARKS.

(177) 64. Time of transit over T. VI assumed as $45^s.5$ instead of $55^s.5$.

INSTRUMENT READINGS.

	Date.	CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1849. h. m.	° ′ ″				″	″	in.	°	°
Zone 177	Apr. 11, 12 40	. .	. .	. .	. .	. .	. .	. .	. .	46.5
	13 0	296 5 58.9	60.2	67.0	65.4	. .	62.88	30.168	54.	46.3
	13 25	. .	. .	. .	. .	. .	. .	. .	. .	45.9

Zone 177. April 11. Maj. $D_0 = -21° 31' 50''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
83	8	34.4	46.3	58.7	10.7	. .	. .	. .	. .	. .	11 18 10.76	−30.73	−1.01	.	1	38.603	51 13.06	−18.84	− 4.74	11 17 39.02	25 23 26.6
84	8	. .	. .	43.5	55.7	7.9	. .	. .	. .	. .	18 55.70	30.73	1.01	.	3	32.711	40 3.21	18.90	3.82	18 23.96	25 12 15.9
85	7	. .	. .	. .	. .	. .	51.1	3.3	. .	. .	19 26.86	30.73	1.00	.	5	40.957	23 36.41	18.94	2.49	18 55.13	24 55 47.8
86	6.7	. .	. .	. .	44.3	56.3	. .	. .	. .	. .	20 44.23	30.73	1.00	.	4	39.984	30 0.55	19.05	3.00	20 12.50	25 2 12.6
87	9	. .	. .	. .	. .	33.0	45.7	. .	. .	. .	21 21.19	30.73	1.00	.	5	41.749	23 9.05	19.10	2.45	20 49.46	24 55 20.6
88	9	. .	. .	. .	. .	. .	16.4	28.4	. .	. .	21 52.04	30.73	1.00	.	4	40.919	29 28.16	19.14	2.96	21 20.31	25 1 40.3
89	6	. .	1.	13.3	25.5	. .	. .	. .	. .	. .	23 25.38	30.73	1.00	.	5	36.672	26 4.30	19.26	2.69	22 53.65	24 58 16.2
90	8	. .	. .	. .	5.5	17.4	29.9	. .	. .	. .	24 5.46	30.73	1.00	.	4	36.24	32 9.78	19.31	3.17	23 33.73	25 4 22.3
91	9	. .	. .	. .	. .	. .	. .	. .	. .	43.7	26 37.00	30.74	1.00	.	5	35.259	26 52.14	19.52	2.75	26 5.26	24 59 4.4
92	8	43.4	. .	7.4	19.4	. .	. .	. .	. .	. .	29 19.59	30.74	1.00	.	5	42.080	22 57.65	19.74	2.44	28 47.85	24 55 9 8
93	9	. .	. .	. .	0.7	13.2	25.4	. .	. .	. .	30 0.95	30.74	1.01	.	1	43.208	48 34.13	19.80	4.52	29 29.20	25 20 48.4
94	9	. .	. .	. .	18.	30.	43.	. .	. .	. .	31 18.29	30.74	0.99	.	6	43.665	13 21.74	19.90	1.66	30 46.56	24 45 33.3
95	10	. .	. .	. .	19.5	31.7	44.7	. .	. .	. .	31 19.91	30.74	0.99	.	6	40.61	15 7.18	19.90	1.81	30 48.18	24 47 18.9
96	8	. .	37.5	49.6	1.8	14.1	26.2	. .	. .	. .	34 1.83	30.74	1.01	.	1	36.967	52 9.52	20.11	4.81	33 30.08	25 24 24.4
97	7	7.3	19.4	31.5	43.4	55.7	. .	. .	. .	. .	36 43.59	30.74	0.99	.	6	36.157	17 40.88	20.32	2.02	36 11.86	24 49 53.2
98	9	. .	54.4	6.4	18.3	30.3	42.4	. .	. .	. .	38 18.35	30.74	1.01	.	1	37.347	51 56.40	20.44	4.79	37 46.60	25 24 11.6
99	8	41.7	. .	51.3	4.	. .	. .	. .	. .	. .	40 4.54	30.75	1.00	.	3	38.249	36 52.07	20.60	3.56	39 32.69	9 6.2
100	6	41.7	. .	5.2	. .	. .	42.7	. .	. .	. .	40 17.96	30.75	1.00	.	3	40.74	35 26.09	20.60	3.44	39 46.21	7 40.1
101	7	. .	. .	. .	. .	52.	4.4	. .	. .	. .	40 40.00	30.75	1.00	.	3	39.313	36 15.34	20.63	3.51	40 8.25	8 29.5
102	7	. .	. .	. .	. .	. .	. .	9.5	. .	. .	41 33.08	30.75	1.00	.	4	36.392	32 4.53	20.69	3.17	41 1.38	4 18.4
103	7	. .	. .	. .	. .	. .	. .	27.2	. .	. .	41 50.80	30.75	1.01	.	3	31.737	40 36.82	20.71	3.87	41 19.04	12 51.4
104	10	. .	. .	. .	24.8	37.8	. .	. .	. .	. .	46	30.75	1.01	.	3	31.456	40 46.53	21.0	3.88	(41)	13 1.4
105	.	. .	. .	. .	. .	. .	10.8	22.8	. .	. .	46 46.45	30.75	1.00	.	5	33.54	27 52.41	21.08	2.83	46 14.70	25 0 6.3
106	4	. .	. .	. .	36.	48.7	0.9	13.	. .	. .	47 36.47	30.75	0.99	12.	6	30.845	20 43.29	21.14	2.26	47 4.73	24 52 56.7
107	7	. .	32.	44.0	56.	8.1	20.6	. .	. .	. .	49 56.18	30.75	0.99	.	7	45.454	6 28.02	21.31	1.12	49 24.44	24 38 40.4
108	8	. .	. .	. .	. .	. .	. .	49.	. .	. .	50 12.55	30.75	1.01	.	1	46.872	46 27.65	21.34	4.34	49 40.79	25 18 43.3
109	5	. .	. .	35.3	47.5	59.9	. .	. .	. .	. .	51 47.56	30.75	1.00	.	3	46.54	32 5.90	21.45	3.17	51 15.81	25 4 20.5
110	9	. .	. .	. .	. .	. .	. .	34.3	. .	. .	51 57.86	30.75	1.00	.	5	41.658	23 11.94	21.46	2.45	51 26.11	24 55 25.8
111	9	. .	. .	. .	. .	46.3	. .	11.	. .	. .	53 34.40	30.75	1.00	.	3	36.000	38 9.66	21.58	3.66	53 2.65	25 10 24.9
112	10	. .	. .	. .	. .	13.3	. .	. .	. .	. .	58 1.21	30.75	1.00	.	5	35.445	26 46.62	21.89	2.74	57 29.46	24 59 1.2
113	9	. .	. .	. .	. .	4.3	16.7	28.7	. .	. .	58 52.31	30.75	1.00	.	5	38.575	24 58.59	21.97	2.60	58 20.56	57 13.2
114	6	. .	. .	. .	. .	. .	. .	9.7	. .	. .	11 59 33.21	30.75	0.99	.	7	40.792	9 8.93	22.00	1.33	11 59 1.47	24 41 22.3
115	8	. .	. .	. .	49.5	2.4	14.3	. .	. .	. .	12 0 49.88	30.75	1.01	.	1	41.117	19 46.28	22.08	4.62	12 0 18.12	25 22 3.0
116	8	. .	. .	. .	. .	. .	. .	49.4	. .	. .	1 12.92	30.75	0.99	.	7	37.71	10 55.30	22.11	1.47	0 41.18	24 43 8.9
117	6	10.4	22.5	34.7	46.4	. .	. .	. .	. .	. .	4 46.71	30.75	1.00	.	3	43.100	34 4.63	22.35	3.34	4 14.96	25 6 20.3
118	9	. .	. .	. .	. .	27.	. .	. .	. .	. .	5 14.90	30.75	1.00	.	4	41.057	29 23.49	22.37	2.95	4 43.15	25 1 38.8
119	8	. .	. .	. .	. .	40.3	52.8	. .	. .	. .	5 28.38	30.75	1.00	.	4	45.25	26 58.79	22.39	2.76	4 56.63	24 59 13.9
120	8	. .	. .	. .	. .	. .	29.2	41.2	. .	. .	7 4.80	30.75	1.01	.	2	39.00	45 8.23	22.50	4.24	6 33.04	25 17 25.0
121	8	. .	. .	. .	. .	. .	51.2	3.2	. .	. .	7 26.75	30.75	1.01	.	1	38.697	51 9.81	22.52	4.73	6 54.99	23 27.1
122	7	. .	. .	. .	. .	. .	. .	. .	58.2	. .	8 3.78	30.75	1.00	.	4	42.21	28 43.72	22.56	2.90	7 32.03	0 59.2
123	8	. .	. .	. .	47.2	59.7	11.3	. .	. .	. .	9 47.26	30.75	1.00	.	3	39.359	36 13.75	22.68	3.51	9 15.51	8 29.9
124	8	4.4	16.4	28.4	40.3	. .	. .	. .	. .	. .	11 40.61	30.75	1.01	.	1	37.51	51 50.78	22.80	4.78	11 8.85	24 8.4
125	8	. .	. .	59.2	10.7	23.4	. .	. .	. .	. .	13 11.09	30.75	1.01	.	2	41.26	43 50.22	22.89	4.12	12 39.33	25 16 7.2
126	8	. .	. .	. .	. .	. .	. .	. .	44.3	. .	12 50.05	30.75	0.99	.	7	36.524	11 36.24	22.87	1.52	12 18.31	24 43 50.6
127	8	. .	. .	32.7	44.4	56.7	. .	. .	. .	. .	14 44.59	30.75	1.00	.	4	35.575	32 32.73	22.98	3.20	14 12.84	25 4 48.9
128	7	. .	. .	. .	33.7	45.7	57.7	. .	. .	. .	15 33.62	30.75	1.01	.	6	32.27	19 55.04	23.03	2.20	15 1.86	24 52 10.3
129	8	. .	. .	34.7	46.8	59.	. .	. .	. .	. .	16 46.83	30.75	1.00	.	3	35.258	38 35.30	23.10	3.71	16 15.08	25 10 52.1
130	7	. .	. .	. .	. .	. .	. .	37.7	. .	. .	17 1.22	30.75	0.99	.	7	37.343	11 7.97	23.12	1.49	16 29.48	24 43 22.6
131	6	. .	. .	. .	. .	10.3	22.7	. .	. .	. .	12 17 58.30	−30.75	−1.00	.	3	37.837	37 6.29	−23.18	− 3.58	12 17 26.55	25 9 23.0

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1849. h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1849. h. m.	° ′ ″				″	″	in.	°	°

REMARKS.

(177) 99. Transit over T. I assumed as belonging to next star, that over T. III as 53^s instead of $5^s.3$.

Zone 177. April 11. Maj. $D_0 = -24° 31' 50''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1870.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
132	8	. .	. .	. .	. .	. .	. .	. .	6.	. .	12 18 11.68	−30.75	−0.99	.	6	31.25	20 30.24	−23.19	− 2.24	12 17 39.94	24 52 45.7
133	8	. .	. .	. .	. .	. .	. .	2.0	. .	. .	18 25.52	30.75	0.99	.	7	35.658	12 6.14	23.23	1.57	17 53.78	44 20.9
134	8	. .	. .	. .	36.7	. .	. .	. .	. .	. .	20 36.73	30.75	0.99	.	6	36.00	17 46.30	23.34	2.02	20 4.99	24 50 1.7
135	9	. .	. .	. .	. .	. .	. .	5.5	. .	. .	21 29.10	30.74	1.00	.	3	33.604	39 32.11	23.40	3.78	20 57.36	25 11 49.3
136	8	. .	. .	. .	. .	. .	24.2	36.	. .	. .	24 59.78	30.74	0.99	.	6	38.805	16 9.48	23.60	1.89	24 28.05	24 48 25.0
137	9	. .	18.7	30.7	42.6	55.0	. .	. .	. .	. .	28 42.82	30.74	1.00	.	3	37.105	37 31.56	23.81	3.61	28 11.08	25 9 49.0
138	8	. .	26.2	39.	50.8	3.2	. .	. .	. .	. .	29 50.87	30.74	1.00	.	3	34.234	39 10.64	23.88	3.76	29 19.13	25 11 28.3
139	8	. .	. .	. .	. .	. .	43.0	55.2	. .	. .	30 18.78	30.74	0.99	.	7	39.47	9 54.57	23.91	1.39	29 47.05	24 42 9.9
140	6	. .	. .	. .	. .	. .	. .	. .	6.2	. .	31 12.00	30.74	0.99	.	7	43.184	7 11.95	23.96	1.18	30 40.27	24 39 27.1
141	10	. .	. .	. .	. .	7.2	19.3	31.4	. .	. .	33 55.03	30.74	1.00	.	4	40.37	29 47.20	24.10	2 98	33 23.29	25 2 4.3
142	10	. .	. .	. .	. .	. .	. .	2.4	. .	. .	35 25.94	30.73	0.99	.	6	34.627	18 33.41	24.19	2.08	34 54.22	24 50 49.7
143	9	. .	. .	. .	. .	57.3	9.7	. .	. .	. .	39 45.30	30.73	1.00	.	3	36.318	37 58.69	24.43	3.65	39 13.57	25 9 16.8
144	9	. .	. .	. .	. .	5.3	17.7	. .	. .	. .	39 53.30	30.73	1.00	.	4	36.144	32 13.06	24.44	3.17	40 21.57	4 30.7
145	8	65.0	17.4	29.7	41.3	53.4	. .	. .	. .	. .	42 41.50	30.73	1.00	.	4	41.756	28 59.39	24.57	2.92	42 9.77	1 16.9
146	8	. .	. .	50.3	2.4	. .	. .	. .	. .	. .	44 2.39	30.72	1.00	.	3	42.49	34 25.69	24.65	3.38	43 30.67	6 43.7
147	9	. .	. .	63.0	14.7	27.0	. .	. .	. .	. .	45 14.89	30.72	1.00	.	3	34.660	38 55.94	24.71	3.73	44 43.17	25 11 14.4
148	8	. .	. .	. .	31.3	43.5	55.7	. .	. .	. .	46 31.39	30.72	1.00	.	5	40.367	23 56.77	24.78	2.52	45 59.67	24 56 14.1
149	9	. .	. .	. .	. .	. .	43.5	55.3	. .	. .	47 19.04	30·72	1.00	.	4	41.978	28 51.61	24.82	2.90	46 47.32	25 1 9.3
150	9	. .	. .	. .	. .	. .	35.9	47.8	. .	. .	49 11.49	30.71	1.00	.	3	38.524	36 42.45	24.93	3.55	48 39.78	9 0.9
151	9	. .	. .	. .	. .	19.5	. .	44.	. .	. .	53 7.49	30.71	1.00	.	4	35.032	32 51.44	25.12	3.22	52 35.78	25 5 9.8
152	10	. .	. .	. .	23.	35.7	. .	. .	. .	. .	55 23.31	30.70	1.00	.	5	40.365	23 56.84	25.28	2.50	54 51.61	24 56 14.6
153	7	. .	. .	. .	18.4	30.7	43.0	. .	. .	. .	56 18.58	30.70	1.00	.	4	44.465	27 25.89	25.29	2.79	55 46.88	24 59 44.0
154	9	. .	49.	. .	1.	. .	. .	. .	. .	. .	58 1.03	30.70	1.01	.	1	34.75	53 26.04	25.37	4.93	57 29.32	25 25 46.3
155	8	. .	. .	. .	. .	. .	0.	12.2	. .	. .	12 58 35.74	30.70	1.01	.	3	33.30	39 42.88	25.40	3.81	12 58 4.03	12 2.1
156	8	. .	31.5	44.	56.1	8.0	. .	. .	. .	. .	13 2 55.96	30.69	1.00	.	4	34.78	33 0.17	25.62	3.24	13 2 24.27	25 5 19.0
157	6	. .	. .	. .	. .	. .	. .	. .	. .	42.?	2 35.60	30.69	0.99	.	7	36.084	11 51.43	25.60	1.52	2 3.92	24 44 8.6
158	9	. .	. .	40.3	. .	4.4	16.4	. .	. .	. .	5 52.31	30.68	1.00	.	5	38.957	24 45.44	25.77	2.58	5 20.63	24 57 3.8
159	8	16.2	28.3	40.	52.4	. .	. .	. .	. .	. .	7 52.43	30.68	1.00	.	4	42.81	28 23.01	25.87	2.86	7 20.75	25 0 41.7
160	9	. .	. .	. .	25.2	37.7	50.0	. .	. .	. .	8 25.48	30.68	1.01	.	1	41.407	49 36.27	25.90	4.63	7 53.79	21 56.8
161	10	. .	. .	. .	. .	. .	49.7	. .	. .	. .	9 25.30	30.68	1.01	.	1	39.775	50 32.49	25.92	4.70	8 53.61	25 22 53.1
162	7	. .	. .	. .	. .	. .	. .	. .	55.	. .	10 0.78	30.68	0.99	.	7	39.48	9 54.22	25.95	1.37	9 29.11	24 42 11.5
163	7	. .	. .	. .	. .	53.	5.4	. .	. .	. .	10 41.11	30.68	0.99	.	7	36.81	11 26.37	25.98	1.51	10 9.44	43 43.9
164	7	. .	. .	. .	. .	. .	43.2	55.7	. .	. .	11 19.12	30.67	0.99	.	6	39.25	15 54.12	26.00	1.86	10 47.46	48 12.0
165	8	. .	. .	. .	. .	. .	. .	27.	. .	. .	11 0.54	30.67	1.00	.	6	32.07	20 1.94	26.03	2.19	11 28.87	24 52 20.2
166	6	11.4	23.7	35.5	47.5	59.6	. .	. .	. .	. .	14 47.69	30.67	1.00	.	4	38.407	30 54.98	26.17	3.07	14 16.02	25 3 14.2
167	9	. .	8.2	19.7	. .	. .	. .	. .	. .	. .	15 32.14	30.67	1.00	.	3	34.065	39 16.45	26.20	3.77	15 0.47	25 11 36.4
168	7	. .	10.	21.4	33.6	45.7	57.8	. .	. .	. .	17 33.74	30.66	0.99	.	7	40.167	9 30.51	26.29	1.34	17 2.09	24 41 48.1
169	8	. .	. .	. .	. .	40.8	53.	5.0	. .	. .	18 28.61	30.66	1.01	.	1	37.63	51 46.63	26.33	4.80	17 56.94	25 24 7.8
170	7	. .	. .	. .	. .	54.7	7.2	. .	. .	. .	19 42.87	30.66	0.99	.	7	39.213	10 3.44	26.39	1.38	19 11.22	24 42 21.2
171	9	. .	. .	59.	10.8	23.0	. .	. .	. .	. .	22 10.93	30.65	1.01	.	2	40.182	44 27.43	26.49	4.20	21 39.27	25 16 48.1
172	6	. .	. .	10.7	23.0	34.7	. .	. .	. .	. .	23 22.84	30.65	1.00	.	6	31.295	20 28.69	26.54	2.23	22 51.19	24 52 47.5
173	7	. .	. .	. .	7.0	19.9	31.8	. .	. .	. .	24 7.42	30.65	1.01	.	2	33.98	48 1.48	26.58	4.50	23 35.76	25 20 22.6
174	7	. .	. .	. .	. .	37.2	. .	. .	. .	. .	13 24 25.11	−30.65	−1.01	.	2	45.15	41 35.95	−26.59	− 3.96	13 23 53.45	25 13 56.5

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	*m*	*n*	*c*	Zenith Point.	Mic. Co.
1849. h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.	CIRCLE.					Mean.	Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.				
	1849. h. m.	° ′ ″				″	″	in.	°	°

REMARKS.

(177) 140. Micrometer reading assumed as $44^{r}.184$ instead of $43^{r}.184$.
(177) 144. Minutes assumed as 40 instead of 39.
(177) 154. Transit at 49^{s} assumed to have been over T. III instead of T. II.
(177) 165. Transit over T. VII assumed to have been at 37^{s} instead of 27^{s}.

ZONE 178. APRIL 14. MAJ. $D_\circ = -27^\circ\ 2'\ 10''$.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
1	6	. .	. .	. .	. .	56.5	9.4	. .	. .	. .	10 5 44.30	−30.78	−1.01	.	1	41.40	49 36.51	− 3.94	− 7.97	10 5 12.51	27 51 58.4
2	9	. .	. .	39.5	51.3	. .	16.4	. .	. .	. .	8 51.69	30.79	0.99	.	7	42.475	8 10.85	4.23	3.76	8 19.91	10 28.8
3	7	. .	. .	. .	. .	58.6	10.7	. .	. .	. .	9 46.00	30.79	1.01	.	1	41.035	49 49.11	4.32	7.99	9 14.20	52 11.4
4	8	. .	. .	11.3	23.7	. .	. .	. .	. .	. .	12 23.67	30.80	1.00	.	4	42.35	28 38.89	4.56	5.89	11 51.87	30 59.3
5	8	54.3	6.	. .	30.0	. .	. .	. .	. .	. .	12 30.81	30.80	1.01	.	3	34.88	38 48.34	4.57	7.03	11 59.00	41 9.9
6	8	. .	. .	. .	. .	. .	11.8	24.	. .	. .	13 46.76	30.80	1.01	.	1	36.33	52 31.51	4.69	8.27	13 14.95	54 54.5
7	7	. .	. .	. .	12.	24.6	37.	49.6	. .	. .	15 12.19	30.81	1.00	.	4	41.60	29 4.77	4.82	5.90	14 40.38	31 25.5
8	7	. .	. .	15.3	27.5	40.	. .	. .	. .	. .	16 27.67	30.81	0.99	.	6	43.99	13 10.52	4.94	4.26	15 55.87	15 29.7
9	10	. .	. .	60.7	12.3	24.7	. .	. .	. .	. .	22 12.56	30.83	1.01	.	1	42.64	48 53.72	5.47	7.90	21 40.72	51 17.1
10	9	. .	. .	. .	39.	51.6	. .	. .	. .	. .	22 39.12	30.83	1.01	.	2	47.33	40 20.72	5.50	7.08	22 7.28	42 43.3
11	6	44.7	57.3	9.4	21.5	33.6	46.7	59.	. .	. .	25 21.74	30.84	1.00	.	4	47.508	25 40.87	5.78	5.55	24 49.90	28 2.2
12	9	. .	. .	. .	. .	29.4	. .	. .	. .	. .	27 17.04	30.84	1.01	.	2	49.12	39 18.90	5.95	6.98	26 45.19	41 41.8
13	8	29.2	41.7	54.	6.2	. .	. .	. .	. .	. .	31 6.34	30.85	0.99	.	6	40.595	15 7.71	6.30	4.46	30 34.50	17 28.5
14	10	. .	. .	. .	57.3	9.9	. .	. .	. .	. .	31 57.46	30.85	0.99	.	6	36.182	17 40.02	6.38	4.72	31 25.62	20 1.1
15	10	. .	. .	. .	. .	. .	23.5	. .	. .	. .	31 58.73	30.85	1.00	.	5	41.834	23 6.00	6.38	5.27	31 26.88	25 27.6
16	6	. .	. .	. .	. .	. .	. .	. .	47.4	. .	32 51.98	30.86	0.99	.	7	32.948	13 39.67	6.47	4.31	32 20.13	16 0.4
17	9	. .	. .	33.2	46.1	58.6	. .	. .	. .	. .	34 46.01	30.86	1.00	.	6	34.29	18 45.32	6.65	4.82	34 14.15	21 6.8
18	10	. .	. .	26.8	39.	51.3	4.0	. .	. .	. .	36 39.04	30.87	1.01	.	2	42.584	43 4.52	6.82	7.37	36 7.16	45 28.7
19	10	. .	12.8	25.	37.6	49.9	. .	. .	. .	. .	38 37.51	30.88	1.00	.	4	40.488	29 43.16	7.00	5.97	38 5.63	32 6.1
20	9	. .	30.	. .	. .	. .	19.	. .	. .	. .	39 54.48	30.88	0.99	.	6	31.637	20 16.88	7.12	4.99	39 22.61	22 39.0
21	10	. .	31.	. .	. .	. .	20.0	. .	. .	. .	39 55.48	30.88	0.99	.	6	34.190	18 48.77	7.12	4.83	39 23.61	21 10.7
22	6	45.7	58.4	10.3	. .	. .	. .	. .	. .	. .	42 22.81	30.88	0.99	.	7	47.505	5 17.24	7.35	3.46	41 50.94	7 38.0
23	10	. .	. .	. .	48.	. .	. .	. .	. .	. .	42 48.11	30.88	0.99	.	7	47.475	5 18.28	7.39	3.46	42 16.24	7 39.1
24	8	. .	. .	. .	39.6	. .	. .	. .	. .	. .	44 39.72	30.89	0.98	.	7	51.255	3 7.81	7.56	3.24	44 7.85	5 28.6
25	9	. .	. .	20.6	32.7	45.3	. .	. .	. .	. .	46 32.86	30.89	1.00	.	4	35.728	32 27.46	7.73	6.25	46 0.97	34 51.4
26	9	. .	. .	. .	. .	. .	20.7	. .	. .	. .	48 56.01	30.89	0.99	VII.	7	36.617	11 32.72	7.95	4.10	48 24.13	13 54.8
27	9	. .	. .	. .	25.3	38.3	50.7	. .	. .	. .	50 25.69	30.90	1.00	VI.	3	36.070	38 7.13	8.09	6.83	49 53.79	40 32.0
28	8	. .	. .	. .	. .	33.	45.2	57.9	. .	. .	51 20.57	30.90	1.00	VII.	5	32.584	28 25.09	8.17	5.84	50 48.67	30 49.1
29	9	. .	. .	. .	. .	41.7	54.2	6.5	. .	. .	52 29.32	30.91	1.00	VII.	3	38.57	36 40.67	8.28	6.69	51 57.41	39 5.6
30	9	. .	46.	58.7	10.7	. .	. .	. .	. .	. .	56 10.89	30.92	1.01	V.	1	36.169	52 37.03	8.62	8.30	55 38.96	55 4.0
31	8	. .	. .	66.2	18.3	30.5	. .	. .	. .	. .	59 18.42	30.92	0.99	. .	7	42.205	8 20.17	8.90	3.77	58 46.51	10 42.8
32	6	. .	. .	. .	. .	. .	21.3	34.2	. .	. .	10 59 56.61	30.92	1.01	.	1	36.29	52 32.89	− 8.95	− 8.29	10 59 24.68	27 55 0.1
33	6	. .	. .	. .	44.4	57.3	. .	. .	. .	. .	11 0 44.64	30.93	1.00	.	.	. .	. .	. .	. .	11 0 12.71	
34	5	. .	. .	. .	. .	. .	. .	37.5	. .	. .	1 0.24	30.93	0.99	.	7	32.84	13 43.39	− 9.05	− 4.32	0 28.32	27 16 6.8
35	8	. .	. .	. .	. .	. .	. .	20.3	. .	. .	2 43.06	30.93	1.00	.	5	36.045	26 25.95	9.20	5.63	2 11.13	28 50.8
36	7	. .	. .	. .	. .	45.4	57.	10.3	. .	. .	11 3 32.78	−30.93	−1.00	.	5	38.66	24 55.69	− 9.27	− 5.47	11 3 0.85	27 27 20.4

ZONE 179. APRIL 16. MAJ. $D_\circ = -23^\circ\ 16'\ 50''$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	5	. .	. .	. .	. .	. .	20.8	32.9	. .	. .	9 57 56.82	−30.43	−0.99	VI.	6	37.943	16 39.12	− 5.37	− 4.98	9 57 25.40	23 33 39.5
2	6	49.7	2.	13.8	25.5	38.	. .	. .	. .	. .	10 0 25.84	30.44	1.01	IV.	2	44.408	42 1.57	5.60	6.93	9 59 54.39	59 4.1
3	7	. .	. .	14.	25.7	37.6	. .	. .	. .	. .	1 25.79	30.45	0.99	IV.	5	43.555	22 6.74	5.69	5.40	10 0 54.35	23 39 7.8
4	10	. .	24.2	36.3	48.2	0.0	. .	. .	. .	. .	5 48.20	30.46	1.01	V.	1	34.893	53 21.08	6.09	7.81	5 16.73	24 10 25.0
5	10	. .	. .	. .	. .	33.7	45.3	. .	. .	. .	7 21.57	30.47	0.99	VI.	7	33.919	13 6.03	6.23	4.72	6 50.11	23 30 7.0
6	10	. .	. .	. .	. .	28.3	40.7	. .	. .	. .	8 16.48	30.47	1.00	.	4	34.445	33 11.70	6.32	6.26	7 45.01	50 14.3
7	10	. .	53.	5.0	16.9	. .	. .	. .	. .	. .	10 16.97	30.48	1.00	.	3	35.10	38 40.75	6.50	6.69	9 45.49	55 43.9
8	6.7	44.	56.3	8.2	19.9	31.3	44.	. .	. .	. .	15 19.97	30.50	1.00	IV.	5	40.605	23 48.56	6.98	5.52	14 48.47	40 51.1
9	6	. .	. .	15.7	27.4	39.3	. .	. .	. .	. .	10 16 27.51	−30.50	−0.99	IV.	6	36.413	17 32.05	− 7.09	− 5.04	10 15 56.02	23 34 34.2

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1849.	h.	s.	s.	s.	s.	s.	° ′ ″	r.
Apr. 14.	10	− 32.413	0.000	− 0.150	+ 0.513	− 0.196	0 0 2.32	39.609
Apr. 16,	8	− 32.296	l 0.004	− 0.150	+ 0.513	− 0.196	0 0 0.35	39.732

REMARKS.

INSTRUMENT READINGS.

	Date.	CIRCLE. A.	CIRCLE. B.	CIRCLE. C.	CIRCLE. D.	CIRCLE. Corr'd Mean.	CIRCLE. Mean.	Barom.	Attached Thermom.	External Thermom.
	1849. h. m.	° ′ ″				″	″	in.	°	°
Zone 178	Apr. 14, 10 4	293 35 58.2	60.2	64.6	65.0	. .	62.00	30.074	48.	33.6
	10 20	. .	. .	. .	. .	. .	. .	. .	. .	33.3
	10 40	. .	. .	. .	. .	. .	. .	. .	. .	32.8
	11 0	. .	. .	. .	. .	. .	. .	30.070	44.8	32.5
Zone 179	Apr. 16, 9 50	. .	. .	. .	. .	. .	. .	29.838	48.0	41.5
	9 57	297 20 58.2	57.9	64.4	62.8	. .	60.82	. .		
	10 0	. .	. .	. .	. .	. .	. .	. .	. .	41.4
	10 20	. .	. .	. .	. .	. .	. .	29.848	. .	40.8

ZONE 179. APRIL 16. MAJ. $D_0 = -23° 16' 50''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
10	7	. .	22.2	34.3	46.	58.2	10.3	. .	. .	. .	10 17 46.19	−30.50	−1.00	IV.	4	33.013	34 1.16	− 7.21	− 6.31	10 17 14.69	23 51 4.7
11	7	. .	. .	. .	. .	. .	42.9	. .	. .	. .	18 18.72	30.51	1.02	VI.	1	30.805	55 42.08	7.26	8.00	17 47.19	24 12 47.3
12	.	. .	. .	. .	. .	. .	. .	50.4	. .	. .	21 14.32	30.52	1.00	VII.	5	40.967	23 35.80	7.53	5.51	20 42.80	23 40 38.8
13	.	. .	. .	. .	. .	17.	. .	. .	. .	. .	22 5.05	30.52	0.99	VI.	5	46.019	20 41.58	7.61	5.27	21 33.54	37 44.5
14	.	. .	. .	. .	. .	. .	. .	40.4	. .	. .	22 4.32	30.52	0.99	VII.	5	42.067	22 57.84	− 7.61	− 5.46	21 32.81	23 40 0.9
15	.	. .	. .	. .	. .	. .	. .	46.	. .	. .	23? 9.93	30.52	1.00	.	.	. .	. . .	. .	. .	(22) 38.41	
16	8	. .	. .	. .	. .	0.7	. .	. .	. .	. .	23 48.73	30.53	1.01	V.	1	41.365	49 37.69	− 7.76	− 7.52	23 17.19	24 6 43.0
17	6	. .	. .	. .	. .	. .	. .	6.0	. .	. .	24 29.87	30.53	0.99	VI.	7	43.434	7 37.63	7.82	4.30	23 58.35	23 24 39.8
18	9	. .	. .	. .	. .	48.	. .	. .	. .	. .	25 36.02	30.53	1.00	VI.	4	40.045	29 58.33	7.93	6.00	25 4.49	47 2.3
19	8	. .	. .	. .	47.	59.2	. .	. .	. .	. .	25 47.09	30.53	1.00	VI.	4	41.806	28 57.54	7.95	5.92	25 15.56	46 1.4
20	7	. .	14.7	26.4	38.3	50.2	. .	. .	. .	. .	26 38.42	30.53	0.99	IV.	6	41.407	14 39.68	8.03	4.80	26 6.90	31 42.5
21	9	12.	24.2	36.	47.4	59.7	. .	. .	. .	. .	29 47.88	30.54	1.00	VI.	4	39.434	30 19.42	8.31	6.02	29 16.34	47 23.7
22	9	20.	32.4	44.4	56.2	8.2	. .	. .	. .	. .	31 56.25	30.55	0.99	VI.	5	42.857	22 30.71	8.51	5.42	31 24.71	39 34.6
23	9	. .	. .	. .	36.	48.	0.3	. .	. .	. .	32 36.11	30.55	0.99	VI.	5	42.020	22 59.60	8.56	5.45	32 4.57	40 3.6
24	9	. .	. .	. .	. .	. .	. .	22.4	. .	. .	33 46.34	30.56	1.00	VII.	3	38.721	36 35.52	8.67	6.52	33 14.78	53 40.7
25	10	. .	. .	. .	. .	. .	. .	. .	10.	. .	34 16.14	30.56	1.00	11.	4	42.77	28 23.80	8.71	5.88	33 44.58	23 45 28.4
26	7	. .	. .	. .	. .	. .	. .	16.5	. .	. .	35 40.36	30.56	1.01	VII.	1	35.205	43 10.09	8.84	7.03	34 8.79	24 0 16.0
27	9	. .	. .	. .	. .	. .	45.	57.1	. .	. .	38 21.00	30.57	1.00	VII.	4	38.757	30 42.64	9.08	6.06	37 49.43	23 47 47.8
28	9	. .	. .	. .	58.5	11.0	23.	. .	. .	. .	39 58.81	30.58	1.00	.	4	39.262	30 25.48	9.23	6.04	39 27.23	47 30.8
29	7	53.4	. .	. .	29.	. .	. .	. .	. .	. .	40 29.25	30.58	1.00	.	4	42.627	28 29.33	9.27	5.88	39 57.67	45 34.5
30	7	42.2	54.4	6.3	18.3	30.3	. .	. .	. .	. .	45 18.31	30.59	0.99	.	6	36.59	17 25.94	9.69	5.02	44 46.73	34 30.6
31	8	. .	. .	. .	7.3	19.	. .	. .	. .	. .	45 7.16	30.59	1.00	VII.	3	35.73	38 18.74	9.67	6.65	44 35.57	55 25.1
32	8	. .	. .	. .	14.	26.4	. .	. .	. .	. .	45 14.22	30.59	1.01	VII.	3	32.41	40 13.34	9.68	6.80	44 42.62	23 57 19.8
33	7	. .	. .	. .	0.4	12.3	. .	. .	. .	. .	47 0.37	30.59	1.01	VII.	2	40.698	44 9.36	9.84	7.10	46 28.77	24 1 16.3
34	8	. .	. .	. .	. .	. .	. .	35.1	. .	. .	47 59.04	30.60	1.01	.	2	41.679	43 35.49	9.93	7.07	47 27.43	24 0 42.5
35	6	14.1	26.	. .	. .	. .	. .	. .	. .	. .	51 49.92	30.61	0.99	IV.	7	44.775	6 51.46	10.25	4.21	51 18.32	23 23 55.9
36	7	. .	. .	. .	. .	0.6	12.7	24.9	. .	. .	51 48.71	30.61	1.00	.	4	44.573	27 22.16	10.25	5.80	51 17.10	44 28.2
37	9	. .	5.7	17.2	29.2	. .	. .	. .	. .	. .	10 55 29.37	30.62	1.00	.	3	36.426	37 54.99	10.56	6.64	54 57.75	55 2.2
38	7	. .	. .	. .	9.3	21.5	33.4	. .	. .	. .	11 0 9.51	30.63	0.98	IV.	7	50.89	3 20.40	10.95	3.94	10 59 37.90	20 25.3
39	9	. .	. .	26.4	38.3	50.5	. .	. .	. .	. .	1 38.41	30.63	1.00	.	5	36.365	26 14.90	11.07	5.71	11 1 6.78	43 21.7
40	9	. .	. .	53.2	4.7	17.	. .	. .	. .	. .	13 4.99	30.65	1.00	.	5	40.878	23 39.14	12.02	5.51	12 33.34	40 46.7
41	8	. .	. .	18.	30.2	. .	. .	. .	. .	. .	13 30.10	30.65	1.00	.	5	35.757	26 35.88	12.06	5.74	12 58.45	43 43.7
42	7	. .	. .	19.	31.0	43.0	. .	. .	. .	. .	10 31.04	30.65	0.99	.	6	38.307	16 26.67	11.81	4.94	9 59.40	33 33.4
43	6	. .	21.	33.	44.8	56.7	. .	. .	. .	. .	11 44.89	30.65	0.99	.	6	41.97	14 20.25	11.91	4.77	11 13.25	31 26.9
44	9	37.5	49.6	1.3	13.2	25.5	. .	. .	. .	. .	15 13.46	30.66	1.01	.	3	32.541	40 9.08	12.20	6.79	14 41.79	57 18.1
45	10	. .	. .	. .	14.4	26.4	. .	. .	. .	. .	16 14.40	30.66	1.00	VI.	5	35.657	26 39.21	12.28	5.74	15 42.74	43 47.2
46	8	11.7	23.8	35.9	47.5	59.9	. .	. .	. .	. .	17 47.77	30.66	1.00	IV.	5	42.823	22 32.00	12.41	5.42	17 16.11	39 39.8
47	10	. .	. .	. .	. .	41.5	. .	. .	. .	. .	18 29.53	30.67	1.01	VII.	2	44.818	41 47.15	12.47	6.92	17 57.85	58 56.5
48	10	. .	. .	. .	. .	. .	. .	45.0	. .	. .	19 8.87	30.67	0.99	.	7	44.445	7 2.59	12.52	4.23	18 37.21	24 9.3
49	6	. .	. .	. .	25.7	37.7	49.6	. .	. .	. .	20 25.78	30.67	0.98	VI.	7	50.467	3 34.88	12.63	3.96	19 54.13	23 20 41.5
50	7	. .	. .	. .	. .	. .	52.	4.5	. .	. .	21 28.14	30.67	1.01	.	1	47.805	45 55.45	12.71	7.24	20 56.46	24 3 5.4
51	.	. .	. .	39.	. .	. .	. .	39.5	. .	. .	21 3.68	30.67	1.01	.	2	49.25	39 14.44	12.67	6.72	20 32.00	23 56 23.8
52	6	. .	. .	. .	. .	. .	. .	43.4	. .	. .	23 7.26	30.67	1.01	.	1	35.248	53 8.87	12.84	7.82	22 35.58	24 10 19.5
53	9	. .	. .	. .	. .	. .	. .	4.4	. .	. .	24 28.28	30.68	0.99	.	7	37.55	11 0.57	12.95	4.53	23 56.61	23 28 8.0
54	8	. .	. .	. .	. .	. .	15.7	27.7	. .	. .	24 51.66	30.68	1.00	.	5	37.678	25 29.59	12.98	5.65	24 19.98	42 38.2
55	10	. .	. .	. .	. .	48.5	. .	. .	. .	. .	26 36.53	30.68	1.00	.	3	38.492	36 43.65	13.12	6.52	26 4.85	53 53.3
56	9	50.6	2.7	14.4	26.3	. .	. .	. .	. .	. .	28 26.53	30.68	1.00	.	5	34.465	27 20.48	13.26	5.80	27 54.85	44 29.5
57	7	11.6	24.	35.5	47.5	59.2	11.4	23.7	. .	. .	29 47.56	30.68	1.00	.	5	33.28	28 1.39	13.37	5.85	29 15.88	45 10.6
58	6	24.7	36.4	48.4	0.5	12.5	. .	. .	. .	. .	11 32 0.53	−30.68	−1.00	.	3	40.409	35 37.51	−13.55	− 6.44	11 31 28.85	23 52 47.5

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1849.	h.	s.	s.	s.	s.	s.	° ′ ″	r.

REMARKS.

(179) 51. Time of transit over T. IV assumed as $3^s.9$ instead of over T. III at 39^s.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1849. h. m.	° ′ ″				″	″	in.	°	°
Zone 179	Apr. 16, 10 40	. .	. .	. .	. .	. .	. .	29.850	46.5	40.2
	10 49	297 20 58.2	58.0	64.4	62.8	. .	60.85			
	11 0	. .	. .	. .	. .	. .	. .	29.858	46.2	40.
	11 20	. .	. .	. .	. .	. .	. .	. .	. .	39.4
	11 40	. .	. .	. .	. .	. .	. .	. .	. .	38.8
	12 0	. .	. .	. .	. .	. .	. .	29.856	45.0	38.5
	12 20	. .	. .	. .	. .	. .	. .	. .	. .	37.3
	12 30	58.1	58.2	4.5	2.9	. .	60.92			

ZONE 179. APRIL 16. MAJ. $D_0 = -23^\circ\ 16'\ 50''$—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
59	7	. .	. .	. .	. .	. .	. .	58.8	. .	. .	11 32 22.71	−30.68	−1.01	.	2	36.252	46 43.07	−13.58	− 7.30	11 31 51.02	24 3 54.0
60	8	. .	48.4	0.9	12.	. .	. .	. .	. .	. .	34 12.43	30.69	0.99	.	7	32.080	14 9.63	13.72	4.76	33 40.75	23 31 18.1
61	6	. .	. .	. .	. .	. .	21.0	33.2	. .	. .	34 57.06	30.69	0.99	.	6	39.04	16 1.37	13.78	4.91	34 25.38	33 10.1
62	9	. .	. .	. .	19.6	32.	. .	. .	. .	. .	36 19.82	30.69	1.00	.	3	35.774	38 17.48	13.89	6.65	35 48.13	55 28.0
63	9	32.2	44.5	56.5	8.7	20.6	. .	. .	. .	. .	38 8.51	30.70	0.99	.	6	29.457	21 32.14	14.03	5.34	37 36.82	23 38 41.5
64	7	. .	. .	. .	. .	. .	. .	57.4	. .	. .	38 21.31	30.70	1.01	.	1	44.564	47 47.31	14.05	7.39	37 49.60	24 4 58.7
65	7	. .	. .	. .	. .	19.7	31.7	44.	. .	. .	39 7.74	30.70	1.01	.	2	38.98	45 8.91	14.11	7.18	38 36.03	2 20.2
66	7	. .	. .	. .	. .	. .	47.	59.	. .	. .	39 22.85	30.70	1.01	.	1	38.475	51 17.48	14.13	7.67	38 51.14	24 8 29.3
67	9	. .	. .	. .	45.	. .	. .	21.	. .	. .	45 44.96	30.70	0.99	.	5	44.507	21 33.88	14.62	5.34	45 13.27	23 38 43.8
68	9	. .	. .	4.0	. .	27.	. .	. .	. .	. .	46 15.51	30.71	1.00	.	4	43.432	28 1.55	14.66	5.85	45 43.80	45 12.1
69	9	. .	. .	. .	. .	. .	. .	23.2	. .	. .	46 47.12	30.71	1.00	.	4	46.637	20 20.09	14.70	5.25	46 15.41	23 37 30.0
70	6	. .	. .	13.3	25.2	37.4	. .	. .	. .	. .	48 25.29	30.71	1.01	.	2	40.484	44 17.00	14.82	7.11	47 53.57	24 1 28.9
71	7	. .	. .	39.2	50.4	3.0	. .	. .	. .	. .	48 50.86	30.71	1.01	.	1	43.022	48 40.54	14.85	7.47	48 19.14	24 5 52.9
72	8	. .	. .	15.0	26.6	38.7	. .	. .	. .	. .	50 26.76	30.71	1.00	.	3	45.09	32 55.96	14.98	6.25	49 55.05	23 50 7.2
73	9	. .	. .	. .	. .	1.0	13.4	. .	. .	. .	50 49.22	30.71	1.00	.	5	42.07	22 57.96	15.01	5.46	50 17.51	40 8.4
74	10	. .	. .	. .	. .	. .	. .	. .	. .	46.4	50 40.24	30.71	1.00	12.	3	32.81	39 58.91	15.00	6.78	50 8.53	57 10.7
75	9	. .	57.2	8.4	20.	32.0	. .	. .	. .	. .	53 20.41	30.71	1.00	.	6	31.735	20 13.50	15.20	5.23	52 48.70	23 37 23.9
76	8	. .	. .	19.9	31.4	43.8	. .	. .	. .	. .	57 31.69	30.72	1.01	.	2	36.548	46 32.86	15.52	7.30	56 59.96	24 3 45.7
77	8	. .	39.3	51.4	3.2	. .	. .	. .	. .	. .	11 59 3.31	30.72	1.01	.	2	40.092	44 30.54	15.63	7.10	11 58 31.58	24 1 43.3
78	8	18.6	30.7	. .	. .	. .	. .	. .	. .	. .	12 0 54.67	30.72	1.00	.	5	41.52	23 16.98	15.77	5.47	12 0 22.95	23 40 28.2
79	3	37.	49.2	1.	12.5	5.	36.4	48.7	. .	. .	1 12.83	30.72	1.00	VII.	3	39.23	36 17.94	15.79	6.49	0 41.11	23 53 30.2
80	9	41.	53.	. .	16.5	28.7	. .	. .	. .	. .	3 16.88	30.72	1.01	.	1	40.38	50 11.72	15.94	7.61	2 45.15	24 7 25.3
81	9	. .	. .	. .	. .	. .	. .	37.	. .	. .	4 0.95	30.72	1.01	.	2	42.037	43 23.14	16.00	7.06	3 29.22	24 0 36.2
82	8	. .	. .	. .	42.	54.0	6.3	. .	. .	. .	5 42.12	30.72	1.00	.	5	42.49	22 43.50	16.12	5.44	5 10.40	23 39 55.1
83	9	. .	. .	. .	. .	. .	55.4	. .	. .	. .	6 31.25	30.72	1.01	.	1	41.77	49 23.62	16.17	7.54	5 59.52	24 6 37.3
84	9	. .	. .	. .	. .	23.4	. .	. .	. .	. .	7 11.43	30.72	1.01	.	1	35.99	52 43.22	16.22	7.81	6 39.70	24 9 57.2
85	6	. .	. .	. .	31.5	. .	. .	7.7	. .	. .	7 31.57	30.72	1.00	.	3	34.274	39 9.26	16.24	6.72	6 59.85	23 56 22.2
86	10	. .	. .	. .	. .	28.7	. .	. .	. .	. .	14 16.80	30.73	0.99	.	7	46.145	6 4.15	16.74	4.14	13 45.08	23 15.0
87	7	. .	. .	. .	. .	. .	34.4	. .	. .	. .	15 10.50	30.73	0.99	.	7	44.505	7 0.78	16.80	4.21	14 38.78	23 24 11.8
88	7	. .	. .	. .	. .	. .	7.8	20.	. .	. .	15 43.80	30.73	1.01	.	2	38.95	45 9.95	16.84	7.19	15 12.06	24 2 24.0
89	7	. .	. .	. .	. .	17.	29.	40.6	. .	. .	16 4.82	30.73	1.01	VI.	2	42.45	43 9.03	16.86	7.04	15 33.08	24 0 22.9
90	8	. .	. .	. .	0.4	12.2	. .	. .	. .	. .	18 0.35	30.73	0.99	V.	6	38.41	16 23.09	17.01	4.93	17 28.63	23 33 35.0
91	8	. .	. .	49.8	1.9	14.0	. .	. .	. .	. .	19 1.97	30.73	0.99	V.	7	40.82	9 7.93	17.08	4.36	18 30.25	26 19.4
92	10	. .	. .	. .	. .	45.3	57.7	9.6	. .	. .	19 33.50	30.73	1.00	VII.	2	48.94	39 24.88	17.12	6.74	19 1.77	56 38.7
93	8	. .	. .	. .	. .	. .	46.0	58.0	. .	. .	20 21.93	30.73	1.00	VII.	3	38.969	36 26.95	17.17	6.50	19 50.20	53 40.6
94	10	. .	. .	. .	53.	4.7	. .	. .	. .	. .	24 52.92	30.73	0.99	VI.	7	33.319	13 26.74	17.49	4.70	24 21.20	30 38.9
95	8	. .	. .	. .	. .	23.7	. .	. .	. .	. .	25 16.80	30.73	0.99	VII, 5.	7	47.834	5 5.46	17.51	4.06	24 45.08	22 17.0
96	.	. .	. .	. .	. .	. .	18.4	30.3	. .	. .	26 54.33	30.73	0.99	.	6	48.96	10 18.86	17.63	4.45	26 22.61	23 27 30.9
97	8	14.	26.	38.0	49.8	. .	. .	. .	. .	. .	29 50.00	30.73	1.01	.	2	36.28	46 42.11	17.83	7.31	29 18.26	24 3 57.2
98	8	. .	. .	. .	3.5	15.7	27.7	. .	. .	. .	34 3.60	30.73	1.01	.	1	35.61	52 56.36	18.10	7.82	33 31.86	24 10 12.3
99	10	. .	. .	. .	10.4	22.6	34.7	46.4	. .	. .	35 10.49	30.73	1.00	.	4	39.717	30 9.77	18.17	6.01	34 38.76	23 47 24.0
100	9	. .	. .	. .	. .	37.5	49.4	. .	. .	. .	36 25.53	30.72	0.99	.	7	38.385	10 31.98	18.25	4.47	35 53.82	23 27 44.7
101	9	43.5	55.5	. .	. .	. .	. .	. .	. .	. .	38 19.64	30.72	1.01	.	1	37.085	52 5.33	18.37	7.76	37 47.91	24 9 21.5
102	9	. .	. .	. .	. .	28.8	41.0	. .	. .	. .	38 16.92	30.72	1.00	.	5	37.426	25 38.26	18.37	5.66	37 45.20	23 42 52.3
103	6	51.5	3.8	. .	. .	. .	. .	. .	. .	. .	40 27.77	30.72	1.01	.	2	39.722	44 43.31	18.51	7.16	39 56.04	24 1 59.0
104	6	51.	. .	. .	. .	39.	. .	. .	. .	. .	27.08	30.72	1.01	.	1	33.155	54 21.09	18.51	7.94	(39) 55.35	24 11 37.5
105	9	. .	. .	. .	. .	. .	. .	23.	. .	. .	40 46.95	30.72	1.01	.	2	43.895	42 19.02	18.53	6.98	40 15.22	23 59 34.5
106	9	. .	. .	. .	. .	. .	. .	30.7	. .	. .	40 54.66	30.72	1.01	.	2	45.54	41 22.23	18.53	6.90	40 22.93	58 37.7
107	9	. .	. .	. .	. .	. .	. .	49.3	. .	. .	12 42 13.20	−30.72	−0.99	.	5	50.145	18 19.03	−18.61	− 5.08	12 41 41.49	23 35 32.7

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	*m*	*n*	*c*	Zenith Point.	Mic. Co.
1849. h.	s.	s.	s.	s.	s.	° ′ ″	r.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1849. h. m.	° ′ ″				″	″	in.	°	°
Zone 179	Apr. 16, 12 36	. .	. .	. .	. .	. .	. .	. .	. .	35.9
	13 0	. .	. .	. .	. .	. .	. .	29.866	43.7	35.5
	13 20	. .	. .	. .	. .	. .	. .	. .	. .	34.3
	13 37	297 20 58.0	58.5	65.5	63.9	. .	61.48			
	13 40	. .	. .	. .	. .	. .	. .	29.858	42.2	34.2

REMARKS.

(179) 69. Hor. thread assumed as 5 instead of 4.

(179) 79. Transit over T. V assumed as 25^s instead of 5^s.

(179) 95. Transit over T. V assumed as 28^s.7 instead of 23^s.7

ZONE 179. APRIL 16. MAJ. $D_0 = -23° 16' 50''$.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	″	″	″	h. m. s.	° ″ ′
108	8	. .	. .	. .	. .	. .	. .	. .	46.3	. .	12 42 52.64	−30.72	−0.99	.	7	45.085	6 40.76	−18.65	− 4.19	12 42 20.93	23 23 53.6
109	9	. .	. .	. .	30.5	43.0	. .	. .	. .	. .	44 30.76	30.72	1.00	.	3	39.545	36 7.33	18.75	6.48	43 59.04	53 22.6
110	9	. .	34.6	46.3	58.5	. .	. .	. .	. .	. .	45 58.45	30.72	1.00	.	4	42.01	28 50.63	18.84	5.91	45 26.73	23 46 5.4
111	8	. .	. .	. .	41.1	53.5	5.7	. .	. .	. .	47 41.40	30.72	1.01	.	1	38.722	51 8.95	18.94	7.68	47 9.67	24 8 25.6
112	7	. .	. .	1.3	13.	. .	. .	. .	. .	. .	49 13.16	30.72	1.00	.	5	45.563	20 57.44	19.03	5.30	48 41.44	23 38 1.8
113	7	. .	. .	22.	34.	. .	. .	. .	. .	. .	49 34.00	30.72	1.00	.	4	44.823	27 13.53	19.06	5.79	49 2.28	44 28.4
114	6	. .	40.6	52.6	4.7	16.5	28.4	. .	. .	. .	54 4.55	30.71	1.00	.	3	43.082	34 5.25	19.32	6.32	53 32.84	51 20.9
115	.	. .	. .	. .	34.6	46.4	. .	. .	. .	. .	55 34.61	30.71	0.98	.	7	51.038	3 15.30	19.40	3.91	55 2.92	20 28.6
116	7	. .	. .	. .	23.5	35.6	47.2	. .	. .	. .	56 23.45	30.71	1.00	.	4	47.957	25 25.37	19.44	5.64	55 51.74	42 40.4
117	10	. .	. .	. .	. .	. .	. .	55.	. .	. .	12 56 18.92	30.71	1.00	.	4	49.763	24 22.77	19.44	5.56	12 55 47.21	41 37.8
118	9	. .	38.5	50.4	2.5	. .	. .	. .	. .	. .	13 2 2.47	30.71	1.00	.	3	34.48	39 2.15	19.75	6.70	13 1 30.76	56 18.6
119	7	. .	54.3	. .	. .	. .	. .	. .	12.4	. .	4 18.42	30.71	1.00	.	4	41.79	28 58.21	19.87	5.92	3 46.71	46 14.0
120	7	. .	. .	. .	. .	. .	. .	. .	. .	16.4	3 10.58	30.71	0.99	12.	6	39.03	16 0.83	19.81	4.90	2 38.88	33 15.5
121	5	16.4	28.6	40.5	52.4	4.3	. .	. .	. .	. .	6 52.44	30.70	0.99	.	7	35.767	12 2.38	20.00	4.59	6 20.75	23 29 17.0
122	10	. .	. .	. .	. .	. .	49.	0.7	. .	. .	7 24.73	30.70	1.01	.	1	43.665	48 18.23	20.03	7.45	6 53.02	24 5 35.7
123	10	40.3	52.4	4.7	. .	. .	. .	. .	. .	. .	10 16.44	30.70	0.99	.	6	41.915	14 22.12	20.17	4.76	9 44.75	23 31 37.0
124	9	. .	. .	. .	. .	. .	50.	2.2	. .	. .	10 26.09	30.70	0.99	.	7	48.34	4 48.29	20.18	4.02	9 54.40	22 2.5
125	9	. .	. .	. .	. .	56.3	9.	20.4	. .	. .	11 44.53	30.70	1.00	.	3	46.014	32 24.03	20.23	6.18	11 12.83	49 40.4
126	9	. .	. .	. .	. .	52.4	4.7	. .	. .	. .	12 40.56	30.69	1.00	.	4	47.266	25 49.20	20.28	5.67	12 8.87	43 5.2
127	7	. .	. .	14.3	26.4	38.0	. .	. .	. .	. .	13? 26.25	30.69	1.00	.	5	41.015	23 34.42	20.31	5.50	12? 54.56	23 40 50.2
128	7	. .	. .	. .	. .	. .	. .	. .	. .	58.5	13 52.28	30.69	1.01	.	1	38.619	51 12.50	20.33	7.71	13 20.58	24 8 30.5
129	8	. .	. .	. .	26.	. .	50.	. .	. .	. .	15 25.94	30.69	1.00	.	3	33.507	39 35.74	20.40	6.77	14 54.25	23 56 52.9
130	8	. .	. .	. .	35.2	47.5	. .	. .	. .	. .	15 35.36	30.69	1.00	.	4	31.455	34 54.94	20.41	6.38	15 3.67	52 11.7
131	9	. .	. .	. .	39.	50.6	2.4	. .	. .	. .	17 38.73	30.69	0.99	.	7	33.59	13 17.51	20.49	4.68	17 7.05	30 32.7
132	9	. .	. .	14.	25.7	50.6	. .	. .	. .	. .	18 26.15	30.69	0.99	.	7	33.818	13 9.64	20.53	4.67	17 54.47	30 24.8
133	8	. .	. .	26.4	38.4	50.4	2.5	. .	. .	. .	22 38.44	30.68	1.00	.	5	43.43	22 11.05	20.69	5.37	22 6.76	39 27.1
134	9	. .	23.4	. .	. .	. .	. .	23.7	. .	. .	25 47.48	30.67	1.00	.	5	45.578	20 56.92	20.94	5.27	25 15.81	38 13.1
135	7	. .	. .	. .	35.	47.5	. .	. .	. .	. .	25 35.32	30.67	0.99	.	6	42.195	14 12.48	29.93	4.77	25 3.66	31 28.2
136	9	. .	. .	55.0	7.	18.9	30.9	. .	. .	. .	30 7.02	30.67	0.99	.	7	38.778	10 18.45	20.96	4.43	29 35.36	23 27 33.8
137	6.7	. .	. .	. .	15.7	28.2	40.	. .	. .	. .	31 15.94	30.66	1.01	.	1	43.392	48 27.77	21.00	7.47	30 44.27	24 5 46.2
138	8	. .	. .	. .	. .	38.3	50.7	. .	. .	. .	32 26.54	30.66	0.99	.	6	34.565	18 35.83	21.04	5.10	31 54.89	23 35 52.0
139	9	2.5	. .	26.7	38.5	50.7	. .	. .	. .	. .	34 38.63	30.66	1.00	.	5	47.815	19 39 70	21.09	5.17	34 6.97	36 56.0
140	9	. .	. .	. .	. .	. .	. .	27.3	. .	. .	34 51.23	30.66	1.00	.	4	40.525	29 41.62	21.09	5.97	34 19.57	46 58.7
141	9	45.7	57.8	9.8	21.4	. .	. .	. .	. .	. .	13 38 21.65	−30.65	−0.99	.	7	39.697	9 46.73	−21.19	− 4.38	13 37 50.01	23 27 2.3

ZONE 180. MAY 2. MAJ. $D_0 = -26° 26' 20''$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	8	. .	. .	9.3	21.4	34.	. .	. .	. .	. .	14 44 21.63	−19.26	−1.00	VI.	7	37.062	11 17.54	− 4.63	− 4.14	14 44 1.37	26 37 46.3
2	8	. .	. .	. .	. .	. .	25.2	37.2	. .	. .	44 0.39	19.26	1.00	VII.	7	34.802	12 35.37	4.62	4.27	43 40.13	39 4.3
3	9	. .	. .	40.3	. .	5.4	17.4	. .	. .	. .	47 52.84	19.26	1.00	.	5	37.502	25 35.66	4.72	5.55	47 32.58	52 5.9
4	9	. .	. .	. .	. .	. .	. .	28.4	. .	. .	48 51.35	19.25	1.00	.	6	38.634	16 15.08	4.75	4.64	48 31.10	42 44.5
5	8	. .	. .	. .	. .	. .	. .	17.2	. .	. .	49 40.14	19.25	1.00	.	7	34.56	12 44.03	4.77	4.29	49 19.89	39 13.1
6	7	. .	. .	. .	. .	. .	. .	26.	. .	. .	48.95	19.25	1.00	.	6	37.652	16 49.28	4.77	4.68	(49) 28.70	26 43 18.7
7	6	. .	. .	. .	. .	. .	32.	. .	. .	. .	50 7.28	19.25	1.00	.	3	38.828	36 32.08	4.78	6.66	49 47.03	27 3 3.5
8	9	46.2	. .	. .	23.4	36.2	. .	. .	. .	. .	53 23.54	19.24	1.00	.	3	30.40	41 22.97	4.86	7.15	53 3.30	7 55.0
9	.	. .	. .	. .	. .	. .	. .	. .	. .	. .	. . .	19.24	1.00	.	2	33.884	48 4.79	4.90	7.82	54 39.	14 37.5
10	9	35.7	48.4	0.4	12.4	25.3	37.3	50.	. .	. .	58 12.79	19.23	1.00	.	3	34.602	38 57.94	4.96	6.91	57 52.56	27 5 29.8
11	7	. .	. .	. .	. .	. .	. .	. .	29.4	. .	14 58 34.13	−19.23	−1.00	.	5	34.972	27 2.98	− 4.96	− 5.71	14 58 13.90	26 53 33.7

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1849. h.	s.	s.	s.	s.	s.	° ′ ″	r.
May 2, 8	− 20.920	l 0.003	− 0.149	+ 0.382	− 0.196	359 59 58.82	39.722

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1849. h. m.	° ′ ″				″	″	in.	°	°
Zone 180	May 2, 14 44	294 11 60.7	61.0	65.5	65.4	63.17	63.15	30.438	56.8	50.9
	15 0	. .	. .	. .	. .	. .	. .	30.436	56.2	50.4
	15 21	. .	. .	. .	. .	. .	. .	30.434	55.7	50.

REMARKS.

(179) 132. Transit at $50^s.6$ assumed as over T. VI instead of T. V.

ZONE 180. MAY 2. MAJ. D$_{\circ}$=−26° 26′ 20″—Continued.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
12	8	12.	. .	36.4	. .	1.2	. .	26.2	. .	. .	15 2 48.95	−19.22	−1.00	.	6	34.582	18 35.24	− 5.06	− 4.86	15 2 28.73	26 45 5.2
13	8	. .	25.	. .	49.2	. .	14.	. .	. .	. .	2 49.37	19.22	1.00	.	5	34.727	27 11.44	5.06	5.71	2 29.15	26 53 42.2
14	6	. .	. .	. .	36.	49.2	1.7	. .	. .	. .	6 36.61	19.21	1.00	.	1	38.75	51 7.98	5.13	8.14	6 16.40	27 17 41.3
15	5	. .	. .	. .	. .	. .	26.4	39.	. .	. .	7 1.83	19.21	1.00	.	3	40.399	35 37.86	5.14	6.57	6 41.62	27 2 9.6
16	.	. .	. .	. .	16.3	28.7	40.8	. .	. .	. .	8 16.37	19.20	1.00	.	7	40.917	9 4.62	5.16	3.92	7 56.17	26 35 33.7
17	8	. .	36.4	49.	1.	13.4	. .	. .	. .	. .	13 1.12	19.19	1.00	.	3	34.847	38 49.48	5.23	6.89	12 40.93	27 5 21.6
18	9	. .	. .	. .	. .	21.4	33.8	46.	. .	. .	14 9.07	19.19	1.00	.	5	36.27	26 18.15	5.25	5.62	13 48.88	26 52 49.0
19	9	. .	. .	. .	. .	. .	. .	. .	53.	. .	15 57.85	19.18	1.00	11.	6	38.114	16 32.65	5.27	4.65	15 37.67	43 2.6
20	8	. .	. .	. .	. .	. .	. .	0.3	. .	. .	15 23.25	19.18	1.09	11.	6	33.079	19 26.44	5.26	4.94	15 3.07	26 45 56.6
21	8	52.6	5.2	. .	29.2	42.2	. .	. .	. .	. .	19 29.68	19.17	1.00	.	3	33.757	39 27.11	5.32	6.95	19 9.51	27 5 59.4
22	8	. .	. .	21.4	. .	. .	. .	. .	. .	. .	19 33.71	19.17	1.00	.	4	33.932	33 29.43	5.32	6.35	19 13.54	0 1.1
23	8	. .	. .	. .	. .	. .	. .	15.4	. .	. .	20 38.37	19.17	1.00	.	2	40.732	44 8.44	5.33	7.42	20 18.20	27 10 41.2
24	9	. .	. .	. .	. .	. .	. .	21.	. .	. .	15 21 43.95	−19.16	−1.00	.	6	34.225	18 47.27	− 5.35	− 4.88	15 21 23.79	26 45 17.5

ZONE 181. MAY 19. MAJ. D$_{\circ}$=−40° 19′ 50″.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	8	. .	. .	50.3	4.4	19.6	34.	. .	. .	. .	11 48 4.76	−14.85	−1.01	IV.	2	41.268	43 49.95	− 4.22	−22.48	11 47 48.90	41 4 6.6
2	8	37.4	52.	6.4	20.5	35.4	50.0	. .	. .	. .	54 20.90	14.86	1.01	VI.	3	34.841	39 23.99	4.79	20.46	54 5.03	40 59 39.2
3	8	. .	10.2	24.5	39.	53.6	. .	. .	. .	. .	11 56 39.08	14.86	1.00	IV.	4	36.170	32 12.19	5.01	17.01	11 56 23.22	52 24.2
4	8	. .	. .	26.3	40.7	55.5	. .	. .	. .	. .	12 0 40.82	14.87	1.01	VI½.	3	35.967	38 10.42	5.38	−19.80	12 0 24.94	40 58 25.6
5	4	. .	. .	. .	. .	. .	. .	9.0	. .	. .	1 25.37	14.87	1.00	.	.	. .	. . .	5.45	. .	1 10.50	
6	6	17.	31.3	46.3	0.7	15.2	30.2	44.7	. .	. .	8 0.77	14.88	1.01	IV.	2	40.968	44 0.30	6.08	−22.59	12 7 44.88	41 4 19.0
7	6.7	37.2	52.	6.2	21.	34.7	49.7	4.1	. .	. .	12 20.70	14.88	0.98	VII–VIII.	7	36.733	11 29.03	6.49	7.61	12 4.84	40 31 33.1
8	8	1.6	16.4	31.0	45.3	59.7	. .	. .	. .	. .	15 45.38	14.89	1.01	IV.	2	46.843	40 37.52	6.82	20.97	15 29.48	41 0 55.3
9	7	. .	. .	50.2	4.3	19.3	33.3	. .	. .	. .	17 4.61	14.89	0.98	IV.	6	44.362	12 57.68	6.95	8.25	16 48.74	40 33 2.9
10	8	. .	. .	. .	. .	19.3	33.	. .	. .	. .	22 4.49	14.89	0.99	IV.	6	41.07	14 51.08	7.43	9.10	21 48.61	34 57.6
11	6	. .	. .	58.2	12.2	26.9	. .	. .	. .	. .	22 12.43	14.89	1.00	VI.	3	43.072	34 4.43	7.44	17.91	21 56.54	54 19.8
12	7	. .	. .	. .	. .	. .	. .	16.7	. .	. .	23 33.09	14.89	0.99	VII.	5	46.60	20 21.07	7.56	11.57	23 17.21	40 30.2
13	7	. .	13.	27.2	41.4	56.2	10.7	. .	. .	. .	25 41.72	14.90	0.99	IV.	6	40.76	15 2.01	7.77	9.17	25 25.83	35 9.0
14	7	53.6	8.	22.3	36.6	51.	5.5	19.7	. .	. .	35 36.67	14.91	0.98	IV.	7	39.446	9 55.40	8.67	6.91	35 20.78	30 1.0
15	9	47.4	2.2	16.4	. .	. .	. .	. .	. .	. .	42 31.09	14.91	1.00	IV.	4	35.774	32 25.86	9.30	17.10	42 15.18	52 42.3
16	9	. .	. .	. .	. .	18.	32.7	. .	. .	. .	12 43 3.76	−14.91	−0.98	.	7	46.288	5 59.19	− 9.35	− 5.20	12 42 47.87	40 26 3.7

ZONE 182. MAY 19. MAJ. D$_{\circ}$=−30° 11′ 40″.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	9	. .	48.2	58.4	13.3	26.2	. .	. .	. .	. .	13 35 13.49	−14.64	−1.00	IV.	4	37.077	31 40.88	− 6.07	−10.21	13 34 57.85	30 43 37.2
2	10	. .	. .	. .	. .	. .	. .	. .	8.7	. .	35 11.36	14.64	1.00	VII.	4	41.217	29 17.64	6.07	9.91	34 55.72	41 13.6
3	8	. .	16.2	29.2	41.4	54.5	. .	. .	. .	. .	40 41.72	14.65	1.00	IV.	5	37.452	25 37.39	6.36	9.42	40 26.07	37 33.2
4	7	. .	37.5	50.3	. .	. .	. .	. .	. .	. .	42 2.99	14.65	0.99	IV.	7	43.009	7 52.42	6.44	7.11	41 47.35	19 46.0
5	6	. .	. .	. .	21.8	34.	47.2	. .	. .	. .	42 21.63	14.65	1.00	VII.	6	39.785	15 35.31	6.46	8.11	42 5.98	27 29.9
6	7	. .	. .	. .	33.7	33.	. .	. .	. .	. .	42 33.74	14.65	1.00	VI.	6	37.260	17 2.67	6.47	8.29	42 18.09	28 57.4
7	7	. .	. .	. .	. .	. .	48.2	0.7	. .	. .	43 22.48	14.65	1.00	VII.	5	43.130	22 21.05	6.52	8.98	42 6.83	34 16.6
8	6	. .	. .	. .	. .	53.8	6.	. .	. .	. .	43 40.70	14.65	1.00	VII.	2	47.221	40 24.14	6.54	11.38	43 25.05	52 22.1
9	6	. .	58.2	11.3	23.5	36.3	. .	. .	. .	. .	47 23.72	14.65	1.00	IV.	5	45.627	20 55.23	6.76	8.79	47 8.07	32 50.8
10	8	. .	55.9	8.4	21.	33.5	46.7	. .	. .	. .	49 21.14	14.65	0.99	IV.	7	42.560	8 7.91	6.88	7.14	49 5.50	30 20 1.9
11	8	. .	. .	56.4	8.5	21.7	. .	. .	. .	. .	51 58.86	14.65	1.01	IV.	1	43.030	48 40.26	6.98	12.48	50 43.20	31 0 39.7
12	8	23.6	36.6	49.4	1.7	14.7	. .	. .	. .	. .	13 53 2.01	−14.65	−1.00	IV.	2	45.475	41 24.74	− 7.10	−11.51	13 52 46.36	30 53 23.3

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1849. h.	s.	s.	s.	s.	s.	° ′ ″	r.
May 19, 11	− 16.302	l 0.016	+ 0.026	+ 0.415	− 0.196	0 0 1.81	39.715

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1849. h. m.	° ′ ″				″	″	in.	°	°
Zone 181	May 19, 11 45	. .	. .	. .	. .	. .	. .	30.164	67.2	64.1
	11 48	280 21 2.4	1.2	7.2	4.3	. .	3.78			
	12 5	. .	. .	. .	. .	. .	. .	. .	. .	63.4
	12 20	. .	. .	. .	. .	. .	. .	. .	. .	62.7
	12 40	. .	. .	. .	. .	. .	. .	30.176	66.2	62.
	12 43	1.7	0.4	7.4	4.3	. .	3.45			
Zone 182	May 19, 13 35	290 26 55.4	56.3	61.2	57.7	. .	57.65	. .	. .	57.5
	13 40	. .	. .	. .	. .	. .	. .	30.176	64.8	

REMARKS.

(181) 2. Micrometer reading assumed as $33^r.841$ instead of $34^r.841$.

(182) 11. Times of transits over T.'s IV and V assumed as $58^s.5$ and $11^s.7$ instead of $8^s.5$ and $21^s.7$, and minutes changed.

ZONE 182. MAY 19. MAJ. $D_0=-30^\circ\ 11'\ 40''$—Continued.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
13	7	57.4	10.3	22.9	35.5	48.6	. .	. .	. .	. .	13 54 35.76	−14.65	−1.01	IV.	2	38.052	45 40.95	− 7.23	−12.09	13 54 20.10	30 57 40.3
14	7	3.	15.6	28.3	41.1	. .	. .	. .	. .	. .	58 41.18	14.65	1.00	IV.	4	41.824	28 57.03	7.51	9.86	58 25.53	40 54.4
15	8	. .	. .	. .	. .	8.3	21.2	34.1	. .	. .	13 58 55.60	14.65	1.00	VI.	2	47.595	40 11.43	7.53	11.36	13 58 39.95	52 10.3
16	7	54.1	7.0	19.4	32.5	45.3	57.7	10.5	. .	. .	14 4 32.36	14.65	1.00	IV.	6	32.372	19 51.52	7.89	8.66	14 4 16.71	30 31 48.1
17	8	. .	. .	0.4	12.8	26.4	. .	. .	. .	. .	6 13.19	14.65	1.01	IV.	1	35.72	52 52.57	8.00	13.07	5 57.53	31 4 53.6
18	7	. .	. .	. .	. .	. .	. .	. .	11.	. .	6 13.92	14.65	0.99	12.	7	41.37	8 47.80	8.00	7.24	5 58.28	30 20 43.0
19	8	. .	. .	. .	. .	. .	. .	. .	18.	. .	6 20.84	14.65	1.00	12.	6	40.047	15 25.44	8.01	8.09	6 5.19	30 27 21.5
20	8	18.7	31.7	44.6	57.2	. .	. .	. .	. .	. .	13 57.28	14.65	1.01	IV.	1	41.747	49 24.54	8.49	12.60	13 41.62	31 1 25.6
21	9	35.6	48.	1.0	13.7	26.5	. .	. .	. .	. .	17 13.77	14.65	1.00	IV.	3	37.931	37 3.05	8.70	10.93	16 58.12	30 49 2.7
22	10	. .	12.7	25.7	. .	. .	. .	. .	. .	. .	19 38.32	14.65	1.00	IV.	6	35.72	17 55.96	8.85	8.42	19 22.67	29 53.2
23	10	. .	. .	. .	. .	. .	28.	40.7	. .	. .	20 2.42	14.65	0.99	VII.	7	38.464	10 28.93	8.87	7.44	19 46.78	22 25.2
24	11	. .	. .	2.3	. .	28.	. .	. .	. .	. .	23 15.14	14.64	1.00	VI.	2	46.424	40 51.83	9.06	11.45	22 59.50	52 52.3
25	9	. .	. .	. .	42.7	55.5	. .	. .	. .	. .	25 42.82	14.64	0.99	IV.	7	45.471	6 27.44	9.21	6.93	25 27.19	18 23.6
26	9	. .	. .	47.4	0.0	12.7	. .	. .	. .	. .	28 0.11	14.64	0.99	IV.	7	37.031	10 44.23	9.35	7.48	27 44.48	22 41.1
27	6	. .	45.4	58.	10.7	23.4	36.3	. .	. .	. .	33 10.80	14.64	0.99	IV.	7	47.544	5 15.89	9.65	6.77	32 55.17	17 12.3
28	9	. .	. .	. .	. .	. .	. .	. .	37.5	. .	33 40.18	14.64	1.00	12.	3	41.940	34 43.49	9.68	10.62	33 24.54	46 43.8
29	8	. .	3.2	. .	. .	. .	. .	. .	. .	. .	37 28.56	14.64	0.99	III.	7	42.705	8 2.87	9.90	7.14	37 12.93	30 19 59.9
30	8	. .	. .	. .	. .	55.3	8.2	. .	. .	. .	37 42.51	14.64	1.01	VI.	1	39.317	50 48.27	9.91	12.79	37 26.86	31 2 51.0
31	9	9.3	22.2	34.5	47.2	. .	. .	. .	. .	. .	38 47.49	14.64	1.00	IV.	3	42.927	34 10.60	9.97	10.55	38 31.85	30 46 11.1
32	9	24.3	36.9	49.7	. .	15.	. .	. .	. .	. .	41 2.48	14.64	1.00	IV.	4	36.397	32 4.36	10.09	10.27	40 46.84	44 4.7
33	8	27.2	40.4	53.	5.5	18.4	31.	. .	. .	. .	44 5.65	14.64	0.99	IV.	6	43.70	13 20.53	10.25	7.80	43 50.02	30 25 18.6
34	8	. .	. .	. .	. .	27.6	40.5	53.	. .	. .	45 14.73	14.64	1.01	VI.	1	43.065	48 38.91	10.31	12.48	44 59.08	31 0 41.7
35	8	. .	. .	. .	. .	52.2	5.1	18.1	. .	. .	46 39.55	14.63	1.00	VI.	3	39.28	36 16.33	10.38	10.86	46 23.92	30 48 17.6
36	7	. .	. .	. .	. .	. .	. .	. .	10.2	. .	47 13.04	14.63	1.00	11.	6	38.105	16 32.86	10.41	8.23	46 57.41	28 31.5
37	9	. .	. .	. .	22.7	35.5	. .	1.0	. .	. .	49 22.69	14.63	1.00	V.	2	47.034	40 30.89	10.53	11.40	49 7.06	52 32.8
38	8	. .	. .	13.3	25.5	38.3	. .	. .	. .	. .	51 25.69	14.63	1.00	IV.	3	39.95	35 53.35	10.62	10.77	51 10.06	47 54.7
39	7	. .	. .	33.	46.	58.4	. .	. .	. .	. .	52 45.79	14.63	1.00	IV.	2	39.924	44 36.33	10.68	11.95	52 30.16	56 39.0
40	7	. .	. .	. .	24.	37.2	50.	. .	. .	. .	53 24.26	14.63	1.01	IV.	2	34.70	47 36.64	10.71	12.34	53 8.62	59 39.7
41	7	. .	. .	. .	41.3	54.7	7.3	. .	. .	. .	54 41.64	14.63	1.00	IV.	3	41.735	34 51.75	10.77	10.65	54 26.01	46 53.2
42	9	. .	. .	. .	. .	. .	27.2	40.9	. .	. .	51 2.06	14.63	1.00	VI.	4	41.214	29 17.94	10.60	9.91	50 46.43	41 18.4
43	5	. .	. .	. .	43.2	55.7	8.6	21.4	. .	. .	14 52 43.12	14.63	0.99	IV.	7	42.914	7 55.69	10.68	7.10	14 52 27.50	19 53.5
44	10	. .	. .	. .	. .	37.	. .	. .	. .	. .	15 1 24.25	14.61	1.00	VI.	4	34.913	32 55.43	11.05	10.38	15 1 8.64	44 56.9
45	7	39.	52.0	4.7	17.2	. .	. .	. .	. .	. .	3 17.34	14.61	0.99	IV.	7	44.069	6 41.32	11.11	6.95	3 1.74	18 39.4
46	4	3.9	17.	29.7	42.	55.3	8.0	21.	. .	. .	15 5 42.41	−14.61	−1.01	IV.	2	38.905	45 11.50	−11.19	−12.04	15 5 26.79	30 57 14.7

ZONE 183. MAY 23. MAJ. $D_0=-22^\circ\ 40'\ 50''$.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	7	. .	. .	26.4	50.4	2.4	. .	. .	. .	. .	13 0 50.45	−13.40	−1.00	IV.	6	31.82	20 10.56	− 5.31	− 5.32	13 0 36.05	23 1 11.2
2	7	. .	. .	. .	. .	. .	. .	. .	23.4	. .	2 29.90	13.40	0.99	11.	6	41.95	14 20.37	5.34	4.93	2 15.51	22 55 20.6
3	6	59.3	11.4	23.1	34.5	47.0	59.	10.4	. .	. .	6 34.96	13.41	1.01	VI.	2	33.58	48 15.18	5.43	7.30	6 20.54	23 29 17.9
4	7	. .	. .	. .	. .	. .	. .	55.4	. .	. .	7 19.47	13.41	1.00	VII.	5	42.20	22 53.25	5.44	5.51	7 5.06	3 54.2
5	7	. .	. .	. .	. .	. .	51.2	3.	. .	. .	7 27.18	13.41	1.00	12.	4	37.62?	31 21.28	5.44	6.09	7 12.77	23 12 22.8
6	6	15.3	27.5	39.4	51.0	3.1	15.	26.7	. .	. .	12 51.14	13.42	0.99	IV.	6	36.670	17 23.17	5.56	5.14	12 36.73	22 58 23.9
7	8	. .	. .	. .	. .	57.3	. .	21.3	. .	. .	18 45.38	13.43	1.01	VII.	1	41.637	49 28.07	5.68	7.36	18 30.94	23 30 31.1
8	8	. .	. .	. .	8.0	. .	32.3	44.7	. .	. .	19 8.35	13.44	1.01	VII.,IV.	1	41.925	49 18.01	5.69	7.35	18 53.90	23 30 21.0
9	6	55.7	7.7	19.6	31.6	43.6	55.3	7.3	. .	. .	22 31.54	13.45	0.99	IV.	7	36.992	11 20.09	5.76	4.72	22 17.10	22 52 20.6
10	6	. .	47.0	58.7	10.5	22.3	. .	. .	. .	. .	13 30 10.62	−13.46	−0.99	IV.	7	39.70	9 46.63	− 5.93	− 4.61	13 29 56.17	22 50 47.2

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	*m*	*n*	*c*	Zenith Point.	Mic. Co.
1849. h.	s.	s.	s.	s.	s.	° ′ ″	r.
May 23, 4	−15.292	*l* 0.007	+ 0.026	+ 0.415	− 0.196	0 0 0.44	39.734

INSTRUMENT READINGS.

	Date.	CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1849. h. m.	° ′ ″				″	″	in.	°	°
Zone 182	May 19, 14 0	. .	. .	. .	. .	. .	. .	30.180	63.8	57.0
	14 20	. .	. .	. .	. .	. .	. .	. .	. .	55.7
	14 40	. .	. .	. .	. .	. .	. .	. .	. .	56.0
	15 5	290 26 54.0	54.5	59.4	56.7	. .	56.15	30.192	62.5	55.7
Zone 183	May 23, 13 0	297 57 60.0	60.2	64.5	62.6	. .	61.82	29.824	77.5	71.3
	13 20	. .	. .	. .	. .	. .	. .	. .	. .	70.4
	13 29	60.0	61.	65.9	64.0	. .	62.72			
	13 40	. .	. .	. .	. .	. .	. .	29.832	76.	70.4

REMARKS.

(182) 26. Micrometer reading assumed as $38^r.031$ instead of $37^r.031$.

(182) 45. Micrometer reading assumed as $45^r.069$ instead of $44^r.069$.

(183) 1. Transit at $26^s.4$ assumed as over T. II instead of T. III.

ZONE 184. JUNE 22. MAJ. D₀= – ° ′ ″.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
1	10	. .	. .	. .	. .	7.	18.5	. .	. .	. .	15 4 54.84	. .	. .	VII.	3	29.713	41 41.25				
2	8	. .	. .	. .	. .	31.	. .	. .	. .	. .	6 19.03										
3	11	50.	. .	14.1	. .	. .	. .	. .	. .	. .	8 25.84										
4	·9	. .	. .	. .	. .	23.	35.2	. .	. .	. .	9 11.18	. .	. .	.	3	35.744	38 13.31				
5	9	. .	. .	. .	. .	22.2	. .	. .	. .	. .	10 10.23	. .	. .	VI.	4	40.61	29 38.83				
6	.	. .	. .	. .	. .	. .	. .	. .	. .	. .	14										
7	7	. .	33.	45.	. .	. .	. .	. .	. .	. .	15 56.92	. .	. .	.	2	45.197	41 34.34				
8	7	. .	. .	48.7	. .	12.5	. .	. .	. .	. .	16 0.57	. .	. .	.	3	45.592	32 33.40				
9	8	. .	. .	. .	. .	. .	55.0	. .	. .	. .	16 31.15	. .	. .	.	4	39.307	30 23.92				
10	9	33.	. .	57.3	. .	. .	. .	. .	. .	. .	22 8.95	. .	. .	IV.	3	36.16	37 58.98				
11	7	36.	48.	. .	12.0	. .	. .	. .	. .	. .	22 11.87	. .	. .	VI.	1	38.230	51 25.52				
12	7	44.5	56.4	8.3	20.	. .	. .	. .	. .	. .	19 20.18	. .	. .	IV.	3	31.89	40 26.35				
13	8	. .	23.	35.	46.8	. .	. .	. .	. .	. .	26 46.88	. .	. .	IV½.	3	31.27	40 47.74				
14	4	17.	29.	40.9	52.7	4.5	16.4	. .	. .	. .	28 52.67	. .	. .	VI.	5	44.287	21 42.47				
15	7	. .	. .	. .	49.	1.5	. .	. .	. .	. .	29 49.30	. .	. .	.	6	38.074	16 29.43				
16	5	. .	. .	. .	. .	37.5	49.7	. .	. .	. .	30 25.72	. .	. .	.	5	42.715	22 36.83				
17	7	. .	. .	. .	. .	. .	17.6	. .	. .	. .	30 53.71	. .	. .	VI.	2	45.947	41 8.34				
18	6	21.	32.8	45.1	. .	. .	. .	. .	. .	. .	32 56.77	. .	. .	.	4	39.427	30 19.78				
19	7	. .	. .	56.	8.	20.	. .	. .	. .	. .	33 7.97	. .	. .	.	5?	38.43	25 4.73				
20	7	39.4	51.2	3.4	15.0	. .	. .	. .	. .	. .	36 15.04	. .	. .	.	7	32.517	13 54.42				
21	8	. .	. .	. .	. .	. .	. .	7.	. .	. .	36 31.30	. .	. .	VII½.	2	39.94	44 35.39				
22	9	. .	46.7	. .	10.4	. .	. .	. .	. .	. .	39 10.48	. .	. .	IV.	3	38.52	36 37.52				
23	9	. .	47.	. .	11.	. .	. .	. .	. .	. .	39 10.94	. .	. .	IV.	3	36.987	37 30.43				
24	6	5.4	17.4	29.6	41.4	53.0	5.0	. .	. .	. .	41 41.24	. .	. .	IV.	4	38.228	31 1.17				
25	7	. .	. .	. .	17.5	29.4	. .	. .	. .	. .	46 17.48	. .	. .	IV.	3	35.57	38 19.33				
26	7	. .	. .	. .	8.4	20.3	. .	. .	. .	. .	47 8.40	. .	. .	.	2	39.93	44 36.14				
27	6	. .	. .	. .	48.1	60.3	. .	. .	. .	. .	47 48.22	. .	. .	.	5	33.675	27 48.85				
28	5	. .	. .	. .	. .	59.7	11.7	. .	. .	. .	48 47.78	. .	. .	IV.	1	33.102	54 22.62				
29	8	. .	. .	48.4	0.4	12.2	. .	. .	. .	. .	51 0.30	. .	. .	V.	5	31.83	28 52.50				
30	7	8.4	20.7	31.7	44.	56.4	8.	. .	. .	. .	53 44.13	. .	. .	IV.	5	32.960	28 13.52				
31	4	. .	39.2	50.8	3.0	15.	26.4	. .	. .	. .	57 2.92	. .	. .	IV.	1	32.32	54 49.61				
32	9	. .	. .	. .	. .	. .	. .	15.5	. .	. .	57 40.04	. .	. .	VII½.	7	34.87	12 32.80				
33	10	. .	. .	. .	38.5	. .	. .	. .	. .	. .	15 59 38.52	. .	. .	IV.	3	34.78	38 46.61				
34	8	. .	. .	9.8	22.	33.9	. .	. .	. .	. .	16 0 21.87	. .	. .	IV.	4	40.385	29 46.71				
35	7	. .	. .	. .	23.4	35.4	47.2	. .	. .	. .	1 23.41	. .	. .	IV.	5	37.40	25 40.30				
36	9	. .	. .	. .	. .	. .	37.4	. .	. .	. .	2 13.55	. .	. .	VI.	4	37.112	31 39.56				
37	9	. .	. .	. .	. .	. .	26.5	. .	. .	. .	3 2.63	. .	. .	VI.	4	32.395	34 22.49				
38	9	. .	. .	28.4	40.2	. .	. .	. .	. .	. .	6 40.19	. .	. .	IV.	7	41.218	8 54.10				
39	8	. .	. .	. .	. .	27.0	39.	. .	. .	. .	7 15.09	. .	. .	V.	4	39.90	30 3.43				
40	7	. .	. .	. .	. .	. .	13.7	. .	. .	. .	7 49.86	. .	. .	VI.	5	34.68	27 14.05				
41	7	. .	. .	. .	. .	. .	36.0	. .	. .	. .	8 12.20	. .	. .	VII½.	6	38.93	15 59.64				
42	6	. .	. .	. .	. .	36.4	47.7	. .	. .	. .	9 24.14	. .	. .	V.	3	37.41	37 15.82				
43	5	. .	. .	. .	. .	. .	. .	. .	. .	. .	14	. .	. .	VII., V.	4	42.075	28 47.98				
44	7	. .	54.5	. .	18.	. .	. .	. .	. .	. .	16 18.24	. .	. .	.	1	41.068	49 47.68				
45	5.7	. .	5.5	17.5	41.	. .	. .	. .	. .	. .	16 29.33	. .	. .	.	1	42.41	49 1.36				
46	7	. .	. .	. .	41.	. .	. .	. .	. .	. .	16 41.03	. .	. .	.	1	46.85	46 28.11				
47	9	. .	. .	21.	32.9	44.	. .	. .	. .	. .	22 32.61	. .	. .	IV.	6.	46.63	11 34.12				
48	8	. .	. .	32.7	44.6	56.4	. .	. .	. .	. .	24 44.54	. .	. .	IV.	6	43.232	13 31.40				
49	7	. .	50.	2.0	14.	26.	. .	. .	. .	. .	16 29 13.90	. .	. .	IV.	6	34.923	18 18.19				

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1849. h.	s.	s.	s.	s.	s.	° ′ ″	r.
*June 22, 13	+ 6.705	*l* 0.015	– 0.550	+ 0.118	– 0.314	. . .	. . .

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1849. h. m.	° ′ ″				″	″	in.	°	°
Zone 184	June 22, 15 4	298 20 61.0	64.5	60.0	61.2	. .	61.68			
	15 20	. .	. .	. .	. .	. .	. .	. .	. .	79.4
	15 30	60.5	63.6	58.7	61.7	. .	61.12			
	15 40	. .	. .	. .	. .	. .	. .	. .	. .	78.7
	16 20	. .	. .	. .	. .	. .	. .	30.072	82.5	77.9
		. .	. .	. .	. .	. .	. .	. .	. .	76.7
		. .	. .	. .	. .	. .	. .	30.070	81.3	77.0
		. .	. .	. .	. .	. .	. .	30.074	80.5	77.0

REMARKS.

(184) 13. Micrometer thread 4 assumed to have been used instead of 3.

(184) 45. Transit at 41ˢ assumed as over T. V instead of T. IV. Close double star.

* No nadir point could be got for these observations, the declination-wires having become bent and slackened. The transits only are supposed to be good, all the transit-wires seeming straight except VII.

ZONE 184. JUNE 22. MAJ. D_0=— ° ′ ″—Continued.

No.	Mag.	SECONDS OF TRANSIT. I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
50	7	29.7	41.7	53.7	5.7	17.	. .	. .	. .	. .	16 32 5.48	. .	. .	IV.	2	39.542	44 49.53				
51	7	. .	10.7	22.	34.	. .	. .	. .	. .	. .	34 34.02	. .	. .	IV.	7	39.157	10 5.24				
52	8	. .	18.	. .	42.3	. .	. .	. .	. .	. .	34 42.04	. .	. .	IV.	4	43.785	27 49.37				
53	5	. .	. .	48.8	1.0	13.2	. .	. .	. .	. .	36 0.99	. .	. .	IV.	3	37.634	37 8.10				
54	9	30.5	42.	54.	6.	. .	. .	. .	. .	. .	40 5.90	. .	. .	IV.	7	39.705	9 46.33				
55	10	. .	. .	. .	16.5	. .	. .	. .	. .	. .	40 16.50	. .	. .	V.	7	35.794	12 1.29				
56	7	. .	. .	. .	. .	. .	. .	25.2	. .	. .	40 49.43	. .	. .	VII.	1	33.517	54 7.96				
57	7	. .	30.6	42.8	54.6	6.8	18.4	. .	. .	. .	42 54.60	. .	. .	IV.	5	43.50	22 9.73				
58	4	2.9	15.4	27.4	38.5	51.0	2.7	. .	. .	. .	47 38.92	. .	. .	VII.	3	36.78	37 37.33				
59	10	. .	. .	. .	57.5	10.0	. .	. .	. .	. .	48 57.76	. .	. .	V.	4	39.93	30 2.40				
60	8	. .	. .	4.7	16.4	28.6	. .	. .	. .	. .	52 16.54	. .	. .	.	6	33.57	19 4.89				
61	7	. .	. .	. .	. .	10.7	22.4	. .	. .	. .	52 58.63	. .	. .	.	2	36.867	46 21.85				
62	7	. .	. .	. .	11.7	23.7	35.	. .	. .	. .	54 11.53	. .	. .	.	3	34.334	39 2.00				
63	6	. .	. .	. .	16.4	29.0	40.7	. .	. .	. .	55 16.76	. .	. .	.	1	34.444	53 36.30				
64	8	47.7	59.4	11.7	23.4	. .	. .	. .	. .	. .	16 59 23.44	. .	. .	IV.	2	39.89	44 37.52				
65	8	38.	49.7	1.7	13.5	25.5	. .	. .	. .	. .	17 3 13.56	. .	. .	IV.	5	34.23	27 29.69				
66	9	. .	. .	44.7	56.5	8.5	20.6	. .	. .	. .	4 56.61	. .	. .	.	7	44.22	7 10.49				
67	10	. .	. .	. .	. .	57.3	9.2	. .	. .	. .	9 45.42	. .	. .	VI.	7	39.27	10 1.23				
68	7	. .	. .	. .	. .	. .	. .	. .	. .	. .	11	. .	. .	.	4	35.00	32 52.58				
69	7	. .	. .	9.2	21.3	33.	. .	. .	. .	. .	12 21.14	. .	. .	.	4	41.042	29 24.03				
70	7	. .	. .	. .	39.	. .	. .	. .	. .	. .	12 39.00	. .	. .	.	6	33.807	18 56.71				
71	7	. .	. .	50.	2.4	14.0	. .	. .	. .	. .	14 2.12	. .	. .	.	4	31.663	34 47.76				
72	7	. .	. .	. .	13.2	25.0	36.8	. .	. .	. .	15 13.08	. .	. .	.	5	42.685	22 37.87				
73	7	. .	. .	. .	50.0	2.0	13.9	. .	. .	. .	17 16 50.03	. .	. .	.	1	49.38	45 0.78				

ZONE 185. JULY 24. MAJ. D_0=—30° 50′ 40″.

No.	Mag.	I.	II.	III.	IV.	V.	VI.	VII.	11.	12.	T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
1	8	. .	. .	. .	. .	. .	0.0	12.7	. .	. .	16 39 34.26	+20.90	+1.00	VI.	4	36.407	32 3.85	− 4.42	− 8.28	16 39 56.16	31 22 56.6
2	9	. .	. .	. .	. .	53.	6.0	. .	. .	. .	40 40.16	20.90	1.00	VI.	4	37.594	31 22.88	4.42	8.20	41 2.06	22 15.5
3	9	. .	54.0	7.3	. .	. .	. .	. .	. .	. .	42 20.01	20.90	1.00	IV.	2	43.130	42 45.69	4.42	9.76	42 41.91	33 39.9
4	8	. .	. .	52.5	5.7	. .	. .	. .	. .	. .	43 5.59	20.89	1.00	IV.	2	36.630	46 30.03	4.43	10.27	43 27.48	37 24.7
5	9	59.4	12.2	. .	. .	. .	. .	. .	. .	. .	44 37.81	20.89	1.00	II.	7	31.837	14 17.73	4.43	5.88	44 59.70	5 8.0
6	7	. .	. .	57.0	9.6	. .	. .	. .	. .	. .	45 9.68	20.89	1.00	IV.	6	35.015	18 15.02	4.43	6.44	45 31.57	9 5.9
7	8	. .	. .	39.7	53.0	5.5	. .	. .	. .	. .	45 52.69	20.89	1.00	IV.	5	42.795	22 34.07	4.43	7.01	46 14.58	13 25.5
8	7	. .	. .	. .	. .	. .	44.5	. .	. .	. .	46 18.85	20.88	1.00	VI.	6	44.497	12 47.59	4.43	5.71	46 40.73	31 3 37.7
9	8	. .	52.4	. .	. .	. .	. .	. .	. .	. .	49 17.77	20.87	1.00	III.	7	45.187	6 37.07	4.44	4.88	49 39.64	30 57 26.4
10	9	. .	34.4	46.7	. .	. .	. .	. .	. .	. .	49 59.81	20.87	1.00	IV.	4	38.75	30 43.14	4.44	8.10	50 21.68	31 21 35.7
11	9	. .	. .	. .	. .	. .	. .	28.4	. .	. .	49 49.90	20.87	1.00	VJI.	3	36.70	37 39.98	4.44	9.06	50 11.77	28 33.5
12	9	. .	. .	. .	. .	. .	19.4	32.5	. .	. .	50 53.78	20.87	1.00	VII.	3	29.48	41 49.18	4.44	9.63	51 15.65	32 43.2
13	6	37.8	50.4	3.9	16.9	29.5	42.6	55.0	. .	. .	53 16.59	20.86	1.00	IV.	4	35.179	32 46.40	4.44	8.39	53 38.45	23 39.2
14	10	. .	. .	. .	45.8	58.9	11.5	. .	. .	. .	16 54 45.89	+20.86	+1.00	V.	6	35.43	18 0.65	− 4.44	− 6.40	16 55 7.75	31 8 51.5

CORRECTIONS.

Date.		Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1849.	h.	s.	s.	s.	s.	s.	° ′ ″	r.
July 24,	15	+21.316	*l* 0.015	− 0.132	− 0.020	− 0.314	0 0 2.20	39.622

INSTRUMENT READINGS.

	Date.	CIRCLE. A.	B.	C.	D.	Corr'd Mean.	Mean.	Barom.	Attached Thermom.	External Thermom.
	1849. h. m.	° ′ ″				″	″	in.	°	°
Zone 184	June 22, 17 16	298 20 60.0	63.4	59.5	61.0	. .	60.98			
Zone 185	July 24, 16 40	289 47 55.0	57.8	63.0	54.5	. .	57.58	30.256	77.9	72.8
	16 57	. .	. .	. .	. .	. .	. .	30.260	77.7	72.4

REMARKS.

ZONE 186. AUGUST 25. MAJ. D$_0$=−18° 55′ 30″.

No.	Mag.	SECONDS OF TRANSIT.									T.	a_1	a_2	MICROMETER.			i	d_1	d_2	Mean Right Ascension, 1850.0.	Mean South Declination, 1850.0.
		I.	II.	III.	IV.	V.	VI.	VII.	11.	12.											
											h. m. s.	s.	s.			r.	′ ″	″	″	h. m. s.	° ′ ″
1	6	27.2	39.	50.5	2.2	13.9	25.5	37.	. .	. .	17 56 2.19	+36.92	+1.00	IV.	1	41.198	49 43.19	− 7.08	−11.07	17 56 40.11	19 45 31.3
2	6.7	. .	. .	. .	14.5	. .	. .	. .	. .	. .	57 14.50	36.92	1.00	IV.	7	50.957	3 52.60	7.06	8.60	57 52.42	18 59 38.3
3	8	. .	. .	9.2	21.	32.7	. .	. .	. .	. .	17 59 20.94	36.91	1.00	IV.	7	50.004	3 50.85	7.00	8.62	17 59 58.85	18 59 36.5
4	8	. .	. .	. .	. .	18.7	30.2	. .	. .	. .	18 0 6.95	36.90	1.00	V.	4	45.498	26 50.22	6.98	9.81	18 0 44.85	19 22 37.0
5	5	. .	. .	31.5	43.4	. .	. .	. .	. .	. .	1 43.34	36.90	1.00	IV.	1	29.88	56 13.82	6.92	11.41	2 21.24	52 2.1
6	7	. .	. .	. .	44.7	56.8	8.	. .	. .	. .	2 44.82	36.89	1.00	VI.	4	36.638	31 55.94	6.89	10.09	3 22.71	27 42.9
7	8	. .	. .	. .	5.7	17.8	. .	. .	. .	. .	5 5.94	36.88	1.00	IV.	7	39.432	9 55.75	6.81	8.93	5 43.82	5 41.5
8	6	. .	. .	. .	. .	0.0	11.9	23.4	. .	. .	5 48.60	36.88	1.00	.	7	45.814	6 15.46	6.79	8.74	5 26.48	2 1.0
9	8	. .	. .	. .	. .	9.2	. .	. .	. .	. .	6 57.60	36.87	1.00	.	7	47.49	5 17.63	6.75	8.69	7 35.47	1 3.1
10	6	. .	. .	. .	. .	42.4	54.	. .	. .	. .	7 30.78	36.87	1.00	.	7	47.71	5 10.03	6.73	8.69	8 8.65	0 55.4
11	8	. .	. .	. .	. .	. .	. .	31.2	. .	. .	7 56.38	36.87	1.00	.	3	39.18	36 14.74	6.72	10.33	8 34.25	32 1.8
12	8	. .	. .	. .	. .	. .	. .	44.	. .	. .	8 9.10	36.86	1.00	.	2	34.93	47 28.71	6.71	10.94	8 46.96	43 16.4
13	9	. .	. .	. .	. .	14.7	26.2	. .	. .	. .	10 2.94	36.86	1.00	.	1	38.294	51 23.40	6.65	11.15	10 40.80	47 11.2
14	8	. .	. .	19.3	30.7	42.6	. .	. .	. .	. .	11 30.89	36.86	1.00	.	2	35.208	47 19.13	6.59	10.93	12 8.75	43 6.6
15	8	. .	. .	. .	. .	. .	. .	31.1	. .	. .	11 56.35	36.86	1.00	.	5	39.88	24 14.67	6.57	9.69	12 34.21	20 0.9
16	7	59.4	11.2	22.7	34.2	. .	. .	. .	. .	. .	14 34.33	36.85	1.00	.	4	36.182	32 11.78	6.48	10.11	15 12.18	27 58.4
17	8	. .	. .	. .	. .	. .	. .	13.8	. .	. .	14 38.92	36.85	1.00	.	2	42.170	43 18.82	6.48	10.71	15 16.77	39 6.0
18	7	. .	. .	32.8	44.2	56.	. .	. .	. .	. .	17 44.30	36.83	1.00	.	7	46.244	6 0.63	6.37	8.73	18 22.13	1 45.7
19	.	. .	9.0	20.8	. .	44.0	. .	. .	. .	. .	18 19 32.24	+36.82	+1.00	.	7	43.87	7 22.57	6.30	8.80	20 10.06	3 7.7
20	.	. .	. .	. .	. .	. .	. .	. .	. .	. .	. . . .	. .	. .	.	6	43.67	13 16.28	6.3	9.10	(21)	9 1.7
21	7	20.4	32.4	44.2	. .	. .	. .	. .	. .	. .	18 21 55.56	+36.81	+1.00	.	5	47.78	19 42.01	6.20	9.45	22 33.37	15 27.7
22	6	. .	. .	13.0	. .	. .	. .	. .	. .	. .	22 24.56	36.81	1.00	.	5	51.042	17 49.42	6.18	9.33	23 2.37	13 34.9
23	7	. .	. .	56.4	. .	. .	. .	. .	. .	. .	23 7.96	38.81	1.00	.	5	51.042	17 49.42	6.15	9.33	23 45.77	13 34.9
24	9	. .	. .	. .	. .	. .	25.2	37.	. .	. .	22 2.06	36.81	1.00	.	4	43.632	27 54.54	6.20	9.87	22 39.87	23 40.6
25	5	19.7	31.7	43.2	54.9	6.4	17.9	29.4	. .	. .	25 54.74	36.80	1.00	.	4	45.057	27 5.46	6.04	9.84	26 32.54	22 51.3
26	.	. .	7.2	19.0	. .	. .	. .	. .	. .	. .	27 30.46	36.79	1.00	.	5	47.63	19 47.16	5.98	9.45	28 8.25	15 32.6
27	.	. .	. .	26.8	38.8	50.6	. .	. .	. .	. .	27 38.70	36.79	1.00	.	5	50.52	23 51.49	5.98	9.65	28 16.49	19 37.1
28	.	. .	. .	. .	. .	. .	. .	19.1	. .	. .	27 44.28	36.79	1.00	.	2	55.46	35 39.91	5.98	10.31	28 22.07	31 26.2
29	.	. .	. .	. .	. .	. .	. .	33.4	. .	. .	27 58.57	36.79	1.00	.	2	53.25	36 56.18	5.97	10.36	28 36.36	19 32 42.5
30	.	. .	. .	. .	. .	. .	. .	0.0?	. .	. .	29 25.35	36.78	1.00	.	7	50.49	3 33.87	5.90	8.61	30 3.13	18 59 18.4
31	5	52.0	3.4	15.4	26.7	38.7	50.	. .	. .	. .	33 26.83	36.77	1.00	IV.	4	40.667	29 36.98	5.75	9.98	34 4.60	19 25 22.7
32	5	. .	16.4	28.4	40.3	52.	. .	. .	. .	. .	34 40.08	36.77	1.00	.	4	36.47	32 1.84	5.70	10.10	35 17.85	27 47.6
33	9	. .	. .	. .	. .	25.3	36.6	. .	. .	. .	35 13.44	36.76	1.00	VI.	4	35.61	32 31.42	5.69	10.13	35 51.20	28 17.2
34	4.5	. .	. .	20.0	31.6	43.4	. .	. .	. .	. .	36 31.68	36.76	1.00	IV.	2	41.020	49 43.66	5.62	8.90	37 9.44	45 28.2
35	6	10.8	22.3	34.1	45.6	57.2	. .	. .	. .	. .	38 45.61	36.75	1.00	IV.	5	37.232	25 46.08	5.53	9.76	39 23.36	21 31.4
36	7	33.0	44.5	56.4	8.0	. .	. .	. .	. .	. .	40 7.90	36.74	1.00	.	5	42.618	22 40.18	5.49	9.59	40 45.64	18 25.3
37	9	. .	. .	. .	20.2	. .	. .	. .	. .	. .	39 20.20	36.74	1.00	VII.	7	41.392	8 47.88	5.52	8.87	39 57.94	4 32.3
38	10	. .	. .	. .	. .	. .	. .	14.2?	. .	. .	40 39.51	36.74	1.00	.	7	35.91	11 57.10	5.46	9.04	41 17.25	7 41.6
39	10	. .	. .	. .	. .	. .	. .	35.7	. .	. .	41 0.75	36.74	1.00	.	1	35.868	52 46.95	5.45	11.22	41 38.49	48 33.6
40	9	. .	. .	18.3	30.0	41.7	. .	. .	. .	. .	43 29.97	36.73	1.00	.	5	43.77	22 0.41	5.36	9.56	44 7.70	17 45.3
41	8	. .	. .	20.4	32.4	44.0	. .	. .	. .	. .	45 32.30	36.72	1.00	.	1	34.661	53 28.82	5.30	11.25	46 10.02	49 15.4
42	9	. .	. .	. .	. .	. .	. .	27.2	. .	. .	45 52.50	36.72	1.00	.	7	32.295	14 1.87	5.30	9.15	46 30.22	9 46.3
43	6	33.8	45.7	57.0	8.7	20.3	32.0	. .	. .	. .	48 8.71	36.71	1.00	.	5	38.514	25 1.83	5.19	9.73	48 46.42	20 46.7
44	6	21.4	33.1	44.7	56.6	8.0	19.7	31.5	. .	. .	49 56.43	36.70	1.00	IV.	4	34.95	32 54.30	5.12	10.14	50 34.13	28 39.6
45	8	62.4	14.0	25.2	37.4	49.2	. .	. .	. .	. .	51 37.27	36.70	1.00	IV.	3	37.206	37 22.89	5.06	10.39	52 14.97	33 8.3
46	6	2.0	13.4	25.7	36.7	48.	. .	. .	. .	. .	53 36.78	36.69	1.00	.	4	37.032	31 42.43	5.00	10.08	54 14.47	27 27.5
47	6	. .	. .	. .	40.0	51.8	3.4	. .	. .	. .	53 40.07	36.69	1.00	.	5	41.714	23 11.38	5.00	9.62	54 17.76	18 56.0
48	5	15.	26.4	38.3	49.8	1.4	. .	. .	. .	. .	58 49.81	36.67	1.00	IV.	3	40.56	35 27.11	4.82	10.29	59 27.48	31 12.2
49	6	. .	. .	. .	. .	. .	. .	53.4	. .	. .	18 59 18.70	36.67	1.00	.	6	40.037	15 21.68	4.80	9.22	18 59 56.37	11 5.7
50	8	. .	. .	. .	. .	. .	. .	38.?	. .	. .	19 0 3.	+36.67	+1.00	.	2	43.78	42 23.26	− 4.78	−10.66	19 0 41.	19 38 8.7

CORRECTIONS.

Date.	Corr. of Clock.	Hourly rate.	m	n	c	Zenith Point.	Mic. Co.
1849. h.	s.	s.	s.	s.	s.	° ′ ″	r.
Aug. 25, 20	+37.426	l 0.004	− 0.168	+ 0.025	− 0.314	359 59 58.55	39.769

REMARKS.

(186) 2. Micrometer reading assumed as 49^r.957 instead of 50^r.957.

(186) 27. Micrometer reading assumed as 40^r.52 instead of 50^r.52.

(186) 34. Micrometer reading assumed as 31^r.020 instead of 41^r.020.

INSTRUMENT READINGS.

	Date.	CIRCLE.						Barom.	Attached Thermom.	External Thermom.
		A.	B.	C.	D.	Corr'd Mean.	Mean.			
	1849. h. m.	° ′ ″				″	″	in.	°	°
Zone 186	Aug. 25, 17 56	301 41 58.8	63.1	67.9	71.0	. .	65.20	30.152	78.8	73.8
		. .	. .	. .	. .	. .	. .	. .	. .	72.6
	18 40	. .	. .	. .	. .	. .	. .	. .	. .	71.8
	19 0	59.5	63.4	68.4	72.9	. .	66.05	30.162	77.0	70.8

APPENDIX II.

RESULTS OF OBSERVATIONS

MADE AT

THE UNITED STATES NAVAL OBSERVATORY

WITH THE

TRANSIT INSTRUMENT AND MURAL CIRCLE

IN

THE YEARS 1853 TO 1860, INCLUSIVE.

INTRODUCTION.

This appendix contains the results of observations made with the transit-instrument during a portion of the year 1858 and the years 1859 and 1860, and with the mural circle during the years 1853, 1854, 1855, 1856, 1857, and 1858.

The observations with the transit-instrument were made by the aid of a chronograph, in the manner described in the introductions to the Washington Observations for 1861 and subsequent years; but they are referred to the mean equinox of the British Nautical Almanac for 1860, to reduce which to the time-star list of the American Ephemeris of 1865, which has been used in the observations with this instrument since 1861, a correction of $+ 0^s.04$ is necessary. The published places are reduced to the year 1860.0.

The observations with the mural circle were likewise made in the manner described in the introductions to the Washington Observations for 1861 and subsequent years. Those of 1853 and 1854 are reduced to 1850.0, and those of 1855, 1856, 1857, and 1858 are reduced to 1860.0. The latitude used in the reductions was $38° 53' 39''.25$. The observed places of the stars, both in right ascension and declination, are corrected for proper motion. The corrections are those given by the Rev. R. Main, in vol. xix, Memoirs of the Royal Astronomical Society; for stars whose proper motions are not given there, those of the British Association Catalogue have been used, and for all other stars no proper motion is applied. These observations will be embodied in a general catalogue, soon to be published.

This appendix also contains the results of some observations of the sun, moon, and planets, made with the mural circle in the above-mentioned years, and hitherto unpublished.

Professor Yarnall made most of the observations, and all the reductions upon which the results given in this appendix depend.

MEAN RIGHT ASCENSIONS OF STARS FOR 1860.0.

WEST TRANSIT INSTRUMENT.

1858.	h. m. s.	Mag.
α ANDROMEDÆ.		
Sept. 9 . .	0 1 9.44	
Oct. 20 . .	9.40	
22 . .	9.35	
25 . .	9.27	
Nov. 13 . .	9.35	
WEISSE XXIII, 1269.		
Oct. 7 . .	0 1 44.97	
14 . .	44.95	
WEISSE O, 4.		
Sept. 18 . .	0 1 57.83	
Oct. 7 . .	57.85	7.0
14 . .	57.84	
WEISSE O, 13.		
Oct. 18 . .	0 2 21.03	
23 . .	21.08	8.5
WEISSE O, 28.		
Nov. 6 . .	0 2 53.17	
B. A. C. 18.		
Oct. 9 . .	0 3 14.71	
B. A. C. 25.		
Nov. 18 . .	0 4 53.35	
γ PEGASI.		
Sept. 18 . .	0 6 1.75	
Oct. 2 . .	1.63	
20 . .	1.78	
25 . .	1.73	
26 . .	1.70	
27 . .	1.73	
Nov. 13 . .	1.76	
Dec. 27 . .	1.68	
WEISSE O, 104.		
Oct. 18 . .	0 6 54.63	9.0
WEISSE O, 112.		
Oct. 23 . .	0 7 30.93	9.0
B. A. C. 39.		
Oct. 9 . .	0 8 20.45	
SANTINI 10.		
Nov. 6 . .	0 8 27.00	7.5
B. A. C. 49.		
Sept. 23 . .	0 9 39.11	
28 . .	38.95	
WEISSE O, 189.		
Oct. 14 . .	0 11 39.81	8.0
Nov. 18 . .	39.98	
WEISSE O, 199.		
Nov. 13 . .	0 12 27.68	
WEISSE O, 202.		
Oct. 7 . .	0 12 39.59	
18 . .	39.51	9.0
23 . .	39.34	
WEISSE O, 210.		
Oct. 26 . .	0 12 53.38	7.5
Nov. 6 . .	53.35	7.0
WEISSE O, 212.		
Dec. 27 . .	0 12 58.51	
d PISCIUM.		
Oct. 25 . .	0 13 23.66	
WEISSE O, 239.		
Oct. 2 . .	0 14 14.16	
WEISSE O, 287.		
Oct. 26 . .	0 17 22.48	
Nov. 6 . .	22.32	8.0
B. A. C. 83.		
Sept. 9 . .	0 17 33.12	
28 . .	33.10	
45 PISCIUM.		
Sept. 23 . .	0 18 28.99	
Oct. 14 . .	28.91	
Nov. 13 . .	29.07	
B. A. C. 91.		
Oct. 7 . .	0 18 46.91	
9 . .	46.84	
B. A. C. 92.		
Nov. 18 . .	0 19 0.33	
Dec. 27 . .	0.80	
WEISSE O, 312.		
Oct. 18 . .	0 19 4.96	
23 . .	4.86	7.0
28 ANDROMEDÆ.		
Oct. 2 . .	0 22 44.42	
12 CETI.		
Sept. 9 . .	0 22 53.64	
18 . .	53.66	
Oct. 7 . .	53.66	
18 . .	53.65	
25 . .	53.61	
Nov. 19 . .	53.74	
Dec. 27 . .	53.64	
WEISSE O, 376.		
Oct. 26 . .	0 23 19.72	
Nov. 6 . .	19.64	
51 PISCIUM.		
Oct. 14 . .	0 25 10.51	
19 . .	10.40	
(*), +5° 8′.		
Nov. 13 . .	0 25 55.54	8.0
WEISSE O, 436.		
Oct. 23 . .	0 26 14.39	9.0
B. A. C. 133.		
Nov. 18 . .	0 26 20.30	8.0
WEISSE O, 443.		
Oct. 26 . .	0 26 42.84	8.0
Nov. 6 . .	42.78	
WEISSE O, 450.		
Oct. 16 . .	0 26 55.37	8.0
13 CETI.		
Sept. 23 . .	0 28 2.56	
WEISSE O, 476.		
Oct. 18 . .	0 28 16.13	8.5
14 CETI.		
Sept. 28 . .	0 28 21.66	
Oct. 2 . .	21.57	
B. A. C. 149.		
Oct. 7 . .	0 28 39.82	
Dec. 27 . .	39.70	
B. A. C. 158.		
Sept. 9 . .	0 29 52.06	
Oct. 9 . .	51.80	
LALANDE 967.		
Oct. 14 . .	0 30 48.98	8.0
23 . .	48.87	8.0
α CASSIOPEÆ.		
Sept. 18 . .	0 32 35.17	
Oct. 22 . .	35.16	
25 . .	34.76	
Nov. 19 . .	34.93	
WEISSE O, 560.		
Oct. 18 . .	0 33 17.11	8.0
Nov. 18 . .	17.21	
B. A. C. 177.		
Nov. 30 . .	0 33 57.71	7.0
WEISSE O, 595.		
Oct. 7 . .	0 34 49.68	9.0
19 . .	49.60	
WEISSE O, 601.		
Oct. 14 . .	0 35 0.22	8.5
23 . .	34 59.99	8.5

1858.	h.	m.	s.	Mag.
WEISSE O, 608.				
Oct. 7	0	35	31.65	8.5
19			31.53	8.0
26			31.69	
β CETI.				
Sept. 9	0	36	33.52	
18			33.54	
23			33.51	
28			33.62	
Oct. 2			33.55	
9			33.56	
27			33.68	
Dec. 17			33.70	
27			33.64	
WEISSE O, 647.				
Oct. 18	0	37	51.30	8.0
WEISSE O, 680.				
Oct. 14	0	39	38.45	
16			38.26	
WEISSE O, 687.				
Oct. 23	0	40	2.25	
Nov. 30			2.16	
WEISSE O, 711.				
Nov. 6	0	41	8.56	9.0
WEISSE O, 712.				
Nov. 18	0	41	10.46	8.0
δ PISCIUM.				
Sept. 23	0	41	25.33	
Oct. 20			25.22	
B. A. C. 224.				
Sept. 9	0	41	39.55	
Dec. 27			39.44	
(*), + 3° 20′.				
Oct. 7	0	42	8.69	
WEISSE O, 742.				
Oct. 16	0	43	14.15	
WEISSE O, 775.				
Oct. 7	0	44	43.01	8.0
26			43.06	8.5
Nov. 6			42.95	8.5
20 CETI.				
Oct. 23	0	45	51.15	
Nov. 18			51.22	
B. A. C. 243.				
Oct. 7	0	46	7.00	7.0
14			7.06	

1858.	h.	m.	s.	Mag.
υ¹ CASSIOPEÆ.				
Sept. 9	0	46	43.19	
Nov. 30			42.70	
ε PISCIUM.				
Sept. 23	0	55	40.85	
Oct. 20			40.74	
Dec. 16			40.83	
WEISSE O, 1013.				
Oct. 23	0	58	6.79	
WEISSE O, 1043.				
Nov. 6	0	59	20.74	7.0
WEISSE O, 1078.				
Oct. 16	1	1	8.29	9.0
c PISCIUM.				
Oct. 7	1	1	9.56	
18			9.63	
(*), + 9° 1′.				
Oct. 19	1	1	36.69	7.0
ζ¹ PISCIUM.				
Sept. 23	1	6	25.25	
θ CETI.				
Sept. 28	1	17	1.57	
Oct. 2			1.59	
7			1.55	
9			1.50	
14			1.50	
16			1.43	
18			1.53	
19			1.52	
23			1.56	
26			1.60	
Nov. 6			1.59	
18			1.58	
30			1.57	
Dec. 9			1.59	
16			1.56	
27			1.54	
η PISCIUM.				
Sept. 9	1	23	59.78	
Dec. 10			59.73	
16			59.76	
101 PISCIUM.				
Dec. 16	1	28	17.44	
WEISSE I, 497.				
Oct. 14	1	29	11.69	8.5
π PISCIUM.				
Sept. 23	1	29	40.93	
Nov. 18			40.75	

1858.	h.	m.	s.	Mag.
WEISSE I, 504.				
Sept. 18	1	29	47.66	8.5
Oct. 7			47.58	9.0
23			47.44	9.0
WEISSE I, 540.				
Oct. 7	1	ƐI	42.02	9.0
ν PISCIUM.				
Sept. 9	1	34	8.98	
28			8.79	
Oct. 2			8.76	
14			8.93	
23			8.81	
25			8.89	
26			8.80	
Nov. 18			8.79	
19			8.90	
30			8.78	
Dec. 10			8.80	
B. A. C. 524.				
Dec. 16	1	34	54.75	
o PISCIUM.				
Nov. 18	1	38	0.20	
LALANDE 3237.				
Sept. 9	1	38	42.89	7.5
WEISSE I, 713.				
Oct. 14	1	39	55.90	
23			55.85	9.0
WEISSE I, 725.				
Dec. 18	1	40	26.50	8.0
27			26.58	
B. A. C. 547.				
Oct. 25	1	40	35.24	
Nov. 6			35.02	
B. A. C. 549.				
Nov. 30	1	40	35.49	
Dec. 16			35.49	
WEISSE I, 775.				
Oct. 7	1	43	44.07	
WEISSE I, 808.				
Sept. 9	1	45	27.41	
Dec. 27			27.38	9.0
γ¹ ARIETIS.				
Nov. 19	1	45	51.11	

1858.	h.	m.	s.	Mag.
β ARIETIS.				
Sept. 18	1	46	54.68	
Nov. 6			54.64	
19			54.66	
Dec. 9			54.60	
16			54.62	
17			54.63	
18			54.69	
WEISSE I, 855.				
Oct. 7	1	48	9.54	8.0
23			9.46	8.5
WEISSE I, 860.				
Oct. 14	1	48	20.96	9.0
ι ARIETIS.				
Nov. 18	1	49	42.37	
19			42.39	
58 CETI.				
Oct. 25	1	50	52.54	
Nov. 6			52.56	
B. A. C. 613.				
Dec. 16	1	52	37.00	
WEISSE I, 942.				
Oct. 23	1	53	10.80	7.5
Dec. 27			10.78	7.5
WEISSE I, 943.				
Oct. 14	1	53	17.59	8.5
Dec. 18			17.62	
WEISSE I, 963.				
Sept. 9	1	54	23.07	9.0
Oct. 7			23.05	9.0
B. A. C. 641.				
Oct. 23	1	57	28.16	7.0
Nov. 6			28.22	
WEISSE I, 1040.				
Dec. 27	1	58	48.79	7.0
α ARIETIS.				
Sept. 9	1	59	17.30	
18			17.22	
Nov. 18			17.19	
19			17.21	
Dec. 9			17.26	
10			17.25	
16			17.24	
17			17.28	
18			17.32	
WEISSE I, 1047.				
Oct. 7	1	59	20.33	9.0

59 Andromedæ.

1858.	h.	m.	s.	Mag.
Oct. 25	2	2	23.94	
Nov. 30			23.72	

B. A. C. 662.

Oct. 25	2	2	24.80	
Nov. 30			24.66	

5 Trianguli.

Dec. 27	2	3	14.47	

O. Arg. N. 2462.

Oct. 14	2	3	37.40	8.0

64 Ceti.

Nov, 6	2	3	57.83	

(*), +3° 43′.

Oct. 7	2	4	42.16	9.0

ξ^1 Ceti.

Sept. 18	2	5	35.03	
Nov. 18			34.91	
Dec. 16			35.04	

B. A, C. 687.

Oct. 23	2	6	10.52	

(*), +49° 4′.

Sept. 9	2	6	39.74	8.0

B. A. C. 702.

Dec. 18	2	9	30.14	
27			29.83	

67 Ceti.

Sept. 18	2	10	0.16	
Oct. 14			0.13	
23			0.16	
25			0.02	
Nov. 6			0.04	
30			0.11	
Dec. 9			0.06	
10			0.13	
17			0.17	

θ Arietis.

Nov. 18	2	10	20.51	
19			20.59	

(*), +12° 58′.

Sept. 9	2	12	57.94	8.0

Weisse II, 209.

Oct. 23	2	13	52.94	

Weisse II, 235.

1858.	h.	m.	s.	Mag.
Oct. 7	2	15	30.76	
14			30.68	8.0

O. Arg. N. 2729.

Nov. 30	2	16	22.13	7.0
Dec. 9			22.24	7.5

B. A. C. 741.

Nov. 6	2	17	1.79	
Dec. 27			1.86	

ζ Arietis.

Oct. 25	2	17	18.93	
Nov. 18			18.94	

Lalande 4460.

Dec. 16	2	17	51.11	8.0
18			51.14	

Weisse II, 312.

Oct. 23	2	19	41.92	8.0

ξ^2 Ceti.

Oct. 7	2	20	43.08	
14			43.11	
22			43.11	
Nov, 19			43.14	
Dec, 17			43.06	
27			43.07	

B. A. C. 764.

Oct. 25	2	22	6.99	
Nov. 18			7.02	

B. A. C. 768.

Nov. 30	2	22	33.46	
Dec, 9			33.24	

Weisse II, 397.

Dec. 16	2	24	6.79	8.5
18			6.70	8.0

B. A, C. 776.

Dec. 16	2	24	15.73	
18			15.74	

Rumker 654.

Oct. 7	2	25	37.31	8.0
14			37.25	
Nov. 6			37.14	

B. A. C. 789.

Oct. 23	2	27	39.46	7.0
Dec. 27			39.41	

B. A. C. 800.

Oct. 7	2	29	10.30	7.0
Nov. 6			10.15	7.0

81 Ceti.

1858.	h.	m.	s.	Mag.
Oct. 25	2	30	38.73	
Nov. 18			38.72	
Dec. 16			38.73	

B. A. C. 809.

Nov. 30	2	31	9.93	
Dec. 9			9.55	

Weisse II, 556.

Oct. 14	2	32	56.92	
23			56.86	8.5

Weisse II, 569.

Dec. 18	2	33	35.65	9.0
27			35.60	9.0

μ Arietis.

Dec. 16	2	34	28.71	
17			28.65	

γ Ceti.

Oct. 7	2	36	2.94	
14			2.87	
22			2.94	
23			2.90	
Nov. 30			2.89	
Dec. 17			2.97	

38 Arietis.

Oct. 22	2	37	20.09	
Nov. 19			20.15	

B. A. C. 857.

Dec. 9	2	38	56.53	
18			56.71	

B. A. C. 858.

Dec. 9	2	39	12.63	
18			12.77	

40 Arietis.

Oct. 22	2	40	41.41	
23			41.38	

B. A. C. 866.

Oct. 7	2	40	37.89	

π Arietis.

Dec. 16	2	41	29.05	
17			29.10	

Weisse II, 742.

Nov. 30	2	43	25.47	8.0

γ Fornacis.

Oct. 25	2	43	38.69	
Nov. 18			38.79	

Weisse II, 790.

1858.	h.	m.	s.	Mag.
Oct. 7	2	46	15.29	7.5
23			15.27	

Rumker 742.

Dec. 18	2	47	26.97	9.0
27			26.84	

ρ^3 Arietis.

Nov. 19	2	48	32.25	
Dec. 16			32.15	
17			32.22	

B. A. C. 905.

Nov. 30	2	48	44.67	

B. A. C. 920.

Oct. 25	2	50	51.79	
Nov. 18			51.88	

Weisse II, 881.

Oct. 7	2	50	54.38	9.0
Dec. 27			54.54	

B. A. C. 922.

Dec. 9	2	51	10.28	
18			10.28	

ε Arietis.

Oct. 23	2	51	12.64	
Nov. 19			12.74	
Dec, 16			12.71	
17			12.67	

α Ceti.

Oct. 23	2	54	57.83	
25			57.72	
Nov. 18			57.84	
19			57.84	

Weisse II, 967.

Oct. 7	2	55	19.34	
Nov. 30			19.33	8.0

ρ^3 Eridani.

Dec. 27	2	57	24.00	

Weisse II, 1037.

Oct. 7	2	58	53.96	8.5
Nov. 30			53.97	9.0

53 Arietis.

Dec. 16	2	59	33.01	
17			32.99	

B. A. C. 960.

Dec. 9	2	59	52.54	

1858.	h.	m.	s.	Mag.
B. A. C. 980.				
Oct. 25 . .	3	2	8.45	
Nov. 18 . .			8.59	
Weisse (2) III, 45.				
Dec. 27 . .	3	3	12.38	
δ Arietis.				
Oct. 7 . .	3	3	37.69	
23 . .			37.63	
Nov. 19 . .			37.68	
30 . .			37.66	
Dec. 16 . .			37.68	
17 . .			37.59	
18 . .			37.69	
ζ Arietis.				
Oct. 23 . .	3	6	51.53	
Nov. 19 . .			51.50	
Dec. 17 . .			51.47	
Weisse (2) III, 161.				
Dec. 27 . .	3	7	54.80	
(*), +17° 3′.				
Nov. 30 . .	3	9	18.38	
Weisse III, 168.				
Dec. 18 . .	3	10	8.30	8.0
B. A. C. 1019.				
Oct. 7 . .	3	10	24.93	
Nov. 18 . .			25.12	
Weisse III, 172.				
Oct. 25 . .	3	10	33.61	
Dec. 9 . .			33.57	8.0
(*), +22° 42′.				
Dec. 27 . .	3	12	35.48	8.5
τ^1 Arietis.				
Nov. 19 . .	3	13	8.83	
Rumker 849.				
Nov. 30 . .	3	16	2.69	
ο Tauri.				
Oct. 25 . .	3	17	16.94	
Nov. 18 . .			16.86	
Weisse III, 295.				
Dec. 16 . .	3	17	23.53	8.0
B. A. C. 1063.				
Dec. 9 . .	3	18	50.99	

1858.	h.	m.	s.	Mag.
Rumker 870.				
Dec. 18 . .	3	21	47.98	
(*), +9° 29′.				
Dec. 27 . .	3	21	50.88	9.5
Rumker 879.				
Nov. 30 . .	3	22	55.26	
B. A. C. 1097.				
Oct. 25 . .	3	26	18.08	
Nov. 18 . .			17.96	
(*), +31° 15′.				
Dec. 9 . .	3	26	39.55	8.5
B. A. C. 1101.				
Dec. 9 . .	3	26	55.69	
16 . .			55.94	
Weisse III, 517.				
Nov. 30 . .	3	28	40.41	9.0
Dec. 27 . .			40.32	
9 Tauri.				
Oct. 23 . .	3	28	44.42	
Dec. 17 . .			44.42	
18 . .			44.38	
B. A. C. 1130.				
Oct. 25 . .	3	32	58.29	
Nov. 18 . .			58.29	
Weisse (2) III, 733.				
Dec. 16 . .	3	34	3.08	
27 . .			3.16	
Rumker 940.				
Nov. 30 . .	3	34	22.24	8.5
17 Tauri.				
Oct. 23 . .	3	36	34.05	
Dec. 17 . .			33.94	
18 . .			34.01	
24 Tauri.				
Nov. 18 . .	3	39	1.94	
Dec. 18 . .			1.98	
27 . .			1.94	
η Tauri.				
Oct. 23 . .	3	39	10.00	
25 . .			10.02	
Nov. 18 . .			9.89	
Dec. 17 . .			9.99	
18 . .			10.01	
27 . .			9.94	

1858.	h.	m.	s.	Mag.
(*), +11° 15′.				
Dec. 16 . .	3	39	33.33	8.0
Weisse (2) III, 881.				
Nov. 30 . .	3	39	51.99	
B. A. C. 1171.				
Dec. 9 . .	3	40	9.84	
28 Tauri.				
Oct. 23 . .	3	40	51.69	
Dec. 18 . .			51.73	
B. A. C. 1205.				
Oct. 25 . .	3	45	2.38	
Nov. 18 . .			2.32	
Rumker 1023.				
Nov. 30 . .	3	46	29.02	7.0
Dec. 16 . .			29.10	
Weisse (2) III, 1013.				
Dec. 27 . .	3	46	35.80	
Weisse (2) III, 1019.				
Dec. 27 . .	3	46	52.52	
Weisse, 3^h 924.				
Dec. 18 . .	3	47	51.94	
ε Persei.				
Dec. 22 . .	3	48	27.89	
γ^1 Eridani.				
Oct. 24 . .	3	51	29.98	
25 . .			29.98	
Nov. 18 . .			29.97	
30 . .			29.98	
Dec. 9 . .			29.92	
17 . .			29.99	
18 . .			29.85	
27 . .			29.94	
A^1 Tauri.				
Dec. 18 . .	3	56	25.30	
(*), +16° 5′.				
Dec. 27 . .	3	56	39.42	9.0
Rumker 1084.				
Dec. 16 . .	3	58	19.46	
c Persei.				
Dec. 22 . .	3	58	30.59	

1858.	h.	m.	s.	Mag.
B. A. C. 1282.				
Oct. 25 . .	4	3	21.06	
Dec. 9 . .			20.99	
37 Eridani.				
Oct. 24 . .	4	3	32.80	
o^1 Eridani.				
Oct. 24 . .	4	5	1.88	
Nov. 30 . .			2.04	
Dec. 16 . .			1.99	
18 . .			2.01	
22 . .			2.04	
27 . .			1.99	
ω^2 Tauri.				
Dec. 18 . .	4	9	3.70	
51 Tauri.				
Dec. 16 . .	4	10	6.28	
22 . .			6.24	
h Tauri.				
Nov. 30 . .	4	12	4.84	
Dec. 9 . .			4.73	
Weisse (2) IV, 330.				
Dec. 16 . .	4	15	56.03	
ε Tauri.				
Oct. 24 . .	4	20	26.63	
Nov. 30 . .			26.64	
Dec. 18 . .			26.66	
22 . .			26.65	
Weisse (2) IV, 458.				
Dec. 16 . .	4	21	37.04	
B. A. C. 1408.				
Nov. 30 . .	4	25	52.66	
Dec. 16 . .			52.46	
α Tauri.				
Oct. 24 . .	4	27	53.43	
Dec. 9 . .			53.40	
22 . .			53.36	
σ^2 Tauri.				
Dec. 16 . .	4	31	16.14	
Weisse (2) IV, 719.				
Dec. 22 . .	4	33	19.14	9.0
τ Tauri.				
Oct. 24 . .	4	33	50.70	
Dec. 18 . .			50.70	

1858.	h. m. s.	Mag.
B. A. C. 1463.		
Nov. 30	4 37 15.57	
Dec. 16	15.53	
i TAURI.		
Oct. 25	4 43 11.18	
(*), +26° 23′.		
Dec. 22	4 44 7.31	9.0
WEISSE (2) IV, 986.		
Dec. 16	4 44 18.47	
22	18.38	8.0
ι AURIGÆ.		
Oct. 24	4 47 52.79	
Dec. 18	52.74	
κ TAURI.		
Oct. 24	4 49 35.49	
25	35.53	
WEISSE (2) IV, 1172.		
Dec. 22	4 52 8.73	9.5
ι TAURI.		
Oct. 25	4 54 43.82	
Dec. 16	43.71	
18	43.75	
ε LEPORIS.		
Dec. 16	4 59 32.15	
18	32.09	
22	32.07	
103 TAURI.		
Oct. 24	4 59 34.90	
25	34.89	
α AURIGÆ.		
Dec. 18	5 6 21.07	
β ORIONIS.		
Oct. 24	5 7 48.75	
25	48.67	
Dec. 22	48.75	
n TAURI.		
Oct. 25	5 10 51.94	
WEISSE (2) V, 451.		
Dec. 22	5 16 36.63	8.5
WEISSE (2) V, 452.		
Dec. 22	5 16 38.65	9.0

1858.	h. m. s.	Mag.
β TAURI.		
Oct. 25	5 17 26.52	
Dec. 16	26.56	
δ ORIONIS.		
Dec. 16	5 24 51.35	
22	51.42	
ε ORIONIS.		
Dec. 16	5 29 6.58	
WEISSE V, 874.		
Dec. 22	5 34 20.53	
α COLUMBÆ.		
Oct. 25	5 34 34.82	
(*), −13° 41′.		
Dec. 22	5 42 4.93	8.5
136 TAURI.		
Oct. 25	5 44 31.72	
WEISSE V, 1204.		
Dec. 22	5 47 35.62	
139 TAURI.		
Oct. 25	5 49 18.40	
(*), −14° 11′.		
Dec. 22	5 51 24.10	8.0
WEISSE V, 1335.		
Dec. 22	5 52 27.48	8.0
WEISSE V, 1372.		
Dec. 22	5 53 52.26	8.5
WEISSE VI, 264		
Dec. 22	6 9 34.71	
(*), −14° 23′.		
Dec. 22	6 47 8.20	8.5
ε CANIS MAJORIS.		
Dec. 22	6 53 7.48	
γ CANIS MAJORIS.		
Dec. 22	6 57 25.44	
WEISSE VII, 196.		
Dec. 22	7 6 54.04	8.0

1858.	h. m. s.	Mag.
α CANIS MINORIS.		
Dec. 22	7 31 58.38	
β GEMINORUM.		
Dec. 22	7 36 44.62	
φ GEMINORUM.[1]		
Dec. 22	7 44 55.39	
6 CANCRI.		
Dec. 22	7 54 54.81	
ψ² CANCRI.		
Dec. 22	8 2 0.89	
λ CANCRI.		
Dec. 22	8 12 12.36	
υ CANCRI, (1st *.)		
Dec. 22	8 18 19.79	
θ CANCRI.		
Dec. 22	8 23 36.50	
γ CANCRI.		
Dec. 22	8 35 10.64	
ε HYDRÆ.		
Dec. 22	8 39 21.48	
ρ³ CANCRI.		
Dec. 22	8 47 16.05	
κ CANCRI.		
Dec. 22	9 0 9.58	
B. A. C. 3138.		
Dec. 22	9 5 37.15	
83 CANCRI.		
Dec. 22	9 11 9.79	
(*), +8° 15±.		
Dec. 22	9 16 42.38	
λ LEONIS.		
Dec. 22	9 23 43.46	
ο LEONIS.		
Dec. 23	9 33 40.55	
ε LEONIS.		
Dec. 23	9 37 53.84	

1858.	h. m. s.	Mag.
ν LEONIS.		
Dec. 13	9 50 41.35	
π LEONIS.		
Dec. 23	9 52 48.73	
α LEONIS.		
Dec. 23	10 0 54.82	
α VIRGINIS.		
Sept. 29	13 17 49.32	
α BOOTIS.		
Sept. 10	14 9 16.58	
13	16.49	
18	16.61	
29	16.55	
α CORONÆ BOREALIS.		
Sept. 17	15 28 45.65	
19	45.55	
δ OPHIUCHI.		
Sept. 13	16 7 0.53	
α SCORPII.		
Sept. 13	16 20 49.74	
ζ HERCULIS.		
Sept. 17	16 36 0.46	
κ OPHIUCHI.		
Sept. 17	16 51 2.55	
α HERCULIS.		
Sept. 13	17 8 15.83	
17	15.86	
θ OPHIUCHI.		
Sept. 17	17 13 24.85	
α OPHIUCHI.		
Sept. 13	17 28 26.17	
17	26.20	
μ HERCULIS.		
Sept. 13	17 40 58.83	
17	58.76	
γ DRACONIS.		
Sept. 13	17 53 21.36	
17	21.31	
μ SAGITTARII.		
Sept. 13	18 5 23.48	

1858.	h. m. s.	Mag.
δ SAGITTARII.		
Oct. 13	18 12 1.84	
σ SAGITTARII.		
Oct. 13	18 46 34.94	
14	34.88	
ο SAGITTARII.		
Oct. 13	18 56 17.43	
ζ AQUILÆ.		
Sept. 3	18 58 58.45	
ω AQUILÆ.		
Sept. 3	19 11 14.66	
Oct. 13	14.60	
δ AQUILÆ.		
Sept. 3	19 18 26.24	
Oct. 13	26.29	
h^2 SAGITTARII.		
Sept. 2	19 28 10.90	
3	10.91	
7	10.82	
29	10.94	
Oct. 13	10.97	
15	11.02	
20	10.98	
B. A. C. 6738.		
Sept. 2	19 33 5.63	
φ CYGNI.		
Oct. 16	19 33 50.70	
γ AQUILÆ.		
Sept. 2	19 39 36.19	
29	36.10	
Oct. 13	36.13	
15	36.18	
16	36.12	
20	36.18	
α AQUILÆ.		
Sept. 2	19 43 57.09	
7	57.06	
29	57.04	
Oct. 4	57.02	
13	57.05	
15	57.10	
16	57.05	
20	57.08	
b SAGITTARII.		
Oct. 14	19 48 20.95	
β AQUILÆ.		
Sept. 7	19 48 26.18	
29	26.06	
Oct. 4	26.15	
13	26.12	
20	29.15	

1858.	h. m. s.	Mag.
B. A. C. 6841.		
Sept. 2	19 50 7.37	
Oct. 16	7.45	
13 SAGITTÆ.		
Sept. 7	19 53 43.86	
c SAGITTARII.		
Oct. 14	19 54 2.61	
15	2.66	
B. A. C. 6882.		
Aug. 26	19 55 48.75	
Sept. 2	48.83	
16 VULPECULÆ.		
Oct. 16	19 56 5.03	
(*), +19° 57'.		
Sept. 7	19 57 37.15	8.0
B. A. C. 6899.		
Sept. 18	19 58 40.81	
B. A. C. 6903.		
Sept. 29	20 0 7.41	
B. A. C. 6906		
Aug. 26	20 0 33.58	
B. A. C. 6908.		
Sept. 2	20 0 40.04	
17 VULPECULÆ.		
Sept. 7	20 0 52.52	
b^2 CYGNI.		
Aug. 26	20 4 13.58	
Sept. 18	13.66	
B. A. C. 6941.		
Sept. 7	20 4 53.69	
Oct. 16	53.62	
19	53.53	
(*), +16° 18'.		
Sept. 2	20 5 56.27	8.0
4 CAPRICORNI.		
Sept. 18	20 9 47.37	
α^1 CAPRICORNI.		
Aug. 26	20 9 53.05	
Sept. 2	52.98	
7	53.07	
Oct. 14	53.03	

1858.	h. m. s.	Mag.
α^2 CAPRICORNI.		
Aug. 26	20 10 16.94	
Sept. 2	16.94	
7	16.95	
29	16.97	
Oct. 15	16.94	
16	16.93	
19	17.02	
O. ARG. S. 20429		
Sept. 29	20 13 11.85	
B. A. C. 7011.		
Sept. 2	20 16 6.19	
7	6.29	
B. A. C. 7018		
Oct. 16	20 16 51.99	
18	52.05	
LALANDE 39247.		
Sept. 29	20 18 12.55	
ρ CAPRICORNI.		
Aug. 26	20 20 52.23	
Sept. 2	52.09	
7	52.11	
27	52.11	
29	52.19	
Oct. 16	52.21	
19	52.23	
20	52.23	
B. A. C. 7044.		
Sept. 2	20 21 0.58	
B. A. C. 7049.		
Sept. 18	20 21 17.98	
O. ARG. S. 20570.		
Sept. 29	20 23 26.00	
1 DELPHINI.		
Sept. 9	20 23 35.96	
(*), +48° 44'.		
Aug. 26	20 26 33.92	
Sept. 2	33.87	
ω^3 CYGNI.		
Aug. 26	20 26 59.66	
Sept. 2	59.69	
B. A. C. 7093.		
Sept. 18	20 27 27.81	
Oct. 16	27.80	
19	27.92	

1858.	h. m. s	Mag.
O. ARG. S. 20654.		
Sept. 27	20 29 27.80	
B. A. C. 7108.		
Oct. 2	20 29 31.92	
O. ARG. S. 20675.		
Sept. 27	20 30 12.60	
B. A. C. 7128.		
Sept. 18	20 31 51.26	
B. A. C. 7133.		
Sept. 7	20 32 4.26	
ν CAPRICORNI.		
Sept. 29	20 32 4.49	
Oct. 15	4.56	
16	4.49	
GR. 12-YEAR CAT. 1850		
Sept. 2	20 32 35.28	
α DELPHINI.		
Oct. 19	20 33 8.01	
B. A. C. 7159.		
Sept. 27	20 34 41.83	
29	41.60	
B. A. C. 7167.		
Sept. 28	20 35 46.05	
30	46.03	
α CYGNI.		
Sept. 2	20 36 39.67	
18	39.56	
Oct. 4	39.50	
20	39.48	
(*), −21° 23'.		
Oct. 2	20 36 43.85	8.5
19	43.83	7.0
ψ CAPRICORNI.		
Oct. 15	20 37 48.00	
16	47.93	
30 VULPECULÆ.		
Sept. 7	20 38 48.93	
B. A. C. 7202, (2d *.)		
Aug. 26	20 40 28.26	
WEISSE XX, 1031.		
Sept. 29	20 40 49.76	

1858.	h.	m.	s.	Mag.
B. A. C. 7209.				
Sept. 27	20	41	23.78	
B. A. C. 7216.				
Sept. 28	20	42	14.64	
Oct. 19			14.67	
B. A. C. 7219.				
Sept. 7	20	42	32.86	
14 DELPHINI.				
Oct. 2	20	42	56.51	
B. A. C. 7224.				
Sept. 2	20	43	10.51	
ω CAPRICORNI.				
Oct. 16	20	43	27.51	
B. A. C. 7248.				
Sept. 2	20	46	48.27	
19 CAPRICORNI.				
Sept. 27	20	46	52.85	
29			52.85	
(*), −19° 19′.				
Sept. 7	20	47	33.10	
B. A. C. 7254.				
Oct. 16	20	48	25.25	
19			25.07	
32 VULPECULÆ.				
Aug. 26	20	48	35.56	
Oct. 2			35.48	
4			35.56	
15			35.62	
20			35.53	
B. A. C. 7274.				
Sept. 7	20	51	51.33	
21 CAPRICORNI.				
Sept. 27	20	52	58.70	
29			58.68	
B. A. C. 7285.				
Oct. 2	20	53	10.41	
16			10.30	
B. A. C. 7290.				
Sept. 28	20	53	18.89	
Oct. 7			18.66	

1858.	h.	m.	s.	Mag.
B. A. C. 7297.				
Oct. 19	20	54	34.33	
WEISSE XX, 1394.				
Oct. 4	20	54	45.55	
θ CAPRICORNI.				
Sept. 18	20	58	4.16	
27			4.37	
29			4.30	
61¹ CYGNI.				
Aug. 26	21	0	37.51	
Sept. 2			37.57	
7			37.32	
13			37.12	
28			37.42	
Oct. 2			37.40	
4			37.40	
7			37.20	
19			37.21	
61² CYGNI.				
Sept. 7	21	0	38.88	
Oct. 4			38.87	
7			38.59	
28			38.92	
19			38.61	
υ AQUARII.				
Oct. 16	21	1	57.87	
LALANDE 41011.				
Sept. 30	21	2	11.01	
B. A. C. 7366,				
Oct. 2	21	6	33.11	8.0
7			32.76	
ζ CYGNI.				
Aug. 26	21	6	58.63	
Sept. 2			58.83	
7			58.69	
13			58.63	
23			58.58	
28			58.70	
30			58.67	
Oct. 4			58.72	
5			58.72	
16			58.65	
19			58.61	
B. A. C. 7401.				
Aug. 26	21	13	3.17	
Sept. 7			3.48	
A CYGNI.				
Sept. 28	21	13	14.18	
Oct. 7			13.85	
ι CAPRICORNI.				
Sept. 18	21	14	26.59	
Oct. 19			26.73	

1858.	h.	m.	s.	Mag.
α CEPHEI.				
Sept. 2	21	15	14.28	
30			14.17	
B. A. C. 7436.				
Aug. 26	21	17	44.69	
Sept. 28			44.72	
ζ CAPRICORNI.				
Sept. 18	21	18	39.87	
Oct. 16			40.05	
B. A. C. 7450.				
Oct. 2	21	19	56.44	
5			56.43	
19			56.42	
69 CYGNI.				
Sept. 9	21	20	3.69	
Oct. 7			3.68	
β AQUARII.				
Sept. 2	21	24	11.12	
7			11.19	
9			11.19	
13			11.15	
23			11.16	
27			11.11	
28			11.21	
Oct. 2			11.24	
5			11.16	
7			11.14	
9			11.08	
13			11.13	
15			11.23	
16			11.17	
19			11.17	
β CEPHEI.				
Aug. 26	21	26	50.46	
Sept. 7			50.60	
ρ CYGNI.				
Sept. 9	21	28	43.10	
Oct. 5			42.96	
ε CAPRICORNI.				
Oct. 16	21	29	14.13	
O. ARG. S. 21515.				
Oct. 19	21	29	32.52	7.0
B. A. C. 7515.				
Sept. 23	21	30	22.34	
28			22.24	
B. A. C. 7523.				
Oct. 2	21	30	56.48	
74 CYGNI.				
Oct. 7	21	31	20.17	
9			20.14	

1858.	h.	m.	s.	Mag.
γ CAPRICORNI.				
Oct. 16	21	32	19.79	
18			19.70	
B. A. C. 7528.				
Aug. 26	21	32	29.74	
Sept. 2			29.76	
B. A. C. 7549.				
Sept. 7	21	35	21.20	
28			21.28	
B. A. C. 7558.				
Sept. 2	21	36	37.01	
77 CYGNI.				
Oct. 9	21	36	45.05	
ε PEGASI.				
Sept. 9	21	37	18.58	
13			18.68	
23			18.66	
27			18.62	
30			18.57	
Oct. 2			18.50	
5			18.51	
7			18.49	
13			18.51	
15			18.53	
18			18.56	
δ CAPRICORNI.				
Oct. 16	21	39	18.48	
19			18.40	
B. A. C. 7584.				
Oct. 14	21	39	35.74	
B. A. C. 7590.				
Sept. 2	21	40	25.27	
Oct. 9			25.08	
B. A. C. 7610.				
Sept. 2	21	44	32.81	
9			32.60	
Oct. 19			32.21	7.0
μ CAPRICORNI.				
Sept. 13	21	45	39.54	
Oct. 16			39.60	
18			39.58	
O. ARG. N. 22961.				
Oct. 19	21	45	58.65	8.5
B. A. C. 7620.				
Sept. 23	21	46	6.95	
28			6.75	
Oct. 2			6.73	

1858.	h.	m.	s.	Mag.
16 Pegasi.				
Aug. 26	21	46	41.65	
Sept. 7			41.68	
27			41.64	
30			41.49	
Oct. 5			41.56	
13			41.45	
15			41.66	
(*), +55° 8′.				
Oct. 7	21	47	16.16	
9			16.30	7.0
B. A. C. 7631.				
Oct. 7	21	47	16.79	
9			16.88	
17 Pegasi.				
Sept. 2	21	50	6.72	
9			6.90	
B. A. C. 7644.				
Sept. 7	21	50	16.32	
Oct. 14			16.03	
Lalande 42813.				
Oct. 18	21	51	4.78	8.5
(*), −20° 42′.				
Oct. 2	21	51	32.60	
B. A. C. 7677.				
Sept. 7	21	56	29.62	
B. A. C. 7680.				
Oct. 7	21	57	16.21	
16			16.28	
α Aquarii.				
Aug. 26	21	58	35.47	
Sept. 23			35.46	
28			35.46	
Oct. 2			35.54	
5			35.43	
9			35.47	
14			35.49	
15			35.43	
18			35.48	
19			35.44	
α Gruis.				
Sept. 13	21	59	23.21	
27			23.24	
Oct. 13			23.55	
B. A. C. 7724.				
Oct. 16	22	3	15.92	

1858.	h.	m.	s.	Mag.
O. Arg. S. 21964.				
Sept. 7	22	4	0.52	9.0
(*), −18° 49′.				
Oct. 18	22	4	38.57	9.5
B. A. C. 7752.				
Aug. 26	22	6	33.97	
Sept. 2			33.98	
B. A. C. 7754.				
Sept. 23	22	6	45.62	
28			45.84	
B. A. C. 7765.				
Oct. 5	22	7	52.34	
7			52.22	
42 Aquarii.				
Oct. 16	22	9	18.04	
θ Aquarii.				
Sept. 2	22	9	26.58	
27			26.52	
30			26.60	
Oct. 2			26.68	
9			26.71	
13			26.50	
14			26.55	
15			26.48	
18			26.58	
19			26.57	
20			26.60	
26			26.56	
27			26.49	
ρ Aquarii.				
Oct. 18	22	12	49.80	
19			49.69	
31 Pegasi.				
Aug. 26	22	14	37.54	
Sept. 2			37.64	
2 Lacertæ.				
Sept. 9	22	15	14.96	
23			14.98	
B. A. C. 7803.				
Oct. 7	22	16	3.72	
9			3.53	
33 Pegasi.				
Oct. 26	22	16	55.37	
50 Aquarii.				
Oct. 14	22	16	56.84	
16			56.88	

1858.	h.	m.	s.	Mag.
B. A. C. 7812.				
Oct. 19	22	17	50.51	
B. A. C. 7818.				
Sept. 13	22	18	57.56	
Oct. 18			57.72	
53 Aquarii.				
Oct. 18	22	18	58.21	
B. A. C. 7835.				
Aug. 26	22	22	32.04	
Sept. 2			32.00	
Weisse XXII, 467.				
Sept. 27	22	22	34.74	
Oct. 26			34.56	8.0
σ Aquarii.				
Sept. 23	22	23	14.05	
28			14.13	
Oct. 5			13.96	
18			14.08	
B. A. C. 7846.				
Oct. 2	22	23	53.61	
7			53.59	
9			53.59	
B. A. C. 7858.				
Oct. 14	22	26	15.22	
16			15.29	
B. A. C. 7866.				
Aug. 26	22	27	53.94	
Oct. 26			53.93	
η Aquarii.				
Sept. 2	22	28	9.63	
7			9.56	
23			9.71	
27			9.71	
28			9.58	
Oct. 2			9.65	
5			9.66	
9			9.59	
14			9.63	
16			9.64	
20			9.68	
27			9.58	
κ Aquarii.				
Oct. 18	22	30	30.28	
19			30.21	

1858.	h.	m.	s.	Mag.
B. A. C. 7907.				
Oct. 2	22	34	12.24	
7			12.05	
9			12.23	
ζ Pegasi.				
Aug. 26	22	34	28.74	
Sept. 2			28.74	
7			28.64	
9			28.83	
28			28.70	
Oct. 5			28.75	
16			28.79	
19			28.80	
20			28.81	
26			28.78	
27			28.81	
Weisse XXII, 761.				
Oct. 18	22	35	53.74	8.0
Weisse XXII, 772.				
Sept. 23	22	36	42.85	
Oct. 14			42.87	7.0
13 Lacertæ.				
Oct. 16	22	36	51.22	
ξ Pegasi.				
Sept. 28	23	39	41.88	
Oct. 5			41.99	
B. A. C. 7948.				
Aug. 26	22	39	58.09	
B. A. C. 7950.				
Oct. 2	22	40	13.83	
B. A. C. 7953.				
Oct. 7	22	41	50.03	
9			50.10	
τ^2 Aquarii.				
Sept. 27	22	42	10.63	
Oct. 18			10.41	
20			10.55	
26			10.52	
27			10.53	
21 Piscis Australis.				
Sept. 2	22	43	37.17	
23			37.18	
B. A. C. 7978.				
Oct. 5	22	46	47.82	
B. A. C. 7983.				
Oct. 14	22	47	24.64	
16			24.69	

1858.	h.	m.	s.	Mag.
α Piscis Australis.				
Aug. 26	22	49	54.24	
Sept. 2			54.24	
9			54.24	
23			54.50	
27			54.31	
28			54.27	
Oct. 2			54.45	
7			54.35	
9			54.39	
14			54.34	
16			54.41	
19			54.26	
20			54.41	
22			54.40	
27			54.37	
81 Aquarii.				
Sept. 7	22	54	6.96	
Oct. 2			6.96	
Weisse XXII, 1149.				
Oct. 27	22	55	2.85	
Weisse XXII, 1156.				
Oct. 18	22	55	12.05	8.0
19			11.94	
27			12.01	
2 Andromedæ.				
Oct. 5	22	56	9.93	
7			10.07	
α Pegasi.				
Sept. 7	22	57	47.31	
9			47.30	
27			47.26	
28			47.31	
Oct. 20			47.35	
22			47.31	
23			47.30	
25			47.42	
Weisse XXII, 1221.				
Oct. 14	22	58	11.55	8.0
1 Cassiopeæ.				
Oct. 2	23	0	41.95	
16			42.48	
B. A. C. 8056.				
Oct. 5	23	0	53.90	
19			53.98	
6 Andromedæ.				
Sept. 7	23	3	59.68	
28			59.55	
60 Pegasi.				
Oct. 7	23	5	1.69	
14			1.64	

1858.	h.	m.	s.	Mag.
φ Aquarii.				
Oct. 18	23	7	4.22	
19			4.11	
B. A. C. 8091.				
Oct. 2	23	8	7.91	
5			7.86	
B. A. C. 8094.				
Oct. 14	23	8	21.51	
ψ¹ Aquarii.				
Oct. 18	23	8	33.26	
B. A. C. 8104.				
Oct. 16	23	9	39.52	
γ Piscium.				
Sept. 7	23	9	54.45	
9			54.44	
23			54.46	
27			54.53	
28			54.41	
Oct. 7			54.50	
9			54.39	
20			54.54	
23			54.46	
25			54.58	
27			54.49	
Nov. 6			54.38	
Weisse XXIII, 185.				
Oct. 26	23	10	21.42	7.0
Weisse XXIII, 188.				
Oct. 27	23	10	25.21	8.0
ψ³ Aquarii.				
Oct. 25	23	10	37.62	
96 Aquarii.				
Oct. 18	23	12	8.32	
19			8.29	
B. A. C. 8123.				
Sept. 7	23	13	0.26	
28			0.15	
Oct. 7			0.27	
b Piscium.				
Oct. 27	23	13	12.69	
Lalande 45704.				
Oct. 23	23	13	34.25	
Weisse XXIII, 309.				
Oct. 2	23	15	43.71	
22			43.79	
25			43.82	
Nov. 6			43.80	

1858.	h.	m.	s.	Mag.
Lalande 45804.				
Oct. 26	23	16	31.64	
27			31.74	
B. A. C. 8158.				
Sept. 7	23	17	46.84	
Weisse XXIII, 359.				
Oct. 18	23	18	14.00	9.0
κ Piscium.				
Sept. 9	23	19	45.30	
23			45.24	
28			45.19	
Oct. 7			45.35	
19			45.21	
20			45.34	
22			45.28	
23			45.34	2.8
25			45.32	
Noa. 6			45.30	
18			45.36	
9 Piscium.				
Oct. 22	23	20	4.59	
B. A. C. 8173.				
Oct. 9	23	20	24.05	
16			24.38	
θ Piscium.				
Oct. 14	23	20	51.98	
27			52.02	
(*), +5° 39′.				
Oct. 26	23	21	8.59	8.0
Weisse XXIII, 423.				
Oct. 2	23	21	36.72	
Weisse XXIII, 458.				
Oct. 14	23	23	14.53	8.5
B. A. C. 8187.				
Oct. 5	23	23	28.91	
Weisse XXIII, 463.				
Oct. 7	23	23	36.21	8.5
18			36.31	9.0
19			36.00	8.0
Santini 1636.				
Oct. 27	23	25	5.57	
B. A. C. 8204.				
Sept. 28	23	26	34.38	
Nov. 6			33.75	

1858.	h.	m.	s.	Mag.
B. A. C. 8217.				
Oct. 9	23	28	55.31	
Nov. 18			55.54	
Weisse XXIII, 592.				
Oct. 2	23	29	4.49	
Weisse XXIII, 602.				
Oct. 14	23	29	40.32	9.0
19			40.15	9.0
B. A. C. 8223.				
Sept. 9	23	30	42.15	
Oct. 7			41.97	
ι Piscium.				
Sept. 27	23	32	44.93	
Oct. 22			45.05	
27			44.92	
Nov. 18			44.96	
Weisse XXIII, 685.				
Oct. 2	23	33	34.46	
γ Cephei.				
Sept. 28	23	33	38.20	
Oct. 5			37.55	
16			38.43	
Weisse XXIII, 705.				
Oct. 7	23	34	33.35	8.5
Weisse XXIII, 710.				
Oct, 26	23	34	48.89	
Santini 1649.				
Oct. 22	23	34	48.80	
25			48.79	
26			48.89	
λ Piscium.				
Oct. 20	23	34	54.19	
B. A. C. 8247.				
Nov. 6	23	35	26.41	
B. A. C. 8252.				
Sept. 9	23	36	17.38	
Weisse XXIII, 749.				
Oct. 14	23	36	59.04	9.5
Weisse XXIII, 764.				
Oct. 7	23	37	40.30	8.0
26			40.32	

1858.	h. m. s.	Mag.
Weisse XXIII, 803.		
Oct. 22	23 39 52.47	
B. A. C. 8269.		
Sept. 23	23 40 35.63	
Weisse XXIII, 828.		
Oct. 2	23 40 58.66	
Weisse XXIII, 831.		
Oct. 14	23 41 5.82	7.0
26	5.88	
δ Sculptoris.		
Sept. 9	23 41 37.44	
18	37.51	
27	37.65	
28	37.55	
Oct. 16	37.65	
18	37.58	
23	37.64	
25	37.74	
Nov. 6	37.81	
21 Piscium.		
Oct. 19	23 42 17.29	
20	17.29	
Weisse XXIII, 870.		
Oct. 7	23 42 59.11	8.5
82 Pegasi.		
Oct. 14	23 45 28.72	
26	28.80	
Weisse XXIII, 932.		
Sept. 28	23 45 58.72	8.5
Oct. 2	58.73	
ρ Cassiopeæ.		
Sept. 9	23 47 24.50	
18	24.52	
(*), – 1° 4′.		
Oct. 18	23 47 41.07	8.5
B. A. C. 8315.		
Sept. 23	23 48 28.27	
Nov. 18	28.26	
B. A. C. 8317.		
Oct. 9	23 48 33.56	
Weisse XXIII, 1030.		
Oct. 2	23 50 36.62	7.0
7	36.69	7.0

1858.	h. m. s.	Mag.
ψ Pegasi.		
Oct. 26	23 50 37.69	
27 Piscium.		
Oct. 19	23 51 30.17	
ω Piscium.		
Sept. 18	23 52 7.47	
28	7.28	
Oct. 14	7.40	
16	7.44	
18	7.34	
20	7.30	
23	7.30	
25	7.38	
Nov. 13	7.34	
18	7.49	
B A. C. 8344.		
Oct. 9	23 54 29.41	
Weisse XXIII, 1178.		
Nov. 18	23 57 31.49	8.0
Weisse XXIII, 1195.		
Oct. 18	23 58 20.37	7.0
23	20.29	
26	20.43	7.0
Weisse XXIII, 1201.		
Sept. 23	23 58 48.60	
B. A. C. 8374.		
Oct. 27	23 59 20.84	
Weisse XXIII, 1212.		
Sept. 18	23 59 20.95	
28	20.90	
Oct. 2	20.76	8.0
7	20.88	
14	20.87	
Weisse XXIII, 1217.		
Oct. 2	23 59 (40.74)	
7	41.26	
14	41.28	
α Andromedæ.		
1859.		
Jan. 13	0 1 9.37	
Aug. 17	9.47	
Weisse XXIII, 1258.		
Nov. 16	0 1 37.53	
Weisse XXIII, 1260.		
Nov. 16	0 1 38.26	
Weisse XXIII, 1267.		
Nov. 28	0 1 41.84	

1859.	h. m. s.	Mag.
B. A. C. 18.		
Dec. 26	0 3 14.81	
Weisse O, 69.		
Nov. 26	0 4 36.58	
Weisse O, 83.		
Nov. 15	0 5 36.61	9.0
γ Pegasi.		
Jan. 13	0 6 1.75	
Aug. 17	1.78	
Nov. 28	1.79	
Weisse O, 104.		
Nov. 16	0 6 54.61	9.0
35 Piscium.		
Sept. 12	0 7 46.34	
13	46.30	
B. A. C. 39.		
Dec. 26	0 8 21.18	
Santini 10.		
Nov. 26	0 8 26.98	7.0
Weisse O, 192.		
Nov. 28	0 11 55.47	9.0
Weisse O, 199.		
Nov. 16	0 12 27.66	7.5
d Piscium.		
Aug. 16	0 13 23.79	
17	23.68	
Sept. 12	23.72	
13	23.73	
Nov. 26	23.68	
Weisse O, 239.		
Nov. 15	0 14 14.12	9.0
9 Ceti.		
Nov. 28	0 15 41.16	
44 Piscium.		
Dec. 26	0 18 13.60	
45 Piscium.		
Aug. 16	0 18 29.04	
17	28.95	
Sept. 12	29.05	
13	28.97	

1859.	h. m. s.	Mag.
B. A. C. 96.		
Nov. 16	0 19 56.92	
26	56.88	
12 Ceti.		
Jan. 13	0 22 53.61	
Aug. 16	53.67	
17	53.65	
Sept. 12	53.59	
13	53.61	
Nov. 15	53.62	
16	53.63	
26	53.62	
Dec. 26	53.66	
B. A. C. 113.		
Nov. 28	0 22 56.88	
Weisse O, 436.		
Nov. 28	0 26 14.49	9.0
Weisse O, 450.		
Nov. 26	0 26 55.40	8.0
B. A. C. 137.		
Nov. 16	0 26 55.54	
13 Ceti.		
Aug. 16	0 28 2.46	
17	2.53	
Sept. 13	2.56	
Weisse O, 491.		
Dec. 26	0 29 10.11	8.0
Weisse O, 496.		
Nov. 28	0 29 43.78	8.5
α Cassiopeæ.		
Jan. 19	0 32 34.84	
Sept. 13	34.96	
Nov. 26	35.02	
B. A. C. 177.		
Nov. 15	0 33 57.98	7.0
Dec. 26	58.00	
β Ceti.		
Jan. 8	0 36 33.60	
Aug. 17	33.59	
Dec. 26	33.61	
Weisse O, 635.		
Nov. 16	0 37 5.19	8.5
Weisse O, 638.		
Nov. 16	0 37 11.70	9.0

1859.	h.	m.	s.	Mag.
Weisse O, 647.				
Nov. 26	0	37	51.65	
Weisse O, 657.				
Nov. 15	0	38	25.67	8.0
16			25.58	8.0
ν Cassiopeæ.				
Dec. 26	0	40	55.06	
Weisse O, 712.				
Nov. 28	0	41	10.40	8.0
δ Piscium.				
Aug. 17	0	41	25.28	
Weisse O, 732.				
Nov. 15	0	42	44.82	7.0
26			44.80	7.0
B. A. C. 239.				
Dec. 26	0	44	44.54	
20 Ceti.				
Sept. 13	0	45	53.15	
Weisse O, 815.				
Nov. 15	0	48	4.43	8.5
16			4.39	9.0
28			4.33	8.5
ϕ^3 Ceti.				
Dec. 26	0	49	0.25	
B. A. C. 271.				
Nov. 26	0	51	43.18	
Weisse O, 893.				
Nov. 28	0	51	50.01	8.5
Weisse O, 908.				
Nov. 15	0	52	26.36	8.5
16			26.39	9.0
Weisse O, 965.				
Nov. 26	0	55	24.40	
ε Piscium.				
Sept. 13	0	55	40.84	
Nov. 8			40.78	
Dec. 26			40.80	
Weisse O, 1013.				
Nov. 28	0	58	6.72	

1859.	h.	m.	s.	Mag.
Weisse O, 1033.				
Nov. 15	0	59	5.45	9.0
16			5.46	
e Piscium.				
Aug. 17	1	1	9.51	
ζ Piscium.				
Nov. 8	1	6	25.15	
40 Ceti.				
Nov. 8	1	9	48.99	
θ Ceti.				
Jan. 8	1	17	1.48	
12			1.51	
13			1.55	
Aug. 17			1.52	
18			1.54	
Nov. 8			1.51	
15			1.57	
16			1.55	
26			1.58	
28			1.51	
Dec. 26			1.54	
Weisse I, 375.				
Dec. 26	1	22	42.56	8.5
η Piscium.				
Aug. 17	1	23	59.72	
18			59.74	
Nov. 8			59.78	
15			59.70	
16			59.72	
101 Piscium.				
Jan. 12	1	28	17.52	
B. A. C. 482.				
Jan. 13	1	29	0.01	
Weisse I, 497.				
Jan. 8	1	29	11.50	8.5
π Piscium.				
Aug. 17	1	29	40.75	
18			40.76	
Nov. 8			40.83	
16			40.93	6.5
26			40.78	6.5
Weisse I, 562.				
Dec. 26	1	32	29.45	8.5
ν Piscium.				
Jan. 8	1	34	(8.66)	
12			8.88	
13			8.85	
Aug. 18			8.84	
Nov. 8			8.86	
16			8.85	
Dec. 23			8.88	

1859.	h.	m.	s.	Mag.
o Piscium.				
Jan. 12	1	37	0.22	
Weisse I, 675.				
Dec. 26	1	37	6.62	8.5
o Piscium.				
Jan. 13	1	38	(0.09)	
B. A. C. 551.				
Jan. 8	1	41	10.80	
Weisse I, 767.				
Dec. 26	1	43	26.39	
B. A. C. 562.				
Jan. 13	1	43	54.83	
Dec. 23			55.20	
Weisse I, 808.				
Jan. 8	1	45	27.17	9.0
β Arietis.				
Jan. 12	1	46	54.67	
Aug. 18			54.70	
Nov. 8			54.68	
Dec. 20			54.70	
Weisse I, 847.				
Dec. 23	1	47	32.42	8.0
26			32.44	8.0
ι Arietis.				
Jan. 13	1	49	42.29	
Aug. 18			42.37	
Weisse I, 896.				
Dec. 26	1	51	3.22	8.0
B. A. C. 607.				
Jan. 12	1	51	49.80	
Nov. 8			49.74	
Weisse I, 972.				
Dec. 21	1	54	53.49	7.0
23			53.49	7.5
Weisse I, 973.				
Dec. 26	1	55	3.18	7.0
Weisse I, 1040.				
Jan. 8	1	58	48.69	7.0

1859.	h.	m.	s.	Mag.
Weisse (2) I, 1411.				
Dec. 26	1	58	56.55	8.0
α Arietis.				
Jan. 12	1	59	17.28	
13			17.22	
19			17.33	
Aug. 18			17.20	
Dec. 16			17.21	
20			17.23	
21			17.21	
B. A. C. 663.				
Dec. 23	2	2	22.52	8.5
5 Trianguli.				
Jan. 13	2	3	14.53	
O. Arg. N. 2462.				
Jan. 8	2	3	37.90	8.5
64 Ceti.				
Dec. 21	2	3	57.86	
Weisse II, 35.				
Dec. 26	2	4	15.96	9.0
O. Arg. N. 2511.				
Aug. 18	2	5	23.26	
Dec. 20			23.45	
B. A. C. 687.				
Dec. 16	2	6	10.57	
(*), +5° 35'.				
Dec. 23	2	6	40.49	
Weisse II, 112.				
Dec. 26	2	8	28.18	9.0
67 Ceti.				
Jan. 19	2	10	0.13	
Dec. 20			0.10	
21			0.12	
23			0.03	
θ Arietis.				
Jan. 13	2	10	20.56	
B. A. C. 718.				
Aug. 18	2	12	3.44	
B. A. C. 725.				
Dec. 16	2	13	6.64	

1859.	h. m. s.	Mag.
Weisse II, 209.		
Dec. 26	2 13 52.98	9.0
ι Cassiopeæ.		
Aug. 18	2 17 34.86	
(*), + 61° 9′.		
Dec. 20	2 17 35.26	8.5
Lalande 4460.		
Jan. 8	2 17 50.92	
(*), +5° 35′.		
Dec. 26	2 18 53.68	8.0
Weisse II, 305.		
Dec. 23	2 19 15.31	9.0
Weisse II, 312.		
Dec. 26	2 19 41.84	8.0
25 Arietis.		
Jan. 13	2 19 56.75	
Dec. 16	56.76	
ξ^2 Ceti.		
Dec. 21	2 20 43.12	
27 Arietis.		
Jan. 13	2 23 8.68	
Aug. 18	8.78	
Dec. 20	8.72	
Σ Cat. Gen. 250.		
Dec. 16	2 27 8.91	8.0
23	8.82	
B. A. C. 789.		
Jan. 8	2 27 39.30	7.0
Weisse (2) II, 691.		
Dec. 20	2 28 49.99	9.0
21	49.95	9.0
B. A. C. 800.		
Jan. 13	2 29 10.25	
81 Ceti.		
Aug. 18	2 30 38.78	
Nov. 12	38.66	
Dec. 23	38.61	
Weisse (2) II, 860.		
Dec. 20	2 35 44.97	8.0
21	44.91	8.0

1859.	h. m. s.	Mag.
γ Ceti.		
Jan. 8	2 36 2.83	
13	2.92	
Feb. 5	2.85	
7	2.87	
Aug. 18	2.94	
Nov. 12	2.89	
Dec. 16	2.99	
23	2.89	
26	2.89	
B. A. C. 866.		
Nov. 12	2 40 37.88	
Dec. 16	37.89	
21	37.79	
Weisse (2) II, 1018		
Dec. 26	2 42 5.00	
Weisse II, 741.		
Jan. 8	2 43 25.38	7.0
Dec. 20	25.41	7.5
Weisse II, 742.		
Jan. 4	2 43 25.36	
Dec. 20	25.48	8.0
23	25.43	
γ Fornacis.		
Feb. 5	2 43 38.82	
τ Persei.		
Feb. 7	2 44 21.09	
Lalande 5358.		
Dec. 16	2 46 29.19	8.0
26	29.10	8.0
Weisse II, 820.		
Nov. 12	2 47 37.55	7.0
(*), +14° 47′.		
Dec. 20	2 48 10.79	
21	10.73	
(*), +14° 47′.		
Dec. 20	2 48 28.32	9.0
21	28.42	9.0
ρ^3 Arietis.		
Feb. 7	2 48 32.14	
B. A. C. 905.		
Jan. 8	2 48 44.54	
Weisse II, 866.		
Dec. 26	2 49 40.79	8.0

1859.	h. m. s.	Mag.
Rumker 775:		
Jan. 4	2 50 28.58	
Weisse II, 880.		
Dec. 23	2 50 50.84	
Weisse II, 893.		
Dec. 23	2 51 44.63	
λ Ceti.		
Dec. 21	2 52 12.86	6.5
(*), +9° 41.′		
Dec. 23	2 53 15.75	8.5
B. A. C. 944.		
Dec. 16	2 53 51.88	
26	51.73	
Weisse (2) II, 1293.		
Jan. 8	2 54 0.22	8.0
Dec. 20	0.30	8.0
α Ceti.		
Jan. 4	2 54 57.77	
Feb. 5	57.81	
7	57.83	
Nov. 12	57.81	
Dec. 8	57.87	
Weisse (2) II, 1322.		
Dec. 21	2 55 21.88	7.5
53 Arietis.		
Dec. 8	2 59 32.96	
B. A. C. 975.		
Jan. 4	3 1 8.99	
Feb. 5	9.06	
Weisse III, 1.		
Dec. 20	3 1 56.38	9.0
21	56.27	
Weisse (2) III, 45.		
Dec. 23	3 3 12.33	9.0
δ Arietis.		
Feb. 7	3 3 37.70	
Dec. 8	37.62	
16	37.71	
26	37.73	
Weisse III, 62.		
Dec. 20	3 4 4.97	8.0
21	4.88	

1859.	h. m. s.	Mag.
ζ Arietis.		
Feb. 10	3 6 51.38	
Dec. 8	51.46	
Weisse III, 114.		
Feb. 7	3 7 15.41	
Dec. 26	15.48	8.0
(*), + 23° 52′.		
Dec. 23	3 7 26.87	
(*), + 17° 1′.		
Jan. 4	3 9 18.35	
Weisse III, 168.		
Jan. 8	3 10 8.27	8.0
Weisse (2) III, 216.		
Nov. 12	3 10 25.15	
Dec. 21	25.08	8.0
Weisse III, 224.		
Dec. 23	3 13 2.17	8.5
τ^1 Arietis.		
Feb. 7	3 13 8.98	
10	8.82	
α Persei.		
Jan. 4	3 14 20.72	
Apr. 4	20.72	
Nov. 12	20.68	
Dec. 8	20.57	
16	20.79	
20	20.76	
26	20.66	
Rumker 849.		
Feb. 5	3 16 2.68	
Weisse (2) III, 351.		
Dec. 21	3 16 43.77	9.0
Weisse III, 299.		
Dec. 20	3 17 38.90	9.0
B. A. C. 1063.		
Dec. 16	3 18 51.07	
Weisse (2) III, 393.		
Jan. 4	3 19 3.91	7.5
8	3.91	
ξ Tauri.		
Feb. 5	3 19 35.94	
7	35.11	
Nov. 12	35.08	

1859.	h.	m.	s.	Mag.
Rumker 870.				
Dec. 23	3	21	47.99	8.0
(*), + 9° 28′.				
Dec. 20	3	21	50.95	9.0
Rumker 879.				
Feb. 10	3	22	55.19	8.0
Dec. 21			55.25	8.0
f Tauri.				
Feb. 7	3	23	8.83	
Weisse (2) III, 493.				
Dec. 21	3	23	44.13	8.0
Weisse III, 442.				
Nov. 12	3	25	13.40	7.0
Dec. 16			13.44	
Weisse III, 447.				
Dec. 23	3	25	35.34	7.5
Weisse III, 474.				
Dec. 20	3	26	46.68	9.0
21			46.57	8.5
9 Tauri.				
Feb. 7	3	28	44.34	
10			44.35	
Dec. 8			44.32	
B. A. C. 1110.				
Nov. 12	3	29	36.38	
Weisse (2) III, 639.				
Jan. 8	3	30	8.16	8.0
Feb. 5			8.17	8.0
11 Tauri.				
Feb. 7	3	32	24.78	
10			24.89	
Rumker 940.				
Dec. 20	3	34	22.22	9.0
21			22.24	8.0
17 Tauri.				
Feb. 10	3	36	33.99	
Sept. 18			34.02	
Dec. 8			34.02	
9			34.09	
24 Tauri.				
Jan. 18	3	39	1.96	
Feb. 10			1.97	
Dec. 9			2.04	
20			1.99	

1859.	h.	m.	s.	Mag.
(*), +11° 15′.				
Jan. 8	3	39	8.23	8 0
η Tauri.				
Jan. 18	3	39	10.04	
Feb. 10			10.01	
Sept. 18			10.04	
Nov. 12			10.03	
Dec. 8			10.02	
9			10.02	
20			10:01	
23			10.13	
(*), +15° 9′.				
Dec. 21	3	40	46.18	
Weisse III, 781.				
Feb. 5	3	41	9.77	8.5
7			9.79	
Weisse (2) III, 1013.				
Dec. 20	3	46	35.77	
Weisse (2) III, 1019.				
Dec. 20	3	46	52.51	
Weisse (2) III, 1030.				
Jan. 19	3	47	38.75	
Feb. 7			38.81	
Weisse III, 924.				
Jan. 8	3	47	51.99	8.0
Weisse (2) III, 1041.				
Nov. 12	3	48	27.08	7.5
Dec. 9			27.15	7.5
Weisse III, 965.				
Jan. 18	3	49	55.28	7.5
Feb. 10			55.26	7.5
γ^1 Eridani.				
Jan. 19	3	51	29.89	
Feb. 5			29.94	
Dec. 20			29.86	
B. A. C. 1244.				
Jan. 18	3	54	8.03	
Sept. 18			8.00	
A¹ Tauri.				
Feb. 10	3	56	25.28	
(*)+, 16° 15′.				
Jan. 19	3	56	39.39	9.0
Weisse (2) III, 1212.				
Dec. 9	3	56	44.97	9.0
16			44.92	9.0

1859.	h.	m.	s.	Mag.
Rumrer 1079.				
Nov. 12	3	57	46.45	8.0
Rumker 1084.				
Nov. 12	3	58	19.48	7.0
Dec. 21			19.61	
Weisse (2) III, 1266.				
Jan. 18	3	58	54.99	
Dec. 20			55.01	
Weisse (2) III, 1275.				
Jan. 18	3	59	29.78	
Dec. 20			29.79	
B. A. C. 1272.				
Sept. 18	3	59	58.58	
Dec. 9			58.60	6.5
Weisse IV, 21.				
Jan. 19	4	2	34.69	
o^1 Eridani.				
Jan. 8	4	5	2.07	
18			2.01	
Feb. 5			2.03	
10			2.05	
Sept. 18			1.95	
Nov. 12			1.98	
Dec. 9			2.02	
16			1.95	
20			2.03	
21			2.06	
23			1.94	
Weisse (2) IV, 127.				
Jan. 19	4	7	20.28	9.0
B. A. C. 1307.				
Dec. 23	4	8	43.59	
ω^2 Tauri.				
Feb. 10	4	9	3.60	
Dec. 8			3.63	
b^2 Persei.				
Sept. 18	4	9	36.05	
Dec. 16			35.99	
(*), +46° 45′.				
Jan. 8	4	11	1.33	8.5
Weisse (2) IV, 220.				
Dec. 9	4	11	19.67	7.0
B. A. C. 1334.				
Nov. 12	4	12	38.53	
Dec. 23			38.56	

1859.	h.	m.	s.	Mag.
δ^1 Tauri.				
Feb. 10	4	14	51.82	
63 Tauri.				
Jan. 8	4	15	23.23	
B. A. C. 1351.				
Feb. 5	4	15	26.61	
Weisse (2) IV, 325.				
Jan. 19	4	15	44.24	8.5
Dec. 16			44.38	8.5
20			44.34	
Weisse (2) IV, 330.				
Dec. 21	4	15	56.07	7.5
70 Tauri.				
Nov. 12	4	17	37.96	7.0
v^1 Tauri.				
Feb. 10	4	17	56.02	
Sept. 18			56.08	
Dec. 8			56.07	
9			56.10	
ε Tauri.				
Jan. 8	4	20	26.67	
17			26.70	
18			26.61	
19			26.58	
Feb. 5			26.60	
10			26.67	
Dec. 8			26.72	
9			26.67	
10			26.68	
16			26.72	
20			26.67	
21			26.67	
23			26.69	
Lalande 8479.				
Nov. 12	4	22	18.10	8.0
Rumker 1235.				
Jan. 19	4	24	49.81	
B. A. C. 1408.				
Feb. 5	4	25	52.53	
Weisse (2) IV, 538.				
Jan. 18	4	25	17.56	9.0
Weisse (2) IV, 562.				
Dec. 20	4	26	20.29	
Weisse (2) IV, 579.				
Dec. 21	4	27	16.74	8.5

1859.	h. m. s.	Mag.
α Tauri.		
Jan. 8 . .	4 27 53.44	
15 . .	53.46	
17 . .	53.38	
Feb. 10 . .	53.37	
Sept. 18 . .	53.44	
Dec. 8 . .	53.43	
9 . .	53.45	
ι⁶ Eridani.		
Dec. 10 . .	4 28 1.01	
Weisse (2) IV, 606.		
Jan. 19 . .	4 28 27.39	
Nov. 12 . .	27.41	8.0
Weisse (2) IV, 669.		
Jan. 18 . .	4 30 50.98	8.5
Dec. 21 . .	51.04	9.0
Weisse IV, 728.		
Jan. 19 . .	4 33 44.87	9.0
26 . .	44.92	9.0
τ Tauri.		
Jan. 15 . .	4 33 50.76	
Feb. 10 . .	50.65	
Sept. 18 . .	50.67	
Dec. 8 . .	50.79	
9 . .	50.74	
Weisse IV, 732.		
Jan. 18 . .	4 34 0.88	9.0
Dec. 21 . .	0.88	9.0
B. A. C. 1459.		
Dec. 10 . .	4 36 39.19	
Weisse IV, 809.		
Jan. 19 . .	4 37 33.47	8.0
Nov. 12 . .	33.49	9.0
Dec. 21 . .	33.42	
96 Tauri.		
Sept. 18 . .	4 41 43.70	
***i* Tauri.**		
Jan. 15 . .	4 43 11.25	
Feb. 5 . .	11.14	
Nov. 12 . .	11.15	
O. Arg. N. 5259.		
Jan. 19 . .	4 44 15.55	8.0
Dec. 10 . .	15.66	8.0
Weisse IV, 972.		
Jan. 18 . .	4 44 57.90	8.0
Feb. 10 . .	57.83	8.0
B. A. C. 1518.		
Nov. 12 . .	4 47 44.06	

1859.	h. m. s.	Mag.
ι Aurigæ.		
Jan. 17 . .	4 47 52.78	
24 . .	52.82	
Sept. 18 . .	52.87	
Dec. 9 . .	52.68	
21 . .	52.81	
Weisse (2) IV, 1138.		
Jan. 19 . .	4 50 50.50	9.0
Weisse (2) IV, 1165.		
Jan. 18 . .	4 51 45.12	
19 . .	45.00	8.5
Weisse (2) IV, 1172.		
Jan. 18 . .	4 52 8.73	8.5
19 . .	8.64	9.0
ι Tauri.		
Jan. 17 . .	4 54 43.68	
Sept. 18 . .	43.77	
Dec. 9 . .	43.85	
B. A. C. 1555.		
Feb. 7 . .	4 56 1.15	
11 Orionis.		
Jan. 15 . .	4 56 34.27	
17 . .	34.18	
Weisse (2) IV, 1364.		
Jan. 19 . .	4 59 31.07	9.0
ε Leporis.		
Jan. 24 . .	4 59 32.05	
Feb. 7 . .	32.21	
10 . .	32.26	
Mar. 1 . .	32.19	
Sept. 18 . .	32.08	
Dec. 9 . .	32.17	
10 . .	32.14	
21 . .	32.09	
103 Tauri.		
Nov. 12 . .	4 59 34.70	
15 Orionis.		
Feb. 5 . .	5 1 41.29	
Weisse (2) V, 49.		
Jan. 18 . .	5 3 39.21	
Weisse (2) V, 111.		
Feb. 7 . .	5 5 17.46	

1859.	h. m. s.	Mag.
α Aurigæ.		
Jan. 17 . .	5 6 21.00	
24 . .	21.03	
Feb. 5 . .	21.04	
May 6 . .	21.16	
13 . .	20.99	
Sept. 18 . .	21.19	
Nov. 12 . .	21.09	
Dec. 10 . .	21.20	
21 . .	21.13	
β Orionis.		
Jan. 17 . .	5 7 48.74	
18 . .	48.77	
19 . .	48.64	
24 . .	48.62	
Feb. 10 . .	48.68	
Mar. 1 . .	48.67	
21 . .	48.70	
***n* Tauri.**		
Feb. 7 . .	5 10 51.99	
Mar. 1 . .	51.93	
Nov. 12 . .	52.03	
(*), −13° 19′.		
Jan. 19 . .	5 13 7.50	7.0
Feb. 10 . .	7.41	7.0
Weisse (2) V, 451.		
Jan. 18 . .	5 16 36.68	8.0
Weisse (2) V, 452.		
Jan. 18 . .	5 16 38.59	8.5
β Tauri.		
Jan. 24 . .	5 17 26.61	
Feb. 5 . .	26.56	
7 . .	26.56	
Mar. 1 . .	26.52	
Sept. 18 . .	26.63	
Nov. 12 . .	26.58	
Dec. 10 . .	26.64	
Weisse V, 449.		
Jan. 19 . .	5 19 12.26	
Feb. 10 . .	12.20	
Weisse (2) V, 647.		
Jan. 18 . .	5 22 52.84	9.0
χ Aurigæ.		
Dec. 10 . .	5 23 37.10	
δ Orionis.		
Jan. 24 . .	5 24 51.32	
29 . .	51.33	
Feb. 5 . .	51.33	
7 . .	51.36	
Mar. 21 . .	51.34	
Sept. 18 . .	51.29	
Nov. 12 . .	51.28	
(*), −13° 37′.		
Jan. 19 . .	5 25 54.81	
Feb. 10 . .	54.86	9.0

1859.	h. m. s.	Mag.
(*), +31° 51′.		
Jan. 18 . .	5 26 0.98	9.0
α Leporis.		
Jan. 24 . .	5 26 33.45	
ε Orionis.		
Jan. 24 . .	5 29 6.66	
29 . .	6.64	
Feb. 5 . .	6.64	
7 . .	6.54	
10 . .	6.63	
Mar. 21 . .	6.61	
Nov. 12 . .	6.63	
Dec. 10 . .	6.64	
ζ Tauri.		
Sept. 18 . .	5 29 16.66	
Weisse V, 874.		
Jan. 19 . .	5 34 20.48	8.0
α Columbæ.		
Jan. 24 . .	5 34 34.78	
Nov. 12 . .	34.76	
Dec. 10 . .	34.72	
Weisse (2) V, 1180.		
Jan. 29 . .	5 36 26.01	7.0
Feb. 7 . .	25.80	
10 . .	25.77	
131 Tauri.		
Jan. 18 . .	5 39 14.76	
(*), −13° 42′.		
Feb. 7 . .	5 42 5.01	
136 Tauri.		
Nov. 12 . .	5 44 31.69	
B. A. C. 1867.		
Dec. 10 . .	5 44 59.82	
Weisse V, 1143.		
Feb. 7 . .	5 45 11.09	8.0
10 . .	11.06	
Weisse V, 1176.		
Jan. 19 . .	5 46 10.82	
α Orionis.		
Jan. 12 . .	5 47 35.58	
24 . .	35.57	
Feb. 1 . .	35.58	
5 . .	35.59	
Mar. 1 . .	(35.49)	
21 . .	35.53	
23 . .	35.53	

1859.	h.	m.	s.	Mag.
Weisse V, 1200.				
Jan. 18	5	47	37.87	
29			37.82	
η Leporis.				
Feb. 10	5	50	1.74	
(*), −14° 13′.				
Jan. 19	5	51	24.01	
Feb. 7			24.00	
10			24.06	
Weisse V, 1335.				
Feb. 10	5	52	27.40	
Weisse V, 1368.				
Jan. 12	5	53	39.28	9.0
Weisse V, 1372.				
Jan. 24	5	53	52.36	
Feb. 10			52.30	8.5
Rumker 1673.				
Jan. 18	5	54	44.81	
χ^3 Orionis.				
Mar. 1	5	55	10.01	
1 Geminorum.				
Dec. 10	5	55	36.69	
40 Aurigæ.				
Feb. 5	5	56	55.90	
Weisse V, 1479.				
Jan. 19	5	57	49.63	
24			49.78	
Feb. 7			49 69	
ν Orionis.				
Jan. 12	5	59	34.73	
18			34.73	
29			34.66	
Feb. 1			34.70	
22			34.73	
Mar. 21			34.64	
Nov. 12			34.75	
Dec. 10			34.71	
11			34.71	
Weisse V, 1530.				
Feb. 10	5	59	42.19	6.0
Mar. 1			42.21	6.0
3 Geminorum.				
Feb. 5	6	1	13.87	

1859.	h.	m.	s.	Mag.
Weisse VI, 44.				
Jan. 12	6	2	46.68	7.5
19			46.68	7.5
24			46.65	
Weisse (2) VI, 79.				
Jan. 18	6	4	25.48	9.0
29			25.47	9.0
η Geminorum.				
Nov. 12	6	6	25.63	
Dec. 10			25.58	
11			25.62	
κ Aurigæ.				
Feb. 1	6	6	27.37	
5			27.35	
22			27.42	
Weisse VI, 264.				
Jan. 12	6	9	34.74	9.0
19			34.66	
24			34.90	
(*), −14° 18′.				
Jan. 29	6	12	13.43	8.0
Feb. 10			13.29	
B. A. C. 2039.				
Feb. 5	6	12	59.42	
μ Geminorum.				
Jan. 12	6	14	29.34	
17			29.37	
Feb. 1			29.43	
22			29.46	
Mar. 12			29.38	
26			29.39	
Apr. 4			29.42	
6			29.44	
Nov. 12			29.45	
Dec. 10			29.41	
11			29.42	
Weisse VI, 544.				
Jan. 12	6	18	41.52	7.5
19			41.52	8.5
48 Aurigæ.				
Jan. 17	6	19	34.03	
ν Geminorum.				
Feb. 1	6	20	38.95	
5			38.99	
22			39.02	
Mar. 12			38.97	

1859.	h.	m.	s.	Mag.
Weisse (2) VI, 626.				
Feb. 7	6	22	8.05	
10			7.92	
49 Aurigæ.				
Jan. 17	6	26	22.88	
Mar. 12			22.87	
Weisse VI, 809.				
Jan. 19	6	26	56.85	8.0
γ Geminorum.				
Feb. 21	6	29	37.41	
22			37.44	
Mar. 1			37.46	
Apr. 4			37.43	
α Canis Majoris.				
Jan. 17	6	38	58.67	
18			58.70	
Feb. 14			58.79	
Apr. 1			58.69	
4			58.70	
6			58.65	
11 Canis Majoris.				
Jan. 19	6	40	27.89	
Weisse VI, 1351.				
Jan. 18	6	44	24.79	8.0
19			24.66	
(*), −14° 25′.				
Feb. 10	6	47	8.07	
16 Lyncis.				
Feb. 1	6	47	23.63	
5			23.80	
Mar. 26			23.84	
B. A. C. 2266.				
Feb. 26	6	47	59.57	
O. Arg. N. 7442.				
Jan. 18	6	50	46.35	8.5
Weisse VI, 1587.				
Feb. 22	6	51	38.97	
Weisse VI, 1618.				
Jan. 19	6	52	40.35	7.5
Feb. 22			40.42	

1859.	h.	m.	s.	Mag.
ε Canis Majoris.				
Jan. 12	6	53	7.49	
17			7.57	
29			7.51	
Feb. 7			7.46	
10			7.39	
21			7.49	
26			7.47	
Mar. 1			7.39	
12			7.52	
23			7.53	
26			7.49	
Apr. 1			7.53	
4			7.46	
6			7.50	
ω Geminorum.				
Feb. 14	6	53	52.86	
Dec. 11			52.84	
γ Canis Majoris.				
Jan. 12	6	57	25.53	
18			25.58	
29			25.49	
Feb. 1			25.50	
7			25.49	
10			25.53	
21			25.53	
22			25.55	
26			25.50	
Mar. 1			25.45	
12			25.59	
23			25.52	
26			25.50	
Apr. 1			25.58	
6			25.56	
Dec. 11			25.57	
Piazzi O, 328.				
Jan. 19	6	59	10.29	
(*), + 22° 36′.				
Feb. 21	7	1	19.67	8.0
22			19.70	8.0
τ Geminorum.				
Jan. 17	7	2	13.43	
Feb. 14			13.57	
Mar. 12			13.47	
Weisse VII, 63.				
Jan. 12	7	3	14.03	8.5
Weisse VII, 93.				
Jan. 19	7	3	58.51	8.0
29			58.47	8.0
51 Geminorum.				
Mar. 5	7	5	19.80	
Dec. 11			19.81	
(*), − 14° 17′.				
Feb. 26	7	6	8.07	
53 Geminorum.				
Feb. 14	7	7	12.40	

1859.	h. m. s.	Mag.
(*), − 14° 19′.		
Jan. 12	7 8 2.26	8.5
Feb. 22	2.29	8.5
26	2.19	
Weisse VII, 250.		
Jan. 19	7 8 44.69	
Feb. 22	44.78	7.0
26	44.65	8.0
Weisse VII, 274.		
Jan. 12	7 9 26.78	7.5
O. Arg. N. 7753.		
Feb. 21	7 9 36.36	8.5
Weisse VII, 283.		
Jan. 12	7 9 41.45	7.0
λ Geminorum.		
Feb. 1	7 10 2.62	
Mar. 26	2.73	
Weisse VII, 316.		
Jan. 29	7 10 42.15	7.0
δ Geminorum.		
Jan. 18	7 11 45.52	
Feb. 14	45.59	
28	45.53	
Mar. 5	45.53	
12	45.53	
23	45.52	
Apr. 1	45.54	
4	45.50	
6	45.53	
9	45.53	
Dec. 11	45.54	
B. A. C. 2432.		
Feb. 1	7 14 56.05	
Dec. 11	56.21	7.0
Weisse VII, 464.		
Feb. 26	7 15 37.43	
ι Geminorum.		
Jan. 17	7 17 1.72	
18	1.55	
Feb. 14	1.77	
Mar. 12	1.62	
26	1.60	
Apr. 4	1.64	
9	1.68	
(*), − 14° 27′.		
Feb. 22	7 17 8.34	
(*), + 10° 25′.		
Feb. 21	7 17 23.52	9.0
Mar. 1	23.46	9.0
Weisse VII, 529.		
Jan. 12	7 17 43.32	8.5
Feb. 26	43.21	
(*), − 14° 36′.		
Jan. 19	7 18 42.92	
29	42.89	
Feb. 22	42.99	
26	42.89	
Weisse VII, 551.		
Mar. 5	7 18 44.69	
(*), + 10° 23′.		
Mar. 1	7 19 39.21	9.0
ρ Geminorum.		
Feb. 1	7 20 5.90	
b^2 Geminorum.		
Feb. 28	7 21 5.99	
Mar. 12	5.95	
Weisse VII, 756.		
Jan. 29	7 24 57.14	9.0
Feb. 21	57.20	8.5
α^2 Geminorum.		
Feb. 14	7 25 39.73	
Mar. 23	39.71	
Apr. 1	39.64	
6	39.62	
Weisse VII, 816.		
Feb. 22	7 27 4.60	9.0
Mar. 1	4.56	9.0
υ Geminorum.		
Jan. 17	7 27 17.51	
18	17.40	
Feb. 1	17.33	
28	17.50	
Mar. 12	17.43	
Apr. 9	17.49	
Dec. 11	17.44	
Weisse VII, 835.		
Feb. 26	7 27 22.05	8.5
Mar. 5	22.10	6.5
Weisse VII, 871.		
Jan. 12	7 28 29.90	8.5
Weisse VII, 968.		
Jan. 29	7 31 47.07	
Feb. 21	47.15	
α Canis Minoris.		
Jan. 17	7 31 58.42	
Feb. 14	58.51	
22	58.38	
26	58.30	
Mar. 5	58.35	
9	58.28	
12	58.33	
23	58.35	
26	58.34	
Apr. 1	58.44	
4	58.37	
6	58.36	
9	58.41	
June 1	58.35	
Weisse VII, 1053.		
Feb. 21	7 34 37.68	
Mar. 1	37.66	9.0
(*), — 14° 18′.		
Jan. 12	7 35 6.91	8.0
κ Geminorum.		
Jan. 17	7 35 59.48	
18	59.47	
Feb. 1	59.33	
Mar. 26	59.52	
Dec. 11	59.49	
β Geminorum.		
Feb. 14	7 36 44.70	
28	44.69	
Mar. 5	44.63	
9	44.62	
12	44.55	
23	44.66	
Apr. 1	44.69	
4	44.71	
6	44.64	
9	44.70	
June 1	44.62	
Weisse VII, 1181.		
Jan. 12	7 39 2.38	7.5
29	2.21	7.5
Feb. 22	2.33	7.5
Weisse VII, 1182.		
Jan. 12	7 39 2.80	
19	2.76	
29	2.70	7.0
Feb. 22	2.80	7.0
Rumker 2282.		
Feb. 21	7 39 28.79	8.5
Mar. 1	28.64	9.0
(*), −14° 25′.		
Mar. 12	7 41 0.10	
(*), −14° 15′.		
Mar. 5	7 42 33.41	8.5
9	33.44	
B. A. C. 2599.		
Mar. 23	7 43 8.96	
B. A. C. 2605.		
Jan. 18	7 43 48.00	
Mar. 1	47.93	
ξ Navis.		
Mar. 23	7 43 24.44	
φ Geminorum.		
Feb. 28	7 44 55.45	
Mar. 12	55.41	
26	55.36	
Apr. 9	55.48	
Dec. 11	55.43	
(*), +20° 32′.		
Mar. 5	7 45 58.61	9.0
16	58.51	9.0
Weisse (2) VII, 1212.		
Jan. 29	7 46 27.97	7.5
Feb. 21	28.32	8.0
85 Geminorum.		
Feb. 22	7 47 29.39	
26	29.40	
1 Cancri.		
Feb. 28	7 49 2.30	
Mar. 26	2.32	
O. Arg. S. 7669.		
Apr. 4	7 49 53.11	
B. A. C. 2651.		
Apr. 4	7 50 47.92	
54 Camelopardi.		
Dec. 11	7 51 10.10	
B. A. C. 2655.		
Mar. 12	7 52 5.34	
23	5.43	
Apr. 4	5.29	
3 Cancri.		
Mar. 26	7 52 45.69	
O. Arg. N. 8531.		
Feb. 21	7 53 42.24	8.0
22	42.31	7.5

6 Cancri.

1859.		h. m. s.	Mag.
Jan. 12	. .	7 54 54.83	
17	. .	54.82	
18	. .	54.80	
19	. .	54.80	
Feb. 14	. .	54.89	
28	. .	54.82	
Mar. 5	. .	54.81	
9	. .	54.79	
12	. .	54.80	
16	. .	54.84	
Apr. 1	. .	54.84	
6	. .	54.82	
9	. .	54.87	
Dec. 11	. .	54.82	

Rumker 2390.

Jan. 29	. .	7 56 52.55	
Feb. 26	. .	52.47	7.0
Mar. 1	. .	52.54	

Weisse (2) VIII, 1659.

Feb. 21	. .	8 0 9.66	9.0
22	. .	9.63	9.0
Mar. 12	. .	9.68	9.0

Weisse (2) VIII, 1669.

Mar. 5	. .	8 0 28.43	9.0
12	. .	28.51	9.0

12 Cancri.

Jan. 18	. .	8 0 52.81	
Mar. 26	. .	52 79	

ψ^2 Cancri.

Feb. 14	. .	8 2 0.92	

ρ Argus.

Jan. 12	. .	8 1 34.97	
17	. .	34.94	
19	. .	34.99	
Feb. 26	. .	34.89	
28	. .	34.98	
Mar. 1	. .	35.02	
9	. .	34.97	
16	. .	34.95	
23	. .	34.94	
Apr. 1	. .	34.93	
4	. .	34.99	
6	. .	34.97	
9	. .	34.92	
Dec. 11	. .	35.03	

ζ^1 Cancri.

Jan. 18	. .	8 4 10.75	
19	. .	10.74	
Mar. 9	. .	10.74	
26	. .	10.75	

ζ^2 Cancri.

Mar. 9	. .	8 4 11.00	

Lalande 16130.

Jan. 29	. .	8 7 54.63	7.0
Feb. 22	. .	54.56	8.0

30 Lyncis.

1859.		h. m. s.	Mag.
Mar. 5	. .	8 9 6.27	

B. A. C. 2788.

Jan. 12	. .	8 12 10.82	
29	. .	10.71	
Feb. 21	. .	10.66	
26	. .	10.67	
28	. .	10.74	
Mar. 12	. .	10.70	

λ Cancri.

Jan. 18	. .	8 12 12.37	
19	. .	12.36	
Feb. 14	. .	12.37	
Mar. 9	. .	12.35	
26	. .	12.35	

Weisse (2) VIII, 309.

Feb. 22	. .	8 14 5.89	
Mar. 5	. .	5.88	

21 Cancri.

Feb. 21	. .	8 16 15.62	
28	. .	15.62	
Mar. 9	. .	15.58	
12	. .	15.64	
26	. .	15.59	

O. Arg. N. 8953.

Feb. 26	. .	8 17 13.86	

υ Cancri, (1st *.)

Jan. 12	. .	8 18 19.84	
29	. .	19.75	7.0

υ Cancri, (2d *.)

Jan. 29	. .	8 18 20.12	7.5

B. A. C. 2827.

Apr. 4	. .	8 19 1.11	
6	. .	1.11	

Rumker 2533.

Feb. 21	. .	8 21 20.96	
22	. .	20.95	9.0

O. Arg. N. 9050.

Mar. 5	. .	8 22 17.13	8.0
9	. .	17.28	

υ^3 Cancri.

Apr. 6	. .	8 23 13.50	

θ Cancri.

Feb. 28	. .	8 23 36.53	

B. A. C. 2855.

Mar. 12	. .	8 23 48.16	

Weisse VIII, 618.

1859.		h. m. s.	Mag.
Feb. 21	. .	8 24 26.55	
22	. .	26.55	9.0

η Cancri.

Jan. 12	. .	8 24 36.45	
18	. .	36.48	
19	. .	36.45	
29	. .	36.45	
Feb. 26	. .	36.46	
Mar. 16	. .	36.46	
26	. .	36.45	

B. A. C. 2883.

Apr. 4	. .	8 27 23.63	
6	. .	23.63	

Weisse VIII, 736.

Feb. 21	. .	8 28 46.11	
Mar. 9	. .	46.15	

Weisse VIII, 738.

Feb. 22	. .	8 28 50.06	8.5

B. A. C. 2892.

Mar. 5	. .	8 28 54.03	

B. A. C. 2898.

Apr. 4	. .	8 29 32.54	
6	. .	32.56	

B. A. C. 2912.

Jan. 29	. .	8 31 36.92	
Feb. 26	. .	36.81	
28	. .	36.95	

Weisse VIII, 828.

Feb. 21	. .	8 32 11.20	7.5
22	. .	11.22	
Mar. 9	. .	11.28	7.5

γ Cancri.

Jan. 18	. .	8 35 10.76	
19	. .	10.72	
Feb. 16	. .	10.66	
Mar. 5	. .	10.76	
12	. .	10.70	
16	. .	10.75	
25	. .	10.73	
26	. .	10.72	

δ Cancri.

Jan. 19	. .	8 36 43.38	

σ^1 Cancri.

Feb. 26	. .	8 36 45.47	
28	. .	45.56	

Weisse VIII, 999.

Feb. 21	. .	8 39 6.07	9.0
Mar. 9	. .	6.12	9.0

ε Hydræ.

1859.		h. m. s.	Mag.
Jan. 12	. .	8 39 21.67	
18	. .	21.62	
29	. .	21.57	
Feb. 16	. .	21.55	
22	. .	21.56	
28	. .	21.59	
Mar. 16	. .	21.52	
25	. .	21.60	
26	. .	21.58	
Apr. 4	. .	21.57	
6	. .	21.55	

Weisse VIII, 1012, (2d *.)

Mar. 12	. .	8 39 32.36	8.5

54 Cancri.

Feb. 21	. .	8 43 13.32	
22	. .	13.31	

52 Cancri.

Apr. 4	. .	8 43 20.40	
6	. .	20.39	

6 Ursæ Majoris.

Mar. 5	. .	8 44 34.74	
26	. .	34.35	

ρ^3 Cancri.

Jan. 18	. .	8 47 16.00	
19	. .	16.05	

59 Cancri.

Feb. 28	. .	8 48 17.70	
Mar. 25	. .	17.73	

(*), −13° 31′.

Feb. 22	. .	8 48 20.68	9.5

Lalande 17647.

Feb. 22	. .	8 49 6.59	8.0
Mar. 9	. .	6.45	8.0

ι Ursæ Majoris.

Feb. 16	. .	8 49 36.15	
26	. .	36.19	
Mar. 16	. .	36.27	
Apr. 4	. .	36.39	
6	. .	36.32	

O. Arg. N. 9460.

Mar. 12	. .	8 49 41.28	8.5

α Cancri.

Jan. 19	. .	8 50 49.62	

Weisse VIII, 1367.

Feb. 21	. .	8 53 14.61	9.0
Mar. 5	. .	14.68	9.0
9	. .	14.68	9.0

68 Cancri.

1859.	h.	m.	s.	Mag.
Mar. 26	8	53	51.95	

κ Ursæ Majoris.

Mar. 16	8	54	3.07	
25			3.10	

(*), +6° 12′.

Feb. 28	8	54	7.63	

B. A. C. 3082.

Apr. 4	8	55	7.06	
6			7.04	

B. A. C. 3091.

Apr. 9	8	56	36.45	7.0

Weisse VIII, 1476.

Feb. 22	8	58	0.58	8.0
Mar. 12			0.55	8.5

B. A. C. 3104.

Apr. 6	8	58	35.22	

B. A. C. 3107.

Apr. 6	8	58	59.31	

κ Cancri.

Feb. 16	9	0	9.59	

Weisse VIII, 1529.

Feb. 21	9	0	34.56	6.5
26			34.63	8.5
Mar. 12			34.59	7.5
26			34.55	7.5

ξ Cancri.

Jan. 18	9	1	18.10	
19			18.28	
Mar. 16			18.27	
31			18.18	

79 Cancri.

Apr. 9	9	2	17.89	

B. A. C. 3127.

Mar. 9	9	3	36.96	7.0

36 Lyncis.

Feb. 21	9	4	37.87	
22			37.92	

B. A. C. 3138.

Feb. 28	9	5	37.11	
Mar. 26			37.10	

π² Cancri.

1859.	h.	m.	s.	Mag.
Feb. 16	9	7	29.86	

Weisse (2) IX, 160.

Mar. 12	9	8	37.16	
Apr. 9			37.30	8.5

83 Cancri.

Jan. 18	9	11	9.75	
19			9.74	
Feb. 16			9.70	
21			9.71	
22			9.65	
26			9.68	
28			9.73	
Mar. 5			9.77	
9			9.73	
10			9.66	
16			9.74	
25			9.67	
31			9.72	
Apr. 4			9.61	

O. Arg. N. 9842.

Mar. 12	9	15	9.73	7.5
Apr. 9			9.72	7.0

B. A. C. 3201.

Feb. 21	9	15	58.37	
22			58.43	

B. A. C. 3206.

Feb. 26	9	16	52.17	
Mar. 23			52.20	
Apr. 4			52.28	

Weisse (2) IX, 377.

Mar. 5	9	18	7.46	9.0
9			7.37	9.0

Weisse (2) IX, 383.

Mar. 5	9	18	19.29	9.5
9			19.27	

α Hydræ.

Feb. 16	9	20	42.51	
21			42.47	
22			42.46	
28			42.48	
Mar. 10			42.44	
12			42.48	
16			42.47	
23			42.45	
25			42.42	
May 4			42.45	
13			42.42	

Weisse (2) IX, 478.

Apr. 9	9	23	3.91	9.0

θ Ursæ Majoris.

Feb. 26	9	23	28.16	
28			28.31	
Apr. 4			28.27	
6			28.35	
May 13			28.20	

ξ Leonis.

1859.	h.	m.	s.	Mag.
Feb. 16	9	24	23.78	
Mar. 31			23.83	5.5

9 Leonis Minoris.

Feb. 21	9	24	53.89	

Weisse IX, 563.

Mar. 5	9	26	6.06	9.0
9			5.99	9.0
10			5.97	9.0

Weisse IX, 579.

Mar. 12	9	26	48.43	9.0
Apr. 9			48.53	9.0

33 Hydræ.

Mar. 23	9	27	33.44	
Apr. 4			33.41	
6			33.42	

Weisse (2) IX, 650.

Mar. 9	9	30	45.37	9.0
31			45.36	9.0

2 Sextantis.

Feb. 28	9	31	8.96	
Mar. 16			8.92	
Mar. 25			9.01	

(*), +21° 49′.

Mar. 9	9	31	9.14	9.5

Weisse (2) IX, 660.

Mar. 10	9	31	17.65	9.0
Apr. 9			17.72	9.0

Weisse (2) IX, 662.

Mar. 9	9	31	19.51	8.5
31			19.57	8.5

ο Leonis.

Mar. 5	9	33	40.51	

B. A. C. 3318.

Mar. 10	9	35	31.77	7.0
25			31.79	

ε Leonis.

Jan. 19	9	37	53.89	
Feb. 16			53.82	
21			53.83	
Mar. 5			53.86	
23			53.85	
31			53.90	
Apr. 4			53.87	
6			53.91	
7			53.86	
12			53.85	
May 4			53.85	
13			53.82	

(*), +17° 44′.

1859.	h.	m.	s.	Mag.
Mar. 31	9	39	19.36	9.0

15 Leonis Minoris.

Feb. 28	9	39	32.54	

Weisse (2) IX, 831.

Mar. 9	9	39	45.27	
10			45.11	

B. A. C. 3345.

Mar. 12	9	40	1.41	6.0
16			1.42	
25			1.40	

Weisse IX, 887.

Apr. 9	9	41	20.18	9.0

20 Leonis.

Apr. 7	9	41	59.65	
12			59.60	

23 Leonis.

Mar. 23	9	43	27.17	
Apr. 6			27.17	

Weisse (2) IX, 96.

Mar. 5	9	45	40.28	9.0
9			40.34	9.0
10			40.26	

Rumker 2981.

Mar. 12	9	45	43.77	9.0

Weisse (2) IX, 966.

Feb. 21	9	45	55.85	7.5

Weisse IX, 998.

Mar. 25	9	46	29.64	8.0

19 Leonis Minoris.

Feb. 28	9	49	5.74	

Weisse (2) IX, 1047.

Mar. 12	9	49	19.27	9.0
31			19.36	

ν Leonis.

Jan. 19	9	50	41.29	
Mar. 16			41.29	
Apr. 12			41.29	

Weisse (2) IX, 1086.

Mar. 10	9	51	24.24	7.5
25			24.48	

π LEONIS.

1859.	h.	m.	s.	Mag.
Feb. 21 . .	9	52	48.69	
28 . .			48.71	
Mar. 5 . .			48.76	
9 . .			48.70	
23 . .			48.84	
31 . .			48.72	
Apr. 7 . .			48.76	

WEISSE IX, 1204.

Mar. 25 . .	9	56	15.68	7.5
Apr. 7 . .			15.81	7.0
9 . .			15.83	7.0

RUMKER 3061.

Mar. 10 . .	9	57	22.62	8.5
12 . .			22.62	

WEISSE (2) IX, 1214.

Mar. 5 . .	9	57	27.58	
9 . .			27.50	

B. A. C. 3439.

Feb. 28 . .	9	57	33.21	

WEISSE IX, 1259.

Mar. 31 . .	9	59	5.62	8.0

η LEONIS.

Jan. 19 . .	9	59	41.73	

α Leonis.

Feb. 16 . .	10	0	54.77	
21 . .			54.78	
Mar. 9 . .			54.71	
12 . .			54.71	
16 . .			54.74	
23 . .			54.76	
25 . .			54.72	
Apr. 6 . .			54.75	
7 . .			54.78	
9 . .			54.78	
12 . .			54.75	
May 4 . .			54.74	
13 . .			54.74	

(*), +21° 1'.

Mar. 10 . .	10	2	15.69	7.5

B. A. C. 3468.

Feb. 28 . .	10	2	54.17	

WEISSE X, 45.

Mar. 5 . .	10	4	5.76	8.0
31 . .			5.75	8.0

WEISSE (2) X, 106.

Mar. 9 . .	10	5	23.03	8.0
25 . .			23.00	8.0

WEISSE X, 76.

Apr. 7 . .	10	5	57.81	9.0

B. A. C. 3489.

1859.	h.	m.	s.	Mag.
Mar. 23 . .	10	6	53.16	

23 LEONIS MINORIS.

Feb. 28 . .	10	8	16.63	
Apr. 12 . .			16.69	

WEISSE X, 173.

Apr. 7 . .	10	10	56.18	

γ^1 LEONIS.

Jan. 19 . .	10	12	14.93	
Feb. 16 . .			14.93	
21 . .			14.87	
Mar. 16 . .			14.90	
23 . .			14.85	
Apr. 9 . .			14.92	
12 . .			14.93	
16 . .			14.93	
May 13 . .			14.97	

(*), — 3° 37'.

Mar. 9 . .	10	13	2.63	8.0

WEISSE X, 224.

Mar. 10 . .	10	13	41.61	8.0
25 . .			41.63	8.0

WEISSE X, 229.

Mar. 10 . .	10	14	4.25	7.5
25 . .			4.22	7.5

26 LEONIS MINORIS.

Feb. 28 . .	10	14	58.35	

WEISSE X, 276.

Apr. 7 . .	10	16	54.45	7.5

30 LEONIS MINORIS.

Mar. 31 . .	10	17	52.67	

WEISSE (2) X, 360.

Mar. 9 . .	10	18	49.43	9.0

WEISSE X, 316.

Mar. 10 . .	10	19	1.02	7.5
Apr. 16 . .			1.08	7.0

B. A. C. 3566.

Mar. 23 . .	10	19	16.43	

26 SEXTANTIS.

Mar. 23 . .	10	19	27.82	

45 LEONIS.

Mar. 16 . .	10	20	14.91	
Apr. 12 . .			15.15	

B. A. C. 3576.

1859.	h.	m.	s.	Mag.
Mar. 23 . .	10	20	25.93	

WEISSE (2) X, 412.

Mar. 25 . .	10	21	9.73	7.0

32 LEONIS MINORIS.

Feb. 28 . .	10	21	55.31	

WEISSE X, 377.

Apr. 7 . .	10	21	55.75	9.0

ρ LEONIS.

Jan. 19 . .	10	25	26.22	
Feb. 16 . .			26.22	
Mar. 9 . .			26.21	
10 . .			26.27	
16 . .			26.18	
31 . .			26.19	
Apr. 4 . .			26.21	
12 . .			26.26	
16 . .			26.23	
May 13 . .			26.26	

34 LEONIS MINORIS.

Feb. 28 . .	10	25	29.90	

LAMONT'S Z., 33.

Mar. 5 . .	10	27	20.17	
25 . .			20.18	8.0

B. A. C. 3627.

Mar. 23 . .	10	28	18.10	
Apr. 4 . .			17.87	

WEISSE X, 538.

Mar. 9 . .	10	30	27.73	9.0

WEISSE X, 548.

Mar. 9 . .	10	30	47.88	9.0

37 LEONIS MINORIS.

Mar. 10 . .	10	30	49.87	

WEISSE (2) X, 660.

Apr. 12 . .	10	32	35.55	7.0

(*), — 11° 28'.

Apr. 16 . .	10	34	1.65	8.5

WEISSE X, 618.

Mar. 10 . .	10	34	54.45	7.5
Apr. 7 . .			54.53	8.0

B. A. C. 3671.

Feb. 28 . .	10	35	47.79	
Mar. 31 . .			47.82	

B. A. C. 3674.

1859.	h.	m.	s.	Mag.
Mar. 23 . .	10	36	9.61	
Apr. 1 . .			9.64	
4 . .			9.40	

WEISSE X, 656.

Apr. 7 . .	10	37	3.39	8.0

37 SEXTANTIS.

Mar. 9 . .	10	38	48.20	
Apr. 12 . .			48.21	

WEISSE X, 702.

Mar. 25 . .	10	39	59.56	8.0

l LEONIS.

Mar. 10 . .	10	41	53.67	6.0
23 . .			53.79	
Apr. 1 . .			53.73	
4 . .			53.65	
12 . .			53.77	
16 . .			53.76	
28 . .			53.71	
May 2 . .			53.73	

44 LEONIS MINORIS.

Feb. 28 . .	10	42	11.51	
Mar. 31 . .			11.56	

WEISSE X, 757.

Apr. 7 . .	10	42	37.05	9.0

WEISSE X, 822.

Mar. 25 . .	10	45	29.00	8.5
May 5 . .			28.96	8.5

WEISSE X, 837.

Mar. 25 . .	10	46	19.39	9.0
Apr. 12 . .			19.46	8.0
May 5 . .			19.48	9.0

b^3 HYDRÆ.

Mar. 23 . .	10	46	38.68	
Apr. 1 . .			38.66	
4 . .			38.42	

47 LEONIS MINORIS.

Feb. 28 . .	10	47	10.45	
Mar. 31 . .			10.57	

WEISSE X, 859.

Mar. 10 . .	10	47	25.31	8.0
Apr. 7 . .			25.36	

WEISSE (2) X, 961.

Mar. 5 . .	10	47	57.76	9.0

B. A. C. 3741.

Apr. 28 . .	10	47	58.54	

1859.	h.	m.	s.	Mag.
Lalande 21026.				
Mar. 10	10	48	57.28	8.0
Apr. 7			57.30	
Weisse X, 914.				
May 2	10	50	52.80	8.0
O. Arg. N. 11325.				
Mar. 25	10	52	57.43	7.0
31			57.59	
c Leonis.				
Apr. 28	10	53	29.36	
May 4			29.32	
B. A. C. 3773.				
Mar. 23	10	53	53.50	
α Ursæ Majoris.				
Feb. 28	10	55	3.18	
Mar. 5			3.52	
9			3.55	
10			3.42	
Apr. 1			3.56	
4			3.47	
12			3.30	
16			3.07	
Weisse X, 987.				
Apr. 7	10	55	14.83	8.0
May 5			14.78	8.0
B. A. C. 3779.				
Mar. 23	10	56	4.73	
χ Leonis.				
Mar. 25	10	57	47.54	
31			47.60	
Apr. 28			47.58	
May 2			47.61	
4			47.62	
5			47.61	
(*), +36° 12′.				
Apr. 7	11	0	52.43	
B. A. C. 3811.				
May 2	11	1	36.46	
4			36.51	
7			36.49	
ψ Ursæ Majoris.				
Feb. 28	11	1	46.70	
Weisse (2) XI, 6.				
Mar. 9	11	2	18.23	
10			17.97	

1859.	h.	m.	s.	Mag.
Rumker 3457.				
Mar. 31	11	3	14.28	7.5
Apr. 16			14.31	7.0
δ Leonis.				
Feb. 28	11	6	39.42	
Mar. 5			39.41	
9			39.48	
10			39.48	
23			39.42	
25			39.40	
Apr. 28			39.49	
May 2			39.44	
4			39.51	
5			39.50	
7			39.49	
B. A. C. 3837.				
Apr. 7	11	6	45.21	
12			45.20	
ξ Ursæ Majoris, (1st *.)				
Mar. 31	11	10	42.17	
Apr. 12			42.28	
16			42.32	
ξ Ursæ Majoris, (2d *.)				
Apr. 12	11	10	42.60	
16			42.60	
δ Crateris.				
Feb. 28	11	12	20.59	
Mar. 5			20.58	
9			20.60	
10			20.60	
23			20.65	
25			20.60	
Apr. 1			20.58	
7			20.55	
28			20.60	
May 2			20.57	
4			20.59	
5			20.57	
7			20.59	
Weisse XI, 234.				
Mar. 31	11	14	25.60	8.0
Apr. 12			25.62	7.5
80 Leonis.				
Mar. 10	11	18	38.26	6.5
25			38.26	
Weisse XI, 318.				
May 4	11	18	51.24	7.0
Weisse (2) XI, 340.				
Apr. 16	11	18	52.48	8.0
May 2			52.44	8.0
Weisse (2) XI, 344.				
Mar. 31	11	19	6.38	8.0
Apr. 12			6.48	
28			6.50	8.0
May 2			6.46	8.0

1859.	h.	m.	s.	Mag.
Rumker 3575.				
May 5	11	19	11.21	9.5
Weisse XI, 381.				
Mar. 25	11	22	25.88	7.0
31			25.88	7.0
May 7			25.97	7.0
86 Leonis.				
Apr. 28	11	23	10.45	
B. A. C. 3917.				
Apr. 1	11	24	11.38	
Rumker 3615.				
Mar. 10	11	24	12.99	6.5
Apr. 7			13.04	7.0
12			13.05	6.0
Weisse XI, 412.				
Apr. 16	11	24	26.51	8.0
May 4			26.50	8.5
Rumker 3636.				
May 7	11	26	51.06	8.0
Weisse (2) XI, 490.				
May 2	11	26	51.94	
Weisse XI, 468.				
Apr. 28	11	27	36.95	8.0
Weisse (2) XI, 511.				
Mar. 25	11	27	45.40	9.0
May 5			45.48	
Leonis.				
Mar. 10	11	29	46.86	
Apr. 1			46.81	
Weisse (2) XI, 592.				
Mar. 31	11	31	10.12	8.5
Weisse (2) XI, 600.				
Mar. 25	11	31	24.67	8.0
May 7			24.89	
(*), +20° 53′.				
May 2	11	32	56.96	10.0
Rumker 3697.				
May 4	11	34	48.76	8.0
Rumker 3706.				
Mar. 25	11	35	26.76	8.0
Apr. 7			26.84	

1859.	h.	m.	s.	Mag.
Weisse XI, 618.				
Mar. 5	11	35	39.82	9.0
7			39.91	9.0
B. A. C. 3973.				
Apr. 30	11	36	11.97	
Rumker 3715.				
Apr. 12	11	36	33.81	
16			33.80	
28			33.88	7.5
Weisse (2) XI, 746.				
May 2	11	38	5.17	8.0
4			5.18	8.0
Weisse (2) XI, 786.				
Mar. 25	11	40	13.19	8.0
Apr. 7			13.26	7.5
Weisse (2) XI, 816.				
Apr. 28	11	41	48.32	
β Leonis.				
Mar. 31	11	41	54.92	
Apr. 1			54.98	
6			54.85	
16			54.93	
30			54.90	
May 3			54.97	
Weisse (2) XI, 822.				
May 4	11	42	0.66	
5			0.70	7.0
Weisse (2) XI, 838.				
May 7	11	42	51.90	9.0
Groombridge 1830.				
May 2	11	44	53.57	6.5
Weisse (2) XI, 889.				
Mar. 25	11	45	58.37	8.5
Apr. 7			58.47	7.5
γ Ursæ Majoris.				
Apr. 6	11	46	27.02	
B. A. C. 4020.				
Apr. 1	11	46	42.52	
65 Ursæ Majoris.				
May 3	11	47	47.97	7.5
4			47.99	7.0

B. A. C. 4028.

1859.	h. m. s.	Mag.
May 5	11 48 53.61	7.0
7	53.66	7.0

WEISSE (2) XI, 1011.

Mar. 25	11 51 54.21	8.5
31	54.23	8.5

π VIRGINIS.

Apr. 7	11 53 41.85	
28	41.94	
30	41.87	

WEISSE XI, 921.

May 5	11 53 50.98	8.5

1 COMÆ.

Apr. 12	11 54 33.80	
May 3	33.82	

WEISSE XI, 947.

May 4	11 55 35.50	9.5
5	35.51	9.0
7	35.39	9.0

WEISSE (2) XI, 1110.

Mar. 25	11 56 51.15	7.5
31	51.16	7.5

B. A. C. 4070.

May 2	11 57 37.32	

o VIRGINIS.

Apr. 28	11 58 4.63	
30	4.65	
June 7	4.62	

WEISSE XI, 1023.

May 4	12 0 32.82	9.0
5	32.73	9.0
7	32.76	

11 VIRGINIS.

Mar. 25	12 2 55.18	
31	55.24	6.0

ε CORVI.

Apr. 12	12 2 55.68	
28	55.74	
29	55.58	
May 3	55.68	
6	55.66	
12	55.75	
June 7	55.65	

B. A. C. 4104.

Apr. 30	12 4 30.49	

WEISSE XII, 53.

1859.	h. m. s.	Mag.
May 4	12 4 48.84	9.0
5	48.83	9.0

WEISSE XII, 63.

May 7	12 5 8.44	8.0

WEISSE XII, 119.

Mar. 25	12 8 41.78	
31	41.73	9.0

WEISSE XII, 130.

Apr. 16	12 9 18.64	8.5
May 2	18.70	8.0
4	18.62	8.5

WEISSE XII, 160.

May 5	12 11 0.28	9.0

13 VIRGINIS.

Apr. 28	12 11 29.72	
May 3	29.72	
13	29.56	
24	29.68	

η VIRGINIS.

Mar. 25	12 12 44.61	
31	44.64	
Apr. 12	44.65	
16	44.54	
29	44.52	
30	44.63	
May 3	44.62	
6	44.62	
13	44.60	
24	44.62	
June 7	44.63	
9	44.54	

RUMKER 3911.

May 7	12 12 47.31	7.5

WEISSE XII, 221.

May 4	12 14 21.20	9.0
5	21.22	9.5

17 VIRGINIS.

Apr. 28	12 15 24.97	6.5
May 2	24.93	7.0

4 CANUM VENATICORUM.

May 12	12 16 53.41	

WEISSE (2) XII, 356.

May 3	12 17 28.02	8.5
7	27.95	

RUMKER 3966.

Mar. 25	12 18 46.15	7.5
31	46.13	8.0

(*), −6° 48′.

1859.	h. m. s.	Mag.
May 24	12 20 29.08	9.0

WEISSE (2) XII, 424.

Apr. 12	12 20 33.70	8.0
16	33.61	8.5
May 2	33.72	8.5
4	33.64	8.5

WEISSE XII, 335.

Apr. 28	12 20 47.25	8.0
May 24	47.14	8.0

WEISSE (2) XII, 446.

May 3	12 21 46.56	8.5
5	46.55	8.5
7	46.57	8.5

WEISSE (2) XII, 478.

Mar. 25	12 22 55.70	8.0
31	55.74	

7 CANUM VENATICORUM.

Apr. 30	12 23 24.88	
May 12	24.98	
June 7	24.79	

WEISSE XII, 409.

May 5	12 24 43.67	8.0

WEISSE (2) XII, 526.

May 2	12 25 8.67	8.5
4	8.61	8.5

WEISSE XII, 416.

May 5	12 25 14.52	9.0
24	14.39	9.0

WEISSE XII, 433.

May 3	12 26 28.79	8.5

q VIRGINIS.

Apr. 16	12 26 33.30	

β CORVI.

Apr. 12	12 27 2.19	
29	2.26	
May 6	2.18	
7	2.25	
13	2.23	
June 7	2.27	
11	2.22	

B. A. C. 4241.

Apr. 30	12 28 4.99	7.5

WEISSE (2) XII, 599.

Mar. 25	12 28 8.14	6.5
31	8.16	6.0

f VIRGINIS.

1859.	h. m. s.	Mag.
May 12	12 29 34.71	
13	34.74	

WEISSE XII, 515.

May 2	12 31 23.03	8.5
3	23.00	8.5

WEISSE XII, 519.

May 4	12 31 32.21	7.5
5	32.22	8.0

WEISSE XII, 525.

May 5	12 31 57.61	9.0
24	57.65	

WEISSE XII, 549.

May 7	12 33 26.71	7.5

γ^1 VIRGINIS.

Mar. 25	12 34 33.99	
31	34.02	
Apr. 12	34.00	
16	33.91	
29	34.11	
30	33.97	
May 6	33.98	
26	33.96	
June 7	34.01	
9	33.94	
11	34.02	

γ^2 VIRGINIS.

June 11	12 34 34.07	

28 VIRGINIS.

May 12	12 34 43.35	
13	43.32	

WEISSE XII, 580.

May 2	12 35 0.53	8.5
3	0.54	8.5

WEISSE XII, 638.

May 4	12 38 9.94	9.0
5	9.90	9.0

10 CANUM VENATICORUM.

Apr. 30	12 38 21.61	
June 7	21.58	

WEISSE XII, 661.

Mar. 25	12 39 22.10	8.5
31	22.03	8.0

WEISSE XII, 665.

May 24	12 39 44.60	9.0

WEISSE XII, 668.

1859.	h. m. s.	Mag.
May 3	12 39 50.68	8.0
7	50.71	8.0

WEISSE XII, 706.

May 2	12 41 48.80	8.5
5	48.85	9.0

29 COMÆ.

Apr. 16	12 41 53.10	
May 26	53.18	

WEISSE (2) XII, 877.

May 4	12 43 17.34	8.0

WEISSE XII, 764.

May 2	12 45 17.62	9.0
24	17.47	9.0

38 VIRGINIS.

May 13	12 46 1.07	
23	1.18	

ψ VIRGINIS.

Apr. 16	12 47 4.40	

WEISSE XII, 818.

May 4	12 48 28.71	7.0
26	28.75	7.0

δ VIRGINIS.

May 13	12 48 33.10	

LALANDE 24193.

May 4	12 52 43.57	8.5
26	43.65	8.0

37 COMÆ.

June 9	12 53 34.18	

WEISSE XII, 929.

Apr. 16	12 54 25.65	8.0

g VIRGINIS.

Apr. 16	13 0 33.89	

θ VIRGINIS.

Apr. 30	13 2 42.23	
May 2	42.21	
3	42.21	
4	42.16	
5	42.19	
7	42.20	
24	42.18	
June 7	42.20	
9	42.21	
11	42.17	

58 VIRGINIS.

1859.	h. m. s.	Mag.
May 13	13 10 7.20	
June 9	7.18	

WEISSE XIII, 208.

May 4	13 13 6.79	9.0

α VIRGINIS.

Mar. 25	13 17 49.24	
Apr. 16	49.24	
30	49.26	
May 2	49.26	
3	49.25	
4	49.23	
5	49.28	
6	49.16	
7	49.21	
13	49.21	
24	49.25	
26	49.21	
June 9	49.27	
11	49.26	

69 VIRGINIS.

Apr. 16	13 19 59.37	

WEISSE XIII, 370.

May 4	13 23 21.82	8.0

ζ VIRGINIS.

Apr. 16	13 27 33.79	
May 2	33.68	
3	33.68	
4	33.62	
5	33.66	
7	33.60	
13	33.71	
23	33.63	
24	33.69	
June 9	33.69	
11	33.74	

WEISSE XIII, 512.

June 7	13 30 32.85	

WEISSE XIII, 563.

May 4	13 33 8.52	8.5
5	8.46	8.5
7	8.56	8.5

m VIRGINIS.

Apr. 16	13 34 16.02	
May 2	16.01	
13	15.97	
23	15.96	
June 9	16.02	
11	15.97	

(*), + 80° 2′.

May 24	13 36 40.88	

85 VIRGINIS.

June 9	13 38 3.15	

WEISSE XIII, 654.

1859.	h. m. s.	Mag.
Apr. 30	13 38 22.24	8.0
May 4	22.29	8.0

86 VIRGINIS.

Apr. 16	13 38 29.05	
May 2	28.91	
3	28.92	
13	28.87	
June 7	28.88	
11	28.84	

WEISSE (2) XIII, 866.

May 7	13 41 26.07	7.0

(*), + 78° 22′.

May 5	13 42 0.18	9.0

η URSÆ MAJORIS.

May 6	13 42 1.35	
23	1.30	

89 VIRGINIS.

Apr. 16	13 42 16.22	
May 13	16.13	
June 9	16.17	
11	16.05	

WEISSE (2) XIII, 900.

Apr. 30	13 42 34.36	7.5
June 7	34.31	

υ BOOTIS.

June 1	13 42 43.55	

WEISSE XIII, 737.

May 2	13 43 15.98	8.5
3	16.18	8.5

(*), + 77° 52′.

May 24	13 43 36.80	

WEISSE (2) XIII, 997.

May 4	13 46 20.85	
7	21.00	8.0

WEISSE XIII, 808.

May 2	13 47 42.39	8.0
3	42.38	8.5

η BOOTIS.

Apr. 16	13 48 1.10	
30	1.01	
May 6	1.11	
23	1.08	
June 1	1.05	
4	1.10	
9	1.14	
11	1.07	

WEISSE XIII, 813.

1859.	h. m. s.	Mag.
May 5	13 48 2.85	8.0
June 7	2.88	8.0

WEISSE XIII, 866.

May 7	13 50 57.35	7.5
24	57.47	

WEISSE XIII, 893.

May 2	13 52 34.74	9.0
3	34.88	9.0
5	34.69	9.0

RUMKER 4551.

June 11	13 54 30.81	7.5

τ VIRGINIS.

May 13	13 54 31.37	
23	31.39	
June 9	31.41	

LALANDE 25762.

May 24	13 55 0.71	9.0
June 1	0.63	9.0

WEISSE XIII, 974.

May 5	13 56 31.99	8.5

WEISSE XIII, 979.

May 3	13 56 42.63	8.0
4	42.62	8.0
7	42.55	8.0

94 VIRGINIS.

May 23	13 58 53.09	
June 7	53.08	
9	53.18	6.5
11	53.14	

WEISSE XIII, 1037.

May 2	13 59 11.27	9.0
June 4	11.32	8.5

WEISSE XIII, 1071.

Apr. 30	14 0 59.14	7.5
May 3	59.13	7.0
6	59.16	

(*), + 34° 4′.

May 5	14 1 34.48	9.0
24	34.56	

WEISSE (2) XIV, 40.

May 4	14 3 13.04	8.5
June 1	13.07	9.0

d Bootis.

1859.	h.	m.	s.	Mag.
June 7	14	4	0.77	
9			0.87	

O. Arg. S. 13471.

June 4	14	5	20.19	8.5

κ Virginis.

May 23	14	5	25.82	

Weisse XIV, 83.

May 5	14	6	3.63	8.5
June 11			3.59	9.0

Weisse XIV, 88.

May 2	14	6	12.84	9.0
3			12.83	9.0
5			12.63	

Lalande 26054.

May 7	14	6	30.64	8.0
24			30.65	8.0

Weisse XIV, 130.

May 4	14	8	32.26	8.5

α Bootis.

May 6	14	9	16.66	
13			16.58	
23			16.64	
26			16.57	
June 1			16.58	
4			16.57	
7			16.59	

B. A. C. 4731.

June 9	14	9	29.27	
11			29.16	

(*), +41° 3′.

May 2	14	10	45.96	8.0
3			46.04	

Lalande 26172.

Apr. 30	14	11	41.68	7.5
May 7			41.67	7.5

Weisse XIV, 221.

May 5	14	12	53.75	9.0

Weisse XIV, 257.

May 5	14	14	57.93	9.0

(*), −19° 3′.

May 6	14	16	11.57	

Lalande 26293.

1859.	h.	m.	s.	Mag.
May 2	14	16	38.46	8.0
3			38.44	
4			38.63	8.0

Rumker 4697.

Apr. 30	14	18	48.47	7.0
May 7			48.39	7.0

(*), +47° 25′.

May 24	14	18	56.37	8.0
June 1			56.20	

B. A. C. 4783.

June 9	14	19	46.23	

Weisse XIV, 362.

June 4	14	20	7.19	8.0
7			7.19	8.0

Weisse XIV, 371.

June 4	14	20	46.24	8.0
7			46.27	8.0

(*), +49° 18′.

May 5	14	22	38.36	10.0

B. A. C. 4798.

May 2	14	22	42.38	
3			42.36	

B. A. C. 4805.

June 9	14	24	5.75	

Rumker 4730.

May 4	14	24	15.40	8.5
24			15.34	9.0

Weisse XIV, 445.

June 4	14	24	49.95	8.0
7			50.00	8.0

ρ Bootis.

June 1	14	25	47.80	

26 Bootis.

June 11	14	26	10.72	

B. A. C. 4814.

Apr. 30	14	26	58.35	
May 3			58.28	7.0
6			58.20	
7			58.19	7.0
June 9			58.23	

(*), +1° 40′.

1859.	h.	m.	s.	Mag.
May 24	14	28	28.15	9.5

Weisse XIV, 519.

June 7	14	28	53.37	

Rumker 4761.

May 5	14	29	26.12	9.0
24			26.07	9.0

Weisse XIV, 540.

May 4	14	29	50.85	8.0
June 4			50.82	7.5

B. A. C. 4841.

June 9	14	32	57.01	
July 9			56.78	

Weisse XIV, 606.

May 4	14	33	36.47	8.0

Weisse XIV, 608.

Apr. 30	14	33	45.56	8.0

μ Virginis.

May 2	14	35	41.13	
3			41.10	

34 Bootis.

June 7	14	37	16.15	6.0

5 Libræ.

June 11	14	38	14.80	

ε Bootis.

Apr. 30	14	38	52.36	
May 2			52.37	
3			52.36	
4			52.34	
5			52.34	
7			52.34	
24			52.36	
June 1			52.33	

B. A. C. 4888.

May 6	14	41	13.65	

μ Libræ.

June 11	14	41	48.85	

α^1 Libræ.

May 24	14	42	56.81	
June 7			56.85	

α^2 Libræ.

1859.	h.	m.	s.	Mag.
Apr. 30	14	43	8.27	
May 2			8.25	
3			8.30	
4			8.30	
5			8.26	
7			8.32	
24			8.28	
June 1			8.26	
4			8.32	
7			8.26	
9			8.25	
July 9			8.26	

ξ^2 Libræ.

June 11	14	49	10.46	

Groombridge 2169.

June 23	14	50	51.28	

β Ursæ Minoris.

Apr. 30	14	51	9.27	
May 2			9.16	
3			9.24	
4			9.29	
7			9.28	
24			9.26	
June 4			(9.42)	
7			9.22	
9			(9.37)	

2 Serpentis.

May 6	14	54	38.83	

Weisse XIV, 1016.

May 5	14	54	42.41	8.5
June 25			42.38	

20 Libræ.

June 11	14	55	52.90	
July 9			52.91	

B. A. C. 4965.

June 4	14	58	9.76	7.0

ψ Bootis.

May 3	14	58	26.81	
4			26.79	
June 1			26.68	
23			26.55	
25			26.70	

Weisse XIV, 1110.

May 24	14	59	17.57	8.5

Weisse XIV, 1118.

May 24	14	59	45.46	

Weisse XIV, 1121.

May 24	14	59	54.31	

Weisse XIV, 1142.

June 9	15	0	50.90	8.0

Weisse XV, 2.

1859.	h. m. s.	Mag.
May 5	15 1 55.49	8.0
June 4	55.41	8.5
7	55.43	8.5

ι^1 Libræ.

June 11	15 4 14.68	
18	14.78	
July 9	14.65	

Weisse XV, 79.

May 7	15 6 3.24	
June 23	3.25	

Weisse XV, 91.

May 24	15 6 34.10	7.5
June 9	34.17	7.0

β Libræ.

May 4	15 9 28.48	
5	28.57	
7	28.59	
June 1	28.54	
4	28.48	
7	28.56	
11	28.52	
18	28.59	
23	28.57	
25	28.63	
July 5	28.60	
29	28.57	
Aug. 6	28.59	

Weisse XV, 221.

May 24	15 13 19.75	9.0

o Coronæ Borealis.

June 25	15 14 21.97	
July 5	21.99	

Weisse XV, 265.

May 7	15 15 43.49	8.0

50 Bootis.

June 9	15 16 12.37	
11	12.33	

Weisse XV, 281.

May 7	15 16 18.74	8.0

(*), −9° 48′.

June 4	15 16 36.71	6.5

Lalande 28090.

June 18	15 17 59.60	

μ Bootis.

June 23	15 19 11.82	
25	11.90	

ζ^1 Libræ.

1859.	h. m. s.	Mag.
June 11	15 20 21.94	
July 9	21.89	

B. A. C. 5092.

June 30	15 20 35.76	
July 5	35.57	

Weisse XV, 400.

May 24	15 22 8.50	8.0
June 4	8.41	8.0

B. A. C. 5109.

June 18	15 24 34.50	

ν^1 Bootis.

June 9	15 25 54.17	

ν^2 Bootis.

June 11	15 26 46.51	
23	46.14	

39 Libræ.

July 9	15 28 31.92	

α Coronæ Borealis.

May 7	15 28 45.62	
June 18	45.59	
25	45.56	
27	45.58	
30	45.60	
July 8	45.53	
Aug. 6	45.54	
Sept. 2	45.59	

τ^3 Serpentis.

May 24	15 29 12.02	
July 5	12.03	

42 Libræ.

July 9	15 32 0.67	

ϕ Bootis.

May 24	15 32 48.03	
June 9	48.08	
23	47.77	

Weisse XV, 637.

June 4	15 33 48.54	9.0
25	48.34	9.0

Weisse XV, 644.

June 18	15 34 9.81	9.0
25	10.08	9.0

α Serpentis.

1859.	h. m. s.	Mag.
May 7	15 37 22.39	
24	22.39	
June 23	22.37	
27	22.40	
July 5	22.40	
8	22.45	
9	22.43	
12	22.41	
29	22.35	
Aug. 6	22.40	
Sept. 2	22.37	
3	22.34	

Weisse XV, 744.

June 9	15 39 14.67	8.0
18	14.66	8.0

υ Serpentis.

June 11	15 40 47.28	
23	47.17	

κ Serpentis.

June 25	15 42 26.26	
30	26.35	

Weisse XV, 828.

May 24	15 43 17.96	8.0

Lalande 28838.

June 9	15 43 34.82	7.5
18	34.79	

λ Libræ.

June 11	15 45 12.62	
July 9	12.66	
29	12.63	

B. A. C. 5254.

June 4	15 45 36.23	6.0

(*), −16° 50′.

May 24	15 47 29.12	9.0

χ Herculis.

July 9	15 47 50.14	
12	50.10	

B. A. C. 5273.

June 30	15 48 24.38	
July 5	24.36	

λ Coronæ Borealis.

June 23	15 50 41.81	
25	41.79	

Lalande 29043.

June 9	15 50 59.47	8.0

Lalande 29044.

1859.	h. m. s.	Mag.
June 9	15 51 0.32	

Weisse XV, 976.

May 24	15 51 54.89	

δ Scorpii.

June 11	15 52 3.56	
July 9	3.64	
29	3.59	
Aug. 6	3.62	
Sept. 2	3.59	
3	3.56	

r Herculis.

June 25	15 54 56.82	
30	56.80	

β Scorpii.

June 9	15 57 18.02	
11	18.00	
18	18.04	
27	18.03	
July 8	18.00	
9	18.08	
12	18.04	
29	18.04	
Aug. 6	18.04	
Sept. 2	18.08	

B. A. C. 5341,

June 30	15 58 31.44	
July 5	31.31	

B. A. C. 5345.

June 4	15 59 28.06	6.0

κ Herculis.

July 12	16 1 45.36	

B. A. C. 5368.

July 12	16 1 45.73	

Weisse XVI, 11.

May 24	16 2 16.56	9.0
June 18	16.64	

q Herculis.

July 29	16 2 27.77	

Weisse XVI, 19.

June 9	16 2 31.14	
11	31.06	

1859.	h.	m.	s.	Mag.
δ Ophiuchi.				
May 24	16	7	0.61	
June 4			0.73	
9			0.75	
11			0.70	
18			0.67	
23			0.64	
25			0.64	
27			0.64	
30			0.63	
July 5			0.58	
8			0.71	
9			0.68	
12			0.64	
29			0.65	
Aug. 6			0.63	
Sept. 3			0.67	
16 Herculis.				
June 27	16	9	16.38	
30			16.40	
Lalande 29696.				
June 4	16	11	28.24	7.0
18			28.23	7.0
σ Scorpii.				
July 9	16	12	41.06	
Aug. 6			41.01	
B. A. C. 5452.				
July 12	16	13	59.89	
29			59.89	
B. A. C. 5460.				
June 23	16	15	7.25	
27			7.37	
ψ Ophiuchi.				
June 4	16	15	54.91	5.0
ξ Coronæ Borealis.				
June 30	16	16	38.41	
July 5			38.44	
ν^1 Coronæ Borealis.				
July 9	16	17	5.18	
12			5.17	
ν^2 Coronæ Borealis.				
July 19	16	17	12.81	
α Scorpii.				
June 4	16	20	49.66	
18			49.65	
23			49.66	
25			49.68	
27			49.65	
30			49.70	
July 8			49.65	
9			49.70	
12			49.68	
Aug. 6			49.73	
Sept. 2			49.65	

1859.	h.	m.	s.	Mag.
η Draconis.				
July 5	16	22	6.03	
29			6.00	
B. A. C. 5527.				
June 23	16	24	28.87	
25			28.67	
27			28.80	
h Herculis.				
July 8	16	26	3.27	
12			3.22	
Groombridge 2356.				
June 18	16	26	52.50	
τ Scorpii.				
July 29	16	27	10.18	
Aug. 6			10.30	
Sept. 3			10.26	
32 Herculis.				
June 27	16	28	1.76	
30			1.76	
B. A. C. 5546.				
June 23	16	28	48.23	
25			48.32	
B. A. C. 5549.				
July 5	16	29	15.50	
9			15.52	
B. A. C. 5580.				
June 18	16	33	40.11	
B. A. C. 5588.				
July 8	16	34	38.83	
12			38.82	
29			38.87	
42 Herculis.				
Aug. 6	16	34	56.93	
B. A. C. 5597.				
June 23	16	35	12.22	
25			12.15	
27			12.36	
ζ Herculis.				
June 4	16	36	0.51	
27			0.48	
July 9			0.45	
11			0.50	
19			0.50	
Sept. 3			0.52	
B. A. C. 5615.				
June 30	16	38	4.76	
July 5			4.61	

1859.	h.	m.	s.	Mag.
B. A. C. 5619.				
June 23	16	38	41.62	
25			41.62	
Lalande 30479.				
June 18	16	38	42.31	
B. A. C. 5625.				
July 8	16	39	50.43	
29			50.40	
Aug. 6			50.44	
20 Ophiuchi.				
July 9	16	42	5.49	
11			5.52	
48 Herculis.				
June 23	16	43	48.32	
25			48.39	
27			48.54	
B. A. C. 5663.				
June 18	16	45	9.40	
51 Herculis.				
June 30	16	45	57.13	
July 5			56.99	
B. A. C. 5686.				
July 8	16	47	0.34	
9			0.42	
12			0.36	
29			0.35	
Aug. 6			0.34	
ι Ophiuchi.				
July 14	16	47	23.04	
19			23.07	
53 Herculis.				
June 23	16	47	39.36	
25			39.39	
27			39.51	
Lalande 30788.				
June 18	16	49	20.59	8.5
Weisse (2) XVI, 1533.				
July 29	16	49	49.09	7.0
Aug. 6			49.15	7.0
κ Ophiuchi.				
June 27	16	51	2.57	
30			2.54	
July 5			2.43	
9			2.48	
11			2.65	
12			2.53	
14			2.52	
19			2.56	
23			2.61	
28			2.52	

1859.	h.	m.	s.	Mag.
B. A. C. 5716.				
July 8	16	52	17.87	
29			17.83	7.0
Aug. 6			17.77	
B. A. C. 5732.				
June 30	16	55	11.11	
July 5			11.10	
28			11.23	
B. A. C. 5767.				
July 8	16	59	21.57	
9			21.63	
29			21.59	
B. A. C. 5771.				
Aug. 6	17	0	7.26	
ε Ursæ Minoris.				
June 18	17	0	27.02	
25			26.16	
July 14			27.03	
19			27.36	
B. A. C. 5775.				
June 30	17	0	49.14	
July 5			49.09	
η Ophiuchi.				
Aug. 8	17	2	21.03	
B. A. C. 5788.				
July 23	17	3	4.16	
28			4.25	
29			4.19	
B. A. C. 5790.				
Aug. 3	17	3	12.80	
6			12.67	
B. A. C. 5795.				
July 5	17	4	51.09	
9			51.13	
A^1 Ophiuchi.				
July 11	17	6	44.50	
Aug. 8			44.41	
α^1 Herculis.				
June 27	17	8	15.84	
30			15.83	
July 8			15.79	
14			15.86	
19			15.86	
23			15.75	
27			15.73	
28			15.82	
29			15.80	
α^2 Herculis.				
July 29	17	8	16.15	

δ Herculis.

1859.	h. m. s.	Mag.
July 9	17 9 16.85	
Aug. 3	16.85	

π Herculis.

Aug. 6	17 10 10.04	

B. A. C. 5841.

July 5	17 12 1.90	
28	2.04	

Weisse XVII, 202.

June 18	17 12 30.03	7.0

ν Serpentis.

July 19	17 12 57.27	
23	57.27	

θ Ophiuchi.

July 8	17 13 24.81	
9	24.81	
11	24.80	
12	24.76	
14	24.76	
27	24.86	
29	24.84	
Aug. 2	24.78	
3	24.74	
6	24.81	
8	24.78	

70 Herculis.

June 25	17 15 8.16	
30	8.19	

Weisse (2) XVII, 487.

July 23	17 17 16.13	

73 Herculis.

June 25	17 18 15.03	
30	15.08	

d Ophiuchi.

July 11	17 18 25.01	
12	24.96	
Aug. 8	24.94	

Weisse (2) XVII, 523.

July 14	17 18 43.62	
23	43.55	

ρ Herculis, (1st *.)

July 5	17 18 50.86	
9	50.87	

ρ Herculis, (2d *.)

July 5	17 18 51.01	
9	51.12	

(*), +37° 3′.

July 19	17 19 19.81	
27	19.82	

B. A. C. 5894.

1859.	h. m. s.	Mag.
July 28	17 19 33.52	
29	33.53	

B. A. C. 5895.

July 19	17 19 36.22	
27	36.10	

B. A. C. 5892.

June 18	17 19 38.29	

Weisse (2) XVII, 552.

July 14	17 19 40.56	
23	40.45	

Weisse (2) XVII, 596.

July 14	17 20 46.00	

B. A. C. 5900.

June 25	17 20 46.53	
30	46.58	

υ Scorpii.

Aug. 1	17 21 14.71	
2	14.79	

c^2 Ophiuchi.

July 11	17 22 52.53	
Aug. 8	52.43	

Lacaille 7325.

Aug. 3	17 23 15.09	6.0
6	15.02	

B. A. C. 5927.

June 25	17 26 37.22	
30	37.38	

B. A. C. 5929.

July 5	17 26 59.52	
28	59.59	

β Draconis.

July 9	17 27 16.26	
11	16.12	

α Ophiuchi.

June 18	17 28 26.14	
25	26.12	
30	26.20	
July 5	26.14	
19	26.16	
29	26.13	
Aug. 1	26.14	
8	26.14	
9	26.13	

B. A. C. 5943.

1859.	h. m. s.	Mag.
July 14	17 28 53.69	
27	53.76	

Lalande 32045.

Aug. 3	17 29 18.08	8.5

B. A C. 5952.

July 27	17 30 10.71	7.0

B. A. C. 5956.

July 23	17 30 29.50	
Aug. 2	29.43	

B. A. C. 5962.

July 5	17 31 16.95	
9	17.05	

o Serpentis.

June 18	17 33 32.83	
July 11	32.84	
Aug. 8	32.77	
9	32.82	

O. Arg. S. 17098.

Aug. 13	17 34 8.06	9.0

B. A. C. 5986.

June 25	17 34 40.14	
30	40.18	

O. Arg. S. 17114.

July 29	17 34 52.94	9.0
Aug. 1	52.93	9.0

ι Herculis.

Aug. 6	17 35 30.77	

84 Herculis.

July 5	17 37 36.73	
14	36.83	

3 Sagittarii.

Aug. 9	17 38 44.93	

Lalande 32418.

June 18	17 39 5.84	
July 27	5.74	

Weisse XVII, 787.

July 29	17 40 9.76	8.0
Aug. 1	9.74	8.5

B. A. C. 6018.

July 23	17 40 19.61	
28	19.70	

γ Ophiuchi.

1859.	h. m. s.	Mag.
July 14	17 40 52.34	
19	52.38	

μ Herculis.

July 11	17 40 58.78	
12	58.77	
Aug. 2	58.83	
3	58.81	
6	58.72	

(*), −31° 20′.

June 25	17 42 30.94	7.0

87 Herculis.

July 5	17 43 8.44	
9	8.65	

B. A. C. 6032.

June 25	17 43 13.22	
30	13.14	

Weisse XVII, 867.

July 29	17 44 3.77	8.5
Aug. 1	3.79	8.5

B. A. C. 6049.

June 18	17 45 16.88	
July 27	16.79	

B. A. C. 6062.

July 12	17 47 31.46	
14	31.42	
Aug. 8	31.45	

B. A. C. 6059.

July 5	17 47 39.86	7.0
9	39.99	

B. A. C. 6063.

June 30	17 47 51.41	

B. A. C. 6065.

Aug. 9	17 48 15.89	

Weisse XVII, 966.

July 29	17 48 18.38	9.0
Aug. 1	18.37	9.0

(*), +15° 17′.

Aug. 2	17 48 21.03	9.0
3	21.00	9.0

f Herculis.

July 19	17 48 44.62	
23	44.70	

Madras 1209.

1859.	h. m. s.	Mag.
Aug. 6	17 48 45.24	8.0

89 Herculis.

July 27	17 49 46.19	
28	46.26	

4 Sagittarii.

June 17	17 51 14.65	
18	14.65	
July 12	14.70	
Aug. 8	14.60	
9	14.65	
Sept. 6	14.64	

ν Herculis.

June 25	17 53 8.72	
30	8.61	

γ Draconis.

July 5	17 53 21.35	
23	21.42	
Aug. 10	21.33	

93 Herculis.

July 9	17 53 49.44	
19	49.44	

Lalande 32986.

July 29	17 54 5.76	8.5
Aug. 2	5.75	8.5

9 Sagittarii.

Aug. 9	17 55 17.33	5.5
Sept. 6	17.38	

95 Herculis, (1st *.)

July 27	17 55 33.57	
28	33.63	
Aug. 6	33.58	

95 Herculis, (2d *.)

July 27	17 55 33.98	
28	34.08	
Aug. 6	34.05	

Lalande 33089.

Aug. 3	17 56 29.95	8.0

B. A. C. 6113.

June 25	17 56 44.98	
30	44.86	

γ^2 Sagittarii.

Aug. 8	17 56 48.81	

O. Arg. S. 17610.

July 9	17 57 53.48	

Lalande 33178.

1859.	h. m. s.	Mag.
July 29	17 59 6.64	9.0
Aug. 2	6.58	9.0

B. A. C. 6130.

June 25	17 59 56.08	7.0
30	56.00	
Aug. 10	56.08	

(*), −27° 43′.

Aug. 3	18 0 9.84	8.5

B. A. C. 6132.

July 27	18 0 14.50	

O. Arg. S. 17695.

Aug. 3	18 0 27.71	7.5

b Herculis.

July 5	18 1 42.63	
19	42.65	

o Herculis.

July 23	18 2 4.86	
28	4.92	

B. A. C. 6166.

Aug. 6	18 4 30.11	

μ Sagittarii.

June 17	18 5 23.39	
18	23.38	
25	23.35	
30	23.38	
July 5	33.35	
9	23.41	
12	23.44	
14	23.38	
19	23.40	
23	23.45	
27	23.42	
28	23.44	
29	23.37	
Aug. 3	23.39	
8	23.42	
9	23.39	
10	23.39	
20	23.41	
Sept. 6	23.40	

η Sagittarii.

Aug. 2	18 8 9.04	
6	8.95	

B. A. C. 6202.

July 23	18 11 22.46	
28	22.36	

δ Sagittarii.

1859.	h. m. s.	Mag.
July 12	18 12 1.80	

B. A. C. 6210.

Aug. 9	18 12 5.09	

B. A. C. 6212.

Aug. 3	18 12 11.81	
6	10.77	

κ Lyræ.

June 17	18 14 57.27	
July 28	57.29	

λ Sagittarii.

July 12	18 19 19.81	

B. A. C. 6261.

June 17	18 18 59.87	
Aug. 1	59.88	
3	59.88	6.0

B. A. C. 6270.

July 28	18 20 13.79	
Aug. 1	13.78	

B. A. C. 6295.

June 17	18 23 19.54	
July 23	19.61	

Lalande 34229.

Aug. 3	18 24 18.78	

B. A. C. 6322.

June 17	18 26 56.59	
July 23	56.57	

Lalande 34354.

July 28	18 27 24.01	7.5
Aug. 1	24.01	7.5

Lalande 34401.

Aug. 3	18 28 19.22	7.5

Bradley 2333.

Aug. 9	18 29 59.68	
10	59.66	
Sept. 6	59.57	

B. A. C. 6349.

1859.	h. m. s.	Mag.
June 17	18 30 40.37	
July 23	40.39	

α Lyræ.

July 19	18 32 11.87	
27	11.73	
28	11.76	
Aug. 1	11.79	

B. A. C. 6358.

Aug. 6	18 33 43.82	
20	43.93	

B. A. C. 6365.

Aug. 25	18 35 27.57	

(*), −18° 55′.

Aug. 3	18 35 51.67	

B. A. C. 6372.

July 27	18 36 39.69	
28	39.84	

φ Sagittarii.

Aug. 10	18 36 54.42	
Sept. 6	54.31	

110 Herculis.

June 17	18 39 38.14	
July 19	38.17	

ε^1 Lyræ.

Aug. 1	18 39 42.31	
2	42.04	
3	41.99	

ε^2 Lyræ.

July 23	18 39 44.48	
27	44.38	
Aug. 2	44.19	

O. Arg. S. 18674.

Aug. 6	18 39 47.15	7.0
20	47.36	

29 Sagittarii.

Aug. 10	18 41 21.49	
Sept. 6	21.45	

B. A. C. 6403.

Aug. 25	18 41 57.40	

ν^1 Lyræ.

July 27	18 44 33.21	
28	33.29	

β Lyræ.

1859.	h. m. s.	Mag.
June 17	18 44 54.56	
25	54.63	
30	54.57	
July 9	54.61	
12	54.59	
19	54.54	
23	54.62	
Aug. 2	54.63	
3	54.66	
6	54.62	
8	54.58	
20	54.57	
25	54.57	
Sept. 2	54.60	

σ Sagittarii.

1859.	h. m. s.	Mag.
Aug. 10	18 46 34.85	
Sept. 6	34.92	

B. A. C. 6452.

1859.	h. m. s.	Mag.
July 5	18 48 26.95	
27	26.70	

113 Herculis.

1859.	h. m. s.	Mag.
July 28	18 48 50.19	
Aug. 1	50.27	

θ Serpentis.

1859.	h. m. s.	Mag.
Aug. 25	18 49 15.57	
30	15.54	

B. A. C. 6462.

1859.	h. m. s.	Mag.
Aug. 25	18 49 17.01	
30	16.94	

δ^2 Lyræ.

1859.	h. m. s.	Mag.
June 17	18 49 36.35	
July 23	36.48	

B. A. C. 6465.

1859.	h. m. s.	Mag.
Aug. 2	18 49 45.30	
8	45.37	

B. A. C. 6476.

1859.	h. m. s.	Mag.
Aug. 3	18 51 5.68	
20	5.49	

10 Aquilæ.

1859.	h. m. s.	Mag.
July 19	18 52 21.38	
28	21.29	

ζ Sagittarii.

1859.	h. m. s.	Mag.
Sept. 2	18 53 42.07	
6	41.92	

B. A. C. 6495.

1859.	h. m. s.	Mag.
Aug. 8	18 54 29.30	
10	29.47	

λ Lyræ.

1859.	h. m. s.	Mag.
June 17	18 54 43.82	
July 5	43.85	
27	43.88	
Aug. 1	43.93	

ο Sagittarii.

1859.	h. m. s.	Mag.
Aug. 2	18 56 17.43	
25	17.52	

B. A. C. 6512.

1859.	h. m. s.	Mag.
Aug. 3	18 56 55.75	
20	55.72	

τ Sagittarii.

1859.	h. m. s.	Mag.
Aug. 10	18 58 11.69	

ζ Aquilæ.

1859.	h. m. s.	Mag.
June 17	18 58 58.41	
July 5	58.52	
19	58.47	
23	(58.56)	
27	58.44	
28	58.51	
Aug. 1	58.52	
25	58.52	
30	58.48	
Sept. 2	58.50	
6	58.47	

π Sagittarii.

1859.	h. m. s.	Mag.
Aug. 8	19 1 26.11	
10	26.06	

B. A. C. 6549.

1859.	h. m. s.	Mag.
Aug. 2	19 1 32.33	7.0
20	32.39	

19 Aquilæ.

1859.	h. m. s.	Mag.
July 28	19 2 8.39	
Aug. 3	8.44	

B. A. C. 6565.

1859.	h. m. s.	Mag.
Aug. 25	19 5 15.23	
30	15.23	

Lalande 36087.

1859.	h. m. s.	Mag.
Aug. 2	19 7 11.31	8.0
Sept. 8	11.11	8.0

B. A. C. 6578.

1859.	h. m. s.	Mag.
July 27	19 7 35.07	
28	35.01	
Aug. 10	34.99	

(*), −32° 5′.

1859.	h. m. s.	Mag.
July 23	19 7 39.29	

B. A. C. 6582.

1859.	h. m. s.	Mag.
Aug. 1	19 9 15.39	
8	15.35	

1 Vulpeculæ.

1859.	h. m. s.	Mag.
June 17	19 10 11.79	
July 5	11.91	

ω Aquilæ.

1859.	h. m. s.	Mag.
July 27	19 11 14.58	
Aug. 2	14.61	
3	14.62	
10	14.64	
11	14.62	
29	14.60	

B. A. C. 6594.

1859.	h. m. s.	Mag.
Aug. 20	19 11 25.51	
25	25.60	

θ Lyræ.

1859.	h. m. s.	Mag.
Aug. 30	19 11 30.41	
Sept. 1	30.39	

2 Vulpeculæ.

1859.	h. m. s.	Mag.
Sept. 2	19 11 48.15	
8	48.00	

B. A. C. 6609.

1859.	h. m. s.	Mag.
July 19	19 12 46.69	
28	46.76	

B. A. C. 6627.

1859.	h. m. s.	Mag.
July 5	19 15 38.05	
23	38.25	

B. A. C. 6631.

1859.	h. m. s.	Mag.
July 19	19 16 14.57	
27	14.63	

χ^1 Sagittarii.

1859.	h. m. s.	Mag.
Aug. 10	19 16 45.03	

χ^3 Sagittarii.

1859.	h. m. s.	Mag.
Sept. 6	19 17 0.98	

2 Sagittæ.

1859.	h. m. s.	Mag.
Aug. 3	19 18 4.83	
25	4.84	

δ Aquilæ.

1859.	h. m. s.	Mag.
June 17	19 18 26.28	
July 5	26.32	
27	26.24	
28	26.25	
Aug. 1	26.29	
2	26.28	
8	26.26	
11	26.24	
20	26.29	
22	26.27	
29	26.31	
30	26.28	
Sept. 1	26.29	
8	26.24	
9	26.24	

3 Sagittæ.

1859.	h. m. s.	Mag.
Aug. 3	19 18 27.85	
25	27.83	

2 Cygni.

1859.	h. m. s.	Mag.
Sept. 2	19 18 36.22	

B. A. C. 6665.

1859.	h. m. s.	Mag.
July 19	19 20 45.55	
23	45.62	

B. A. C. 6667.

1859.	h. m. s.	Mag.
Sept. 6	19 21 34.30	

B. A. C. 6673.

1859.	h. m. s.	Mag.
Aug. 1	19 22 41.38	
11	41.38	

B. A. C. 6672.

1859.	h. m. s.	Mag.
July 5	19 22 41.91	
Aug. 10	41.98	

B. A. C. 6677.

1859.	h. m. s.	Mag.
July 28	19 23 19.03	
Aug. 2	18.98	

B. A. C. 6680.

1859.	h. m. s.	Mag.
June 17	19 23 33.34	
Aug. 20	33.53	

O. Arg. S. 19689.

1859.	h. m. s.	Mag.
Aug. 30	19 24 35.29	

μ Aquilæ.

1859.	h. m. s.	Mag.
Aug. 3	19 27 14.91	
22	14.88	

h^2 Sagittarii.

1859.	h. m. s.	Mag.
June 17	19 28 10.87	
July 5	10.90	
28	10.88	
Aug. 11	10.98	
29	11.05	
Sept. 6	10.91	
7	10.99	

B. A. C. 6707.

1859.	h. m. s.	Mag.
Sept. 8	19 28 16.17	
9	16.15	

9 Vulpeculæ.

1859.	h. m. s.	Mag.
Aug. 30	19 28 25.87	

(*), +19° 27′.

1859.	h. m. s.	Mag.
Aug. 25	19 28 45.97	

B. A. C. 6710.

1859.	h.	m.	s.	Mag.
Sept. 1 . .	19	28	55.72	
2 . .			55.74	

9 CYGNI.

Aug. 1 . .	19	29	17.11	
20 . .			17.07	

B. A. C. 6716.

July 23 . .	19	30	11.59	
27 . .			11.65	

LALANDE 37221.

Sept. 8 . .	19	31	35.42	

B. A. C. 6728.

July 28 . .	19	32	5.14	
Aug. 1 . .			5.24	
2 . .			5.22	

σ AQUILÆ.

Aug. 3 . .	19	32	16.96	
8 . .			16.88	

O. ARG. S. 19861.

June 17 . .	19	33	5.56	

φ CYGNI.

July 19 . .	19	33	50.79	
27 . .			50.73	

B. A. C. 6738.

Aug. 22 . .	19	33	52.59	

(*), −33° 57′.

Sept. 9 . .	19	34	17.67	8.0

e^2 SAGITTARII.

Sept. 1 . .	19	34	30.41	
6 . .			30.39	
7 . .			30.47	

β SAGITTARII.

Aug. 10 . .	19	34	45.59	
11 . .			45.59	

14 CYGNI.

Aug. 20 . .	19	34	53.00	
25 . .			53.07	

f SAGITTARII.

June 17 . .	19	38	11.38	
Aug. 10 . .			11.48	
11 . .			11.50	
29 . .			11.48	
30 . .			11.52	
Sept. 2 . .			11.49	
7 . .			11.47	
Nov. 1 . .			11.53	

B. A. C. 6769.

1859.	h.	m.	s.	Mag.
Aug. 1 . .	19	39	4.69	
20 . .			4.70	

B. A. C. 6768.

Aug. 2 . .	19	39	7.04	7.0
Sept. 1 . .			7.13	

γ AQUILÆ.

July 19 . .	19	39	36.15	
23 . .			36.14	
27 . .			36.17	
28 . .			36.12	
Aug. 3 . .			36.18	
8 . .			36.18	
25 . .			36.16	
Sept. 6 . .			36.16	
8 . .			36.12	
10 . .			36.13	

B. A. C. 6777.

Aug. 30 . .	19	40	38.05	

WEISSE (2) XIX, 1330.

Aug. 22 . .	19	41	13.29	8.0

ζ SAGITTÆ.

Aug. 2 . .	19	42	45.73	
8 . .			45.71	

α AQUILÆ.

July 23 . .	19	43	57.03	
27 . .			57.10	
28 . .			57.04	
Aug. 1 . .			57.07	
3 . .			57.08	
10 . .			57.08	
20 . .			57.07	
25 . .			57.07	
Sept. 1 . .			57.07	
2 . .			56.99	
7 . .			57.01	
10 . .			57.05	
Nov. 1 . .			57.06	

B. A. C. 6817.

June 17 . .	19	45	48.91	
Aug. 11 . .			48.98	

B. A. C. 6816.

Sept. 9 . .	19	46	6.24	6.0

B. A. C. 6829.

Aug. 20 . .	19	48	0.08	
25 . .			0.07	
29 . .			0.02	

B. A. C. 6831.

July 28 . .	19	48	19.04	
Aug. 2 . .			18.77	

β AQUILÆ.

1859.	h.	m.	s.	Mag.
Aug. 8 . .	19	48	26.09	
10 . .			26.08	
22 . .			26.10	
30 . .			26.10	
Sept. 2 . .			26.14	
6 . .			26.07	
7 . .			26.01	
10 . .			26.11	
Nov. 1 . .			26.10	

η CYGNI.

Aug. 1 . .	19	51	3.19	
3 . .			3.18	

B. A. C. 6850.

Aug. 30 . .	19	51	16.10	7.0
Sept. 1 . .			16.05	

LACAILLE 8296.

Sept. 9 . .	19	51	18.39	5.5

B. A. C. 6854.

June 17 . .	19	51	55.54	
July 23 . .			55.63	

B. A. C. 6861.

July 27 . .	19	52	26.12	
28 . .			26.20	
Aug. 20 . .			26.24	

13 SAGITTÆ.

Aug. 1 . .	19	53	43.92	
2 . .			43.90	
29 . .			43.85	

c SAGITTARII.

Sept. 6 . .	19	54	2.45	
7 . .			2.58	
Nov. 1 . .			2.62	

B. A. C. 6877.

Sept. 8 . .	19	55	26.43	

16 VULPECULÆ.

Aug. 3 . .	19	56	5.10	
10 . .			5.07	

B. A. C. 6888.

Aug. 8 . .	19	56	39.13	
25 . .			39.05	

LALANDE 38290.

Sept. 2 . .	19	56	56.06	8.5

τ AQUILÆ.

Aug. 30 . .	19	57	17.94	
Sept. 1 . .			17.96	

WEISSE (2) XIX, 1888.

1859.	h.	m.	s.	Mag.
July 27 . .	19	57	37.00	7.5
Aug. 20 . .			37.04	7.0

B. A. C. 6899.

June 17 . .	19	58	40.75	
Aug. 1 . .			40.87	

B. A. C. 6903.

Aug. 22 . .	20	0	7.40	
25 . .			7.35	

B. A. C. 6906.

July 28 . .	20	0	34.86	
Aug. 3 . .			34.84	
29 . .			34.79	

B. A. C. 6908.

July 27 . .	20	0	40.52	
Aug. 8 . .			40.43	

17 VULPECULÆ.

Aug. 2 . .	20	0	52.33	
Sept. 2 . .			52.39	

B. A. C. 6923.

Aug. 30 . .	20	2	18.39	
Sept. 1 . .			18.33	

66 DRACONIS.

Aug. 20 . .	20	3	18.89	
Sept. 8 . .			18.91	

B. A. C. 6941.

Aug. 8 . .	20	4	53.67	
29 . .			53.70	

(*), +16° 17′.

Aug. 22 . .	20	5	55.12	8.5

(*), +20° 41′.

Aug. 8 . .	20	6	59.97	7.5

(*), + 16° 17′.

July 27 . .	20	7	40.19	8.5
Aug. 3 . .			40.09	7.5
22 . .			40.07	9.0

(*), + 16° 17′.

Aug. 3 . .	20	8	0.60	8.5
22 . .			0.57	9.0

(*), + 16° 17′.

Aug. 3 . .	20	8	29.67	8.5
22 . .			29.63	9.0

(*), +16° 17′.

1859.	h. m.	s.	Mag.
Aug. 3	20 8	46.63	8.5
22		46.52	9.0

α^1 Capricorni.

Aug. 29	20 9	53.03	

23 Vulpeculæ.

Aug. 1	20 9	57.98	
25		57.98	

(*), +16° 17′.

Aug. 22	20 10	13.11	

α^2 Capricorni.

July 28	20 10	16.93	
Aug. 2		16.95	
8		16.95	
11		16.95	
27		16.99	
Sept. 9		16.96	
10		17.00	
Nov. 1		16.97	
2		16.96	

(*), +16° 20′.

Aug. 3	20 10	32.52	7.0
22		32.44	7.5

B. A. C. 6977.

Aug. 30	20 10	43.87	7.0
Sept. 1		43.76	

σ Capricorni.

June 17	20 11	18.57	
Sept. 6		18.64	
7		18.62	
8		18.64	

O. Arg. S. 20429.

Aug. 10	20 13	11.85	8.0
Sept. 1		11.80	7.5

(*), −33° 30′.

Sept. 9	20 14	13.74	8.0

O. Arg. S. 20465.

Sept. 2	20 16	2.03	9.0
6		2.06	8.0

B. A. C. 7021.

July 27	20 17	21.07	
Aug. 3		20.98	
20		21.12	

Lalande 39247.

Aug. 22	20 18	12.48	8.0
Sept. 1		12.53	7.5

39 Cygni.

1859.	h. m.	s.	Mag.
Aug. 1	20 18	16.13	
25		16.13	

π Capricorni.

Sept. 10	20 19	18.16	

O. Arg. S. 20522.

Aug. 30	20 19	53.24	

ρ Capricorni.

June 17	20 20	52.13	
Aug. 2		52.15	
Sept. 2		52.13	
6		52.18	
7		52.17	
8		52.22	
9		52.19	
Nov. 1		52.23	
2		52.12	

B. A. C. 7057.

Aug. 3	20 22	21.69	
10		21.87	

O. Arg. S. 20570.

Aug. 22	20 23	25.81	8.5
Sept. 1		25.94	8.0

42 Cygni.

Aug. 20	20 24	0.05	
25	23	59.97	

Lacaille 8492.

Sept. 10	20 26	8.81	6.0

O. Arg. N. 20664.

Aug. 30	20 26	33.82	7.0
Sept. 7		33.94	

ω^3 Cygni.

Aug. 30	20 26	59.56	
Sept. 7		59.54	
8		59.55	

(*), −33° 56′.

Sept. 9	20 29	5.25	8.0

B. A. C. 7112.

Aug. 2	20 29	19.82	
20		19.90	

O. Arg. S. 20654.

Aug. 22	20 29	27.65	8.5

B. A. C. 7108.

June 17	20 29	31.47	

B. A. C. 7111.

1859.	h. m.	s.	Mag.
Aug. 3	20 29	31.89	
10		32.00	
Sept. 6		31.93	

B. A. C. 7113.

Aug. 25	20 29	47.36	
Sept. 1		47.47	

O. Arg. S. 20675.

Aug. 22	20 30	12.42	

Lacaille 8517.

Sept. 9	20 31	32.24	6.0

υ Capricorni.

Sept. 8	20 32	4.52	
Nov. 1		4.44	
2		4.47	

B. A. C. 7135.

Sept. 6	20 32	8.58	

B. A. C. 7146.

June 17	20 32	35.17	
Aug. 30		35.29	

α Delphini.

June 17	20 33	7.98	
Aug. 30		8.08	

B. A. C. 7158.

Aug. 3	20 34	25.95	
10		26.06	

B. A. C. 7159.

Aug. 20	20 34	41.59	
25		41.68	
Sept. 1		41.60	7.0

α Cygni.

Aug. 2	20 36	39.55	
Sept. 7		39.61	

(*), −21° 26′.

Aug. 22	20 36	43.75	8.5

ψ Capricorni.

Sept. 8	20 37	47.93	
Nov. 1		47.94	
2		47.93	

30 Vulpeculæ.

June 17	20 38	48.84	
Aug. 30		48.93	

B. A. C. 7193.

1859.	h. m.	s.	Mag.
Aug. 3	20 39	40.23	
10		40.23	

B. A. C. 7202, (1st *.)

Aug. 20	20 40	27.34	
25		27.49	

B. A. C. 7202, (2d *.)

Aug. 20	20 40	28.38	
25		28.46	

Weisse XX, 1031.

Sept. 1	20 40	49.77	8.5

Weisse (2) XX, 1036.

Sept. 1	20 40	58.97	9.0

B. A. C. 7216.

Sept. 9	20 42	14.62	

14 Delphini.

Aug. 30	20 42	56.38	

B. A. C. 7224.

June 17	20 43	10.41	

O. Arg. S. 20903.

Aug. 22	20 43	13.70	

ω Capricorni.

Sept. 8	20 43	27.47	
Nov. 1		27.47	

B. A. C. 7244.

Aug. 10	20 45	47.45	
Sept. 9		47.36	

B. A. C. 7248.

Aug. 25	20 46	48.37	

19 Capricorni.

Sept. 10	20 46	52.87	
Nov. 2		52.86	

32 Vulpeculæ.

June 17	20 48	35.41	
Aug. 3		35.57	
10		35.57	
20		35.56	

B. A. C. 7262.

Aug. 30	20 49	18.35	
Sept. 1		18.29	

O. ARG. S. 20996.

1859.	h.	m.	s.	Mag.
Aug. 22	20	49	50.02	

B. A. C. 7268.

Nov. 1	20	51	6.06	
2			6.18	

B. A. C. 7274.

Aug. 25	20	51	51.19	

21 CAPRICORNI.

Aug. 20	20	52	58.86	
Sept. 10			58.75	
Nov. 4			58.65	

B. A. C. 7286.

Sept. 9	20	53	27.48	6.0

B. A. C. 7297.

Aug. 10	20	54	34.33	
Sept. 1			34.34	

WEISSE XX, 1394.

Aug. 22	20	54	45.39	7.0

θ CAPRICORNI.

Aug. 20	20	58	4.35	
Sept. 8			4.31	
9			4.28	
Nov. 1			4.22	
2			4.29	
3			4.40	
4			4.31	

61¹ CYGNI.

Aug. 10	21	0	37.44	
22			37.31	
Sept. 1			37.39	

61² CYGNI.

Aug. 10	21	0	38.88	
22			38.79	
Sept. 1			38.82	

ν AQUARII.

Aug. 25	21	1	57.77	
30			57.78	
Sept. 8			57.86	
Nov. 1			57.94	
3			57.92	
4			57.83	

ζ CYGNI.

Aug. 10	21	6	58.71	
30			58.63	
Sept. 8			58.68	
9			58.62	
10			58.67	
12			58.72	
Nov. 1			58.63	
3			58.66	
4			58.68	

14 AQUARII.

1859.	h.	m.	s.	Mag.
Aug. 20	21	8	46.60	
22			46.60	7.0
25			46.61	
Sept. 1			46.59	8.0

WEISSE XXI, 171.

Aug. 20	21	8	58.49	7.5
25			58.49	7.0
Sept. 1			58.46	

ι CAPRICORNI.

Sept. 8	21	14	26.77	
9			26.76	
Nov. 2			26.74	
3			26.78	

α CEPHEI.

Aug. 10	21	15	14.12	
20			14.21	
22			14.00	
25			14.17	
30			13.95	
Sept. 1			14.07	
10			14.10	
12			14.18	
Nov. 1			14.17	

WEISSE XXI, 346.

Nov. 4	21	16	37.13	8.5

B. A. C. 7431.

Sept. 13	21	17	8.70	

ζ CAPRICORNI.

Sept. 8	21	18	40.05	
9			39.99	
Nov. 3			40.04	

β AQUARII.

Aug. 10	21	24	11.13	
20			11.17	
22			11.10	
25			11.17	
Sept. 1			11.12	
Nov. 1			11.16	

β CEPHEI.

Aug. 30	21	26	50.25	
Sept. 9			50.28	
10			50.46	
12			50.37	
13			50.45	
Nov. 2			50.41	
3			50.32	
4			50.37	

ε CAPRICORNI.

Sept. 8	21	29	14.18	

O. ARG. S. 21515.

Sept. 1	21	29	32.42	8.0

B. A. C. 7523.

1859.	h.	m.	s.	Mag.
Sept. 1	21	30	56.32	

γ CAPRICORNI.

Sept. 8	21	32	19.76	
9			19.75	
Nov. 2			19.74	
3			19.71	

B. A. C. 7528.

Aug. 22	21	32	29.56	
25			29.56	

RUMKER 9349.

Nov. 4	21	33	48.24	

41 CAPRICORNI.

Sept. 10	21	34	2.04	

B. A. C. 7549.

Sept. 1	21	35	21.13	

45 CAPRICORNI.

Aug. 25	21	36	21.99	
30			22.03	

ε PEGASI.

Aug. 22	21	37	18.49	
Sept. 8			18.54	
12			18.48	
13			18.49	
Nov. 2			18.54	
3			18.59	
4			18.55	

δ CAPRICORNI.

Sept. 10	21	39	18.65	

B. A. C. 7584.

Sept. 1	21	39	35.80	

B. A. C. 7586.

Sept. 1	21	40	1.56	

LACAILLE 8941.

Sept. 12	21	43	26.06	
13			26.06	

B. A. C. 7617.

Aug. 22	21	45	30.83	
25			30.89	

μ CAPRICORNI.

Sept. 9	21	45	39.55	
Nov. 3			39.53	
Dec. 1			39.40	

WEISSE XXI, 1071.

1859.	h.	m.	s.	Mag.
Aug. 30	21	45	45.23	8.0
Sept. 1			45.40	8.0

16 PEGASI.

Sept. 8	21	46	41.56	

LALANDE 42700.

Nov. 23	21	47	49.29	
26			49.36	7.5

O. ARG. S. 21737.

Sept. 10	21	47	49.62	7.5
13			49.68	

B. A. C. 7649.

Aug. 25	21	50	54.89	
30			54.81	

LALANDE 42813.

Sept. 1	21	51	4.74	8.5

B. A. C. 7652.

Sept. 13	21	51	25.01	

(*), −20° 40′.

Nov. 23	21	51	32.54	8.5

η PISCIS AUSTRALIS.

Sept. 9	21	52	47.09	

O. ARG. S. 21796.

Sept. 10	21	52	49.63	7.0

B. A. C. 7677.

Sept. 12	21	56	29.83	

LALANDE 43040.

Sept. 1	21	58	5.83	

α AQUARII.

Aug. 16	21	58	35.44	
22			35.44	
25			35.39	
30			35.52	
Sept. 8			35.48	
13			35.50	
Nov. 2			35.53	
5			35.45	
23			35.45	
26			35.49	
Dec. 1			35.44	

ι AQUARII.

Sept. 9	21	58	52.28	
10			52.33	
Nov. 3			52.33	
4			52.34	

B. A. C. 7724.

1859.	h.	m.	s.	Mag.
Aug. 30	22	3	15.87	

Lalande 43288.

Sept. 1	22	4	53.92	9.0
Nov. 23			54.07	8.5

B. A. C. 7759.

Sept. 13	22	7	24.40	
Nov. 26			24.07	

42 Aquarii.

Sept. 1	22	9	17.91	

θ Aquarii.

Aug. 16	22	10	26.60	
30			26.55	
Sept. 9			26.60	
10			26.55	
12			26.61	
Nov. 2			26.58	
3			26.60	
4			26.62	
23			26.60	
28			26.67	
Dec. 1			26.56	

ρ Aquarii.

Sept. 10	22	12	49.76	
12			49.86	
Nov. 2			49.77	
3			49.73	
4			49.75	
23			49.75	
28			49.75	

B. A. C. 7793.

Aug. 20	22	14	3.93	
Sept. 1			3.88	

γ Aquarii.

Nov. 26	22	14	25.39	

(*), −6° 55′.

Sept. 1	22	14	26.76	8.0

49 Aquarii.

Nov. 28	22	15	42.43	

33 Pegasi.

Aug. 16	22	16	55.47	
30			55.37	

B. A. C. 7812.

Nov. 23	22	17	50.67	

π Aquarii.

Sept. 9	22	18	7.57	
12			7.61	

B. A. C. 7818.

1859.	h.	m.	s.	Mag.
Nov. 3	22	18	57.69	
4			57.69	

53 Aquarii.

Nov. 3	22	18	58.17	
4			58.23	

(*), −37° 42′.

Sept. 13	22	20	58.99	7.5

(*), −31° 9′.

Sept. 9	22	22	18.25	8.0

B. A. C. 7835.

Aug. 20	22	22	32.08	

Weisse XXII, 467.

Nov. 26	22	22	34.66	

56 Aquarii.

Aug. 16	22	22	46.92	
Sept. 1			46.81	
Nov. 2			46.86	6.5

σ Aquarii.

Sept. 12	22	23	14.13	
Nov. 3			14.11	
4			14.10	
28			14.12	
Dec. 1			14.09	

O. Arg. S. 22196.

Sept. 1	22	23	27.20	
Nov. 2			27.28	
23			27.35	

(*), −37° 24′.

Sept. 13	22	26	7.78	8.0

(*), −31° 4′.

Sept. 9	22	27	55.44	

η Aquarii.

Nov. 2	22	28	9.61	
3			9.64	
5			9.64	
26			9.63	

B. A. C. 7879, (1st *.)

Aug. 16	22	29	38.50	
30			38.60	
Sept. 12			38.71	

B. A. C. 7879, (2d *.)

Aug. 30	22	29	38.68	
Sept. 12			38.89	

κ Aquarii.

1859.	h.	m.	s.	Mag.
Sept. 10	22	30	30.27	
Nov. 4			30.23	
Dec. 1			30.19	

Weisse XXII, 640.

Sept. 1	22	31	1.73	
Nov. 23			1.79	8.5
28			1.82	

Weisse XXII, 644.

Sept. 1	22	31	6.56	
Nov. 23			6.36	8.0
28			6.37	

B. A. C. 7895.

Sept. 9	22	32	32.99	5.5

ζ Pegasi.

Aug. 16	22	34	28.73	
Sept. 13			28.75	
Nov. 3			28.77	
5			28.75	
26			28.77	
Dec. 1			28.79	

Weisse XXII, 761.

Nov. 23	22	35	53.82	8.0

13 Lacertæ.

Aug. 16	22	37	51.22	
30			51.13	

(*), −14° 18′.

Sept. 10	22	37	54.74	9.0

B. A. C. 7948.

Sept. 1	22	39	58.05	
9			57.96	

τ² Aquarii.

Sept. 12	22	42	10.58	
13			10.53	6.0
Nov. 3			10.55	
4			10.65	
Dec. 1			10.67	

Weisse XXII, 900.

Nov. 23	22	43	13.99	8.0
28			13.99	8.5

γ Piscis Australis.

Aug. 16	22	44	43.95	

λ Aquarii.

Sept. 10	22	45	18.49	
12			18.57	
Nov. 3			18.52	
4			18.54	
5			18.46	

Weisse XXII, 962.

1859.	h.	m.	s.	Mag.
Nov. 23	22	46	21.29	8.5

75 Aquarii.

Aug. 30	22	46	43.85	
Sept. 1			43.77	
Nov. 28			43.86	

B. A. C. 7978.

Dec. 1	22	46	47.78	

Lacaille 9298.

Sept. 13	22	47	22.61	

Lalande 44823.

Nov. 26	22	47	59.30	7.0

α Piscis Australis.

Aug. 16	22	49	54.35	
30			54.40	
Sept. 1			54.31	
9			54.37	
10			54.36	
13			54.39	
Nov. 3			54.30	
4			54.34	
5			34.31	

B. A. C. 7994.

Sept. 12	22	50	0.72	

Weisse XXII, 1049.

Nov. 23	22	50	53.03	8.5
29			52.95	8.5

Weisse XXII, 1057.

Nov. 23	22	51	19.98	
28			19.78	8.5

Lacaille 9343.

Sept. 13	22	54	46.15	6.0

Weisse XXII, 1149.

Nov. 26	22	55	2.84	

Weisse XXII, 1150.

Nov. 26	22	55	3.18	

Lalande 45409.

Sept. 12	22	55	15.34	6.0
Nov. 23			15.39	6.0

Lacaille 9356.

Sept. 9	22	56	4.51	6.5

1859.	h. m. s.	Mag.
α Pegasi.		
Jan. 19	22 57 47.37	
Aug. 30	47.32	
Sept. 1	47.36	
10	47.32	
Dec. 1	47.32	
30	47.31	
h¹ Aquarii.		
Nov. 3	22 57 51.57	
4	51.67	
5	51.61	
Weisse XXII, 1232.		
Nov. 26	22 58 34.44	8.0
28	34.41	8.0
Weisse XXII, 1272.		
Nov. 23	23 0 40.36	9.0
Weisse XXII, 1283.		
Nov. 23	23 1 24.84	9.0
A Piscium.		
Sept. 12	23 1 30.67	
13	30.70	
6 Andromedæ.		
Aug. 16	23 3 59.65	
Weisse XXIII, 48.		
Aug. 30	23 4 7.16	
Nov. 26	7.11	
28	7.14	
59 Pegasi.		
Sept. 1	23 4 40.15	
10	40.12	
(*), −30° 49′.		
Sept. 9	23 5 43.73	7.5
Weisse XXIII, 85.		
Nov. 23	23 6 11.75	9.0
B. A. C. 8084.		
Nov. 5	23 6 54.19	
φ Aquarii.		
Nov. 4	23 7 4.24	
Dec. 1	4.24	
30	4.20	
B. A. C. 8094.		
Sept. 13	23 8 21.43	7.0

1859.	h. m. s.	Mag.
Weisse XXIII, 143.		
Aug. 30	23 8 27.98	
ψ¹ Aquarii.		
Sept. 10	23 8 33.26	
γ Piscium.		
Aug. 16	23 9 54.47	
Sept. 1	54.47	
9	54.43	
12	54.46	
Nov. 4	54.49	
5	54.47	
23	54.45	
28	54.42	
Dec. 1	54.47	
Weisse XXIII, 185.		
Nov. 26	23 10 21.42	
ψ³ Aquarii.		
Dec. 30	23 11 40.57	
b Piscium.		
Sept. 12	23 13 12.70	
13	12.59	
(*), −9° 19′.		
Nov. 23	23 13 19.62	9.5
B. A. C. 8129.		
Dec. 1	23 13 27.88	
Lalande 45704.		
Nov. 4	23 13 34.08	8.0
28	34.11	8.0
B. A. C. 8158.		
Aug. 16	23 17 46.91	
κ Piscium.		
Aug. 17	23 19 45.35	
30	45.29	
Sept. 12	45.36	
13	45.33	
Nov. 4	45.32	
23	45.35	
28	45.29	
Dec. 1	45.33	
θ Piscium.		
Dec. 30	23 20 51.95	
B. A. C. 8187.		
Nov. 26	23 23 29.07	
Santini 1636.		
Nov. 23	23 25 5.67	

1859.	h. m. s.	Mag.
Weisse XXIII, 534.		
Nov. 28	23 26 44 25	9.5
Weisse XXIII, 592.		
Nov. 23	23 29 4.50	8.0
26	4.45	
(*), −37° 35′.		
Sept. 13	23 29 29.16	7.0
ι Piscium.		
Aug. 16	23 32 45.03	
17	45.01	
Nov. 15	45.05	
16	45.04	
26	44.94	
28	44.99	
γ Cephei.		
Dec. 1	23 33 37.84	
Santini 1649.		
Nov. 23	23 34 48.86	6.5
28	48.72	
λ Piscium.		
Sept. 12	23 34 54.22	
Nov. 5	54.20	
Dec. 30	54.09	
Lacaille 9567.		
Sept. 13	23 35 43.86	
B. A. C. 8252.		
Aug. 16	23 36 17.29	
Weisse XXIII, 803.		
Nov. 16	23 39 52.36	9.0
23	52.52	8.5
Weisse XXIII, 817.		
Nov. 26	23 40 31.61	7.0
B. A. C. 8270.		
Sept. 13	23 40 39.71	
20 Piscium.		
Nov. 5	23 40 44.71	
Dec. 30	44.56	
δ Sculptoris.		
Dec. 1	23 41 37.66	
21 Piscium.		
Aug. 16	23 42 17.46	
17	17.33	

1859.	h. m. s.	Mag.
Weisse XXIII, 934.		
Nov. 15	23 46 2.51	9.0
23	2.71	8.0
ρ Cassiopeæ.		
Sept. 12	23 47 24.58	
(*), −1° 6′.		
Nov. 16	23 47 41.02	
B. A. C. 8315.		
Nov. 26	23 48 28.14	7.0
28	28.13	7.0
B. A. C. 8317.		
Aug. 17	23 48 33.79	
Rumker 11777.		
Dec. 1	23 49 37.04	
Lacaillæ 9662.		
Sept. 13	23 50 14.36	7.0
Weisse XXIII, 1032.		
Nov. 15	23 50 37.80	9.0
23	37.95	9.0
27 Piscium.		
Aug. 16	23 51 30.30	
ω Piscium.		
Sept. 12	23 52 7.52	
Nov. 5	7.43	
Weisse XXIII, 1075.		
Nov. 16	23 52 49.99	9.5
30 Piscium.		
Aug. 16	23 54 46.78	
c¹ Piscium.		
Nov. 20	23 55 13.97	
Weisse XXIII, 1142.		
Nov. 15	23 55 35.11	9.0
23	35.24	8.5
Weisse XXIII, 1178.		
Nov. 28	23 57 31.40	8.5
33 Piscium.		
Aug. 16	23 58 10.18	

Weisse XXIII, 1195.

1859.	h.	m.	s.	Mag.
Nov. 5	23	58	20.34	

86 Pegasi.

Sept. 13	23	58	30.88	

Weisse XXIII, 1208.

Nov. 15	23	59	6.92	8.5
26			6.86	7.5

α Andromedæ.

1860.				
Nov. 13	0	1	9.34	
15			9.32	
Dec. 20			9.37	

Weisse XXIII, 1251.

Oct. 26	0	1	14.71	8.0

Weisse XXIII, 1258.

Dec. 21	0	1	37.86	8.5

Weisse XXIII, 1260.

Dec. 21	0	1	38.29	8.5

B. A. C. 10.

Dec. 11	0	2	12.61	

Weisse O, 24.

Nov. 12	0	2	46.52	9.0

Weisse O, 51.

Nov. 12	0	3	54.92	8.0

Weisse O, 83.

Nov. 14	0	5	36.44	9.0

γ Pegasi.

Sept. 3	0	6	1.75	
Oct. 10			1.76	
Nov. 13			1.80	
Dec. 20			1.74	

Weisse O, 97.

Dec. 21	0	6	31.99	8.5

Weisse O, 102.

Dec. 22	0	6	52.04	8.5

Weisse O, 104.

Dec. 21	0	6	54.27	9.0

Weisse O, 110.

Nov. 14	0	7	18.33	9.0

Weisse O, 112.

1860.	h.	m.	s.	Mag.
Nov. 14	0	7	30.93	9.0

Weisse O, 115.

Nov. 14	0	7	38.08	9.0

B. A. C. 42.

Nov. 12	0	8	46.17	

B. A. C. 43.

Nov. 15	0	9	3.71	

B. A. C. 49.

Dec. 11	0	9	39.08	

Weisse O, 192.

Oct. 10	0	11	55.50	8.5

d Piscium.

Sept. 1	0	13	23.89	
3			23.76	
26			23.76	
Nov. 12			23.70	

Weisse O, 229.

Dec. 21	0	13	48.85	7.5

Weisse O, 233.

Dec. 21	0	13	57.93	9.0

Weisse O, 236.

Dec. 22	0	14	5.64	7.0

Santini 23.

Nov. 14	0	15	12.59	9.0

B. A. C. 81.

Nov. 15	0	17	20.47	

45 Piscium.

Oct. 26	0	18	29.00	
Nov. 13			29.03	
Dec. 11			29.00	

Weisse O, 313.

Nov. 12	0	19	6.57	6.5
Dec. 22			6.53	7.0

B. A. C. 103.

Nov. 15	0	20	58.72	

28 Andromedæ.

Oct. 10	0	22	44.40	

12 Ceti.

1860.	h.	m.	s.	Mag.
Sept. 3	0	22	53.69	
Oct. 26			53.56	
Nov. 12			53.62	
13			53.72	
14			53.59	
Dec. 11			53.68	
21			53.71	
22			53.62	

51 Piscium.

Dec. 22	0	25	10.42	6.0

52 Piscium.

Aug. 7	0	25	15.22	
Sept. 3			15.30	

B. A. C. 133.

Oct. 10	0	26	20.27	7.0

B. A. C. 135.

Nov. 15	0	26	45.27	
Dec. 11			45.26	

Weisse O, 450.

Nov. 14	0	26	55.36	8.0

B. A. C. 137.

Nov. 12	0	26	55.54	7.0

14 Ceti.

Oct. 26	0	28	21.60	6.5

B. A. C. 149.

Nov. 13	0	28	39.82	
Dec. 21			39.83	

Weisse O, 491.

Aug. 7	0	29	10.04	

Weisse O, 496.

Dec. 22	0	29	43.94	

B. A. C. 160.

Nov. 15	0	30	8.98	
Dec. 11			9.03	

β Ceti.

Aug. 7	0	36	33.57	
Nov. 13			33.70	
14			33.53	
15			33.69	
Dec. 11			33.(78)	
22			33.63	

B. A. C. 197.

Sept. 3	0	36	40.56	
Oct. 10			40.50	

Weisse O, 635.

1860.	h.	m.	s.	Mag.
Oct. 26	0	37	5.30	8.0
Nov. 12			5.25	

Weisse O, 638.

Nov. 12	0	37	11.66	

58 Piscium.

Dec. 21	0	39	43.43	

60 Piscium.

Nov. 13	0	40	9.29	
Dec. 11			9.34	

61 Piscium.

Nov. 15	0	40	29.59	

ν Cassiopeæ.

Oct. 10	0	40	54.92	

B. A. C. 221.

Aug. 7	0	41	2.46	
Dec. 22			2.42	6.5

δ Piscium.

Sept. 3	0	41	25.27	

Weisse O, 726.

Nov. 14	0	42	20.09	9.0

B. A. C. 237.

Nov. 13	0	44	5.88	
Dec. 11			5.93	

Weisse O, 770.

Nov. 12	0	44	24.71	9.0
Dec. 21			24.75	9.0

Weisse O, 775.

Nov. 12	0	44	43.02	7.5
Dec. 21			43.02	
22			43.00	8.0

B. A. C. 239.

Oct. 10	0	44	44.37	

Weisse O, 806.

Aug. 7	0	46	27.52	9.0
Nov. 14			27.48	9.0

21 Ceti.

Nov. 15	0	47	13.83	

ϕ^3 Ceti.

Sept. 3	0	49	0.22	

(*), + 2° 4′.

1860.	h. m. s.	Mag.
Nov. 12	0 49 58.50	9.0

B. A. C. 269.

Nov. 13	0 50 33.89	
Dec. 11	33.96	

(*), + 1° 52′.

Dec. 22	0 51 11.94	9.5

Weisse O, 893.

Aug. 7	0 51 50.04	9.0
Nov. 14	49.94	
Dec. 22	50.06	9.0

α Sculptoris.

Nov. 15	0 51 51.29	

Weisse O, 918.

Dec. 22	0 52 53.73	8.5

ε Piscium.

Sept. 3	0 55 40.75	
Oct. 10	40.72	
Nov. 12	40.80	
13	40.76	
Dec. 21	40.77	

B. A. C. 296.

Dec. 11	0 56 36.51	

77 Piscium.

Dec. 22	0 58 34.69	

B. A. C. 312.

Dec. 22	0 58 36.92	

Weisse O, 1033.

Nov. 14	0 59 5.36	

Weisse O, 1076.

Nov. 14	1 1 3.41	

Weisse O, 1079.

Nov. 14	1 1 11.00	9.5

Weisse I, 202.

Aug. 7	1 13 28.24	7.0

θ Ceti.

Jan. 30	1 17 1.51	
Aug. 7	1.54	
Sept. 3	1.56	
Oct. 10	1.52	
26	1.64	
Nov. 12	1.60	
14	1.55	
Dec. 4	1.56	
11	1.66	
21	1.57	
22	1.58	

ρ Piscium.

1860.	h. m. s.	Mag.
Jan. 2	1 18 42.81	

η Piscium.

Jan. 2	1 23 59.79	
30	59.71	
Aug. 7	59.76	
Sept. 3	59.71	
Nov. 12	59.77	
14	59.79	
Dec. 4	59.70	
21	59.73	
22	59.71	

B. A. C. 454.

Dec. 11	1 24 18.90	

B. A. C. 472.

Nov. 14	1 27 36.08	7.0

101 Piscium.

Dec. 21	1 28 17.50	
22	17.48	

B. A. C. 477.

Dec. 4	1 28 20.45	
11	20.54	

π Piscium.

Jan. 2	1 29 40.84	
Aug. 7	40.90	

Weisse I, 508.

Nov. 13	1 30 2.32	

Santini 91.

Oct, 26	1 31 6.64	

ν Piscium.

Jan. 2	1 34 8.90	
16	8.85	
30	8.88	
Aug. 7	8.87	
Nov. 13	8.88	
14	8.89	
25	8.83	
Dec. 4	8.87	
11	8.84	
21	8.84	

Weisse I, 646.

Oct. 26	1 35 46.50	

Weisse I, 675.

Dec. 22	1 37 6.84	8.5

B. A. C. 551.

Oct. 26	1 41 11.08	

Weisse I, 740.

1860.	h. m. s.	Mag.
Dec. 22	1 41 42.47	9.0

B. A. C. 562.

Nov. 14	1 43 55.07	

Weisse I, 790.

Oct. 26	1 44 29.95	7.5
Dec. 22	29.86	

β Arietis.

Jan. 2	1 46 54.69	
30	54.69	
Aug. 7	54.67	
Nov. 13	54.65	
25	54.70	
Dec. 4	54.66	
24	54.71	

56 Ceti.

Jan. 16	1 50 6.81	

Weisse I, 896.

Oct. 26	1 51 3.32	8.0

B. A. C. 607.

Dec. 4	1 51 49.75	

Weisse I, 969.

Oct. 26	1 54 36.40	9.0

Weisse I, 972.

Nov. 13	1 54 53.46	

B. A. C. 643.

Nov. 13	1 58 12.84	

Weisse (2) I, 1411.

Jan. 16	1 58 56.50	8.5

Weisse I, 1042.

Oct. 26	1 58 56.88	7.5

α Arietis.

Jan. 2	1 59 17.20	
30	17.24	
Aug. 7	17.23	
Nov. 25	17.35	
Dec. 22	17.14	
24	17.26	

B. A. C. 663.

Jan. 23	2 2 22.52	

O. Arg. N. 2443.

Dec. 22	2 2 50.72	8.5

O. Arg. N. 2462.

1860.	h. m. s.	Mag.
Jan. 16	2 3 37.68	8.9

Weisse II, 35.

Oct. 26	2 4 16.27	9.5

Weisse II, 51.

Nov. 13	2 4 42.77	

ξ^1 Ceti.

Jan. 30	2 5 35.00	
Aug. 7	34.97	

20 Arietis.

Dec. 4	2 7 45.45	

67 Ceti.

Jan. 2	2 10 0.11	
16	0.08	
23	0.07	
Oct. 26	0.16	
Nov. 13	0.15	
Dec. 22	0.12	

Weisse II, 182.

Jan. 23	2 12 36.90	8.5

B. A. C. 723.

Nov. 13	2 12 42.20	
Dec. 4	42.15	

B. A. C. 742.

Dec. 4	2 17 7.78	

ι Cassiopeæ.

Jan. 16	2 17 34.62	

Weisse II, 312.

Nov. 13	2 19 41.93	

25 Arietis.

Dec. 24	2 19 56.63	

ξ^2 Ceti.

Dec. 4	2 20 43.06	

Weisse II, 333.

Jan. 23	2 20 48.64	8.5

27 Arietis.

Jan. 30	2 23 8.74	
Nov. 25	8.77	

Star	1860.	h. m. s.	Mag.
B. A. C. 774.	Nov. 13	2 23 56.05	
	Dec. 4	55.94	
WEISSE II, 437.	Jan. 23	2 26 55.08	8.0
WEISSE II, 470.	Jan. 16	2 28 31.09	8.0
WEISSE II, 479.	Jan. 16	2 29 3.48	9.0
B. A. C. 810.	Jan. 30	2 31 31.35	
μ ARIETIS.	Nov. 25	2 34 28.66	
WEISSE (2) II, 860.	Jan. 16	2 35 44.90	8.0
γ CETI.	Jan. 23	2 36 2.90	
	Nov. 13	2.93	
	Dec. 4	2.98	
RUMKER 695.	Jan. 30	2 36 50.64	
	Dec. 24	50.69	8.0
WEISSE (2) II, 972.	Jan. 16	2 40 25.80	7.0
π ARIETIS.	Jan. 30	2 41 29.04	
σ ARIETIS.	Sept. 7	2 43 45.99	
B. A. C. 883.	Nov. 13	2 43 50.33	
	Dec. 4	50.16	
B. A. C. 894.	Nov. 13	2 46 0.62	
	Dec. 4	0.48	
WEISSE II, 820.	Jan. 23	2 47 37.58	
WEISSE II, 866.	Nov. 28	2 49 40.65	9.0
47 ARIETIS.	Dec. 4	2 50 4.63	
RUMKER 755.	Jan. 30	2 50 28.68	8.0
	Sept. 7	28.74	8.0
WEISSE II, 880.	Jan. 23	2 50 50.93	
WEISSE II, 893.	Jan. 23	2 51 44.62	8.0
(*), +9° 40′.	Jan. 23	2 53 15.76	8.0
α CETI.	Jan. 30	2 54 57.86	
	Sept. 7	57.78	
	Nov. 28	57.82	
	Dec. 24	57.77	
B. A. C. 951.	Nov. 13	2 55 35.51	
	Dec. 4	35.33	
ρ PERSEI.	Dec. 25	2 56 13.00	4.0
ρ^3 ERIDANI.	Jan. 16	2 57 24.03	
53 ARIETIS.	Jan. 3	2 59 33.02	
WEISSE III, 26.	Jan. 23	3 3 15.13	8.0
δ ARIETIS.	Jan. 16	3 3 37.74	
	30	37.68	
	Sept. 7	37.72	
	Oct. 5	37.76	
	Nov. 13	37.63	
	28	37.69	
	Dec. 25	37.73	
ζ ARIETIS.	Jan. 30	3 6 51.54	
	Dec. 24	51.51	
WEISSE III, 114.	Sept. 7	3 7 15.53	9.0
	Nov. 28	15.44	9.0
B. A. C. 1019.	Nov. 13	3 10 25.06	
	Dec. 25	25.01	
WEISSE III, 205.	Sept. 7	3 12 8.82	8.0
	Oct. 5	8.85	8.0
WEISSE III, 224.	Jan. 23	3 13 2.06	
RUMKER 845.	Nov. 28	3 13 55.32	9.0
α PERSEI.	Jan. 30	3 14 20.71	
	Nov. 13	20.40	
	Dec. 24	20.61	
	25	20.64	
WEISSE III, 278.	Jan. 23	3 16 27.41	7.0
	Oct. 5	27.64	7.5
WEISSE (2) III, 351.	Sept. 7	3 16 43.87	9.0
o TAURI.	Jan. 30	3 17 16.95	
WEISSE III, 306.	Nov. 28	3 17 57.21	9.0
WEISSE (2) III, 420.	Nov. 13	3 20 52.24	
(*), − 18° 20′.	Jan. 16	3 22 44.22	
RUMKER 879.	Jan. 16	3 22 55.23	
f TAURI.	Jan. 30	3 23 8.82	
	Oct. 5	8.85	
WEISSE III, 428.	Sept. 7	3 24 34.94	8.0
	Nov. 28	34.84	8.0
WEISSE III, 447.	Jan. 23	3 25 35.31	7.0
B. A. C. 1105.	Sept. 7	3 28 33.10	
9 TAURI.	Jan. 4	3 28 44.29	
	30	44.38	
B. A. C. 1109.	Nov. 13	3 28 56.80	
	Dec. 25	56.85	
B. A. C. 1110.	Jan. 23	3 29 36.33	
11 TAURI.	Jan. 16	3 32 24.84	
WEISSE (2) III, 721.	Oct. 5	3 33 23.39	8.0
17 TAURI.	Jan. 4	3 36 33.94	
B. A. C. 1150.	Nov. 13	3 36 40.88	
η TAURI.	Jan. 4	3 39 10.01	
	16	10.00	
	Feb. 1	9.94	
	Oct. 5	10.02	
	Dec. 25	10.03	
WEISSE (2) III, 881.	Jan. 30	3 39 51.98	8.5
WEISSE (2) III, 887.	Jan. 23	3 40 2.72	8.0
WEISSE (2) III, 890.	Nov. 13	3 40 30.99	
27 TAURI.	Jan. 4	3 40 50.50	
WEISSE III, 774.	Sept. 7	3 40 59.65	8.5
WEISSE (2) III, 906.	Nov. 13	3 41 14.78	
WEISSE (2) III, 931.	Jan. 30	3 42 17.73	9.0

Weisse (2) III, 1041.

1860.	h.	m.	s.	Mag.
Jan. 23	3	48	27.04	7.5

ε Persei.

Oct. 5	3	48	28.07	

γ^1 Eridani.

Jan. 4	3	51	29.98	
30			29.82	
Feb. 1			29.96	
Sept. 7			29.85	
Oct. 5			29.93	
Dec. 25			29.91	

A^1 Tauri.

Dec. 25	3	56	25.38	

Weisse (2) III, 1214.

Jan. 30	3	56	53.19	9.0
Sept. 7			53.13	8.5

Rumker 1079.

Jan. 23	3	57	46.39	8.0
Oct. 5			46.47	

Rumker 1084.

Jan. 23	3	58	19.46	
Oct. 5			19.57	

ω^1 Tauri.

Jan. 30	4	1	0.81	

Weisse IV, 21.

Sept. 7	4	2	34.74	9.0

o^1 Eridani.

Jan. 16	4	5	2.00	
23			1.96	
30			1.97	
Feb. 2			1.97	
20			1.98	
Sept. 7			1.96	
Oct. 5			1.98	
Dec. 26			2.06	

δ^1 Tauri.

Sept. 7	4	14	51.87	

63 Tauri.

Oct. 5	4	15	23.15	

Weisse (2) IV, 351.

Nov. 28	4	16	52.27	8.5

υ^1 Tauri.

Feb. 1	4	17	56.22	
2			56.16	

ε Tauri.

1860.	h.	m.	s.	Mag.
Jan. 6	4	20	26.74	
23			26.69	
Feb. 1			26.78	
25			26.74	
Sept. 7			26.69	
Nov. 28			26.67	
Dec. 25			26.70	
26			26.66	

Weisse (2) IV, 458.

Oct. 5	4	21	37.13	7.0

Lalande 8479.

Jan. 25	4	42	18.12	8.0

Weisse (2) IV, 579.

Jan. 23	4	27	16.71	8.5

α Tauri.

Jan. 25	4	27	53.37	
Feb. 1			53.34	
2			53.45	
20			53.45	
25			53.42	
Sept. 7			53.46	
Nov. 28			53.43	
Dec. 26			53.40	

B. A. C. 1427.

Feb. 25	4	29	2.95	

σ^2 Tauri.

Jan. 23	4	31	16.04	

Weisse (2) IV, 713.

Jan. 25	4	33	0.86	9.0

Weisse (2) IV, 720.

Jan. 25	4	33	20.15	8.5

τ Tauri.

Jan. 6	4	33	50.88	
Feb. 1			50.71	
2			50.82	
Oct. 5			50.72	
Nov. 28			50.72	
Dec. 26			50.64	

μ Eridani.

Jan. 6	4	38	30.32	
23			30.20	
Feb. 23			30.25	
25			30.24	

ι Aurigæ.

Jan. 6	4	47	52.81	
Feb. 23			52.68	
Mar. 2			52.80	
Oct. 5			52.67	
Dec. 26			52.66	

Weisse (2) IV, 1079.

1860.	h.	m.	s.	Mag.
Jan. 25	4	48	32.69	

Weisse (2) IV, 1098.

Feb. 20	4	49	7.36	8.0
25			7.34	8.0

B. A. C. 1531.

Jan. 23	4	49	46.49	

ε Aurigæ.

Feb. 23	4	51	55.69	

ι Tauri.

Mar. 1	4	54	43.73	
2			43.79	
Nov. 28			43.81	
Dec. 26			43.81	

Weisse (2) IV, 1257.

Jan. 25	4	55	36.99	

Weisse (2) IV, 1258.

Jan. 25	4	55	38.31	8.5

B. A. C. 1555.

Jan. 6	4	56	1.16	

B. A. C. 1561.

Feb. 20	4	56	54.87	
23			55.00	

Weisse (2) IV, 1299.

Feb. 25	4	57	10.73	8.0
Oct. 5			10.62	7.5

Weisse (2) IV, 1364.

Jan. 25	4	59	30.86	8.0

ε Leporis.

Jan. 23	4	59	32.05	
Feb. 2			32.06	
Mar. 1			32.17	
2			32.26	
Dec. 26			32.18	

B. A. C. 1582.

Jan. 6	5	0	17.76	

(*), +30° 16′.

Feb. 25	5	4	39.19	9.0

Weisse (2) V, 111.

Feb. 25	5	5	17.48	8.5

12 Aurigæ.

1860.	h.	m.	s.	Mag.
Jan. 6	5	6	5.36	

α Aurigæ.

Jan. 23	5	6	21.10	
Feb. 20			21.05	
23			20.92	
Mar. 1			20.94	
Nov. 28			21.28	

β Orionis.

Jan. 25	5	7	48.70	
Feb. 3			48.67	
Mar. 2			48.74	

n Tauri.

Mar. 1	5	10	51.96	
Nov. 28			52.04	

(*), +26° 8′.

Jan. 25	5	11	6.27	9.0
Feb. 25			6.29	9.0

β Tauri.

Jan. 6	5	17	26.62	
Feb. 2			26.70	
3			26.56	
20			26.59	
23			26.57	
25			26.58	
Mar. 1			26.54	
2			26.60	
Oct. 5			26.63	
6			26.58	
Nov. 28			26.66	

Weisse (2) V, 513.

Jan. 23	5	18	25.10	
25			25.02	8.5

B. A. C. 1711.

Jan. 23	5	20	55.71	

Weisse (2) V, 630.

Jan. 25	5	22	20.19	8.5

δ Orionis.

Jan. 6	5	24	51.37	
23			51.35	
Feb. 2			51.27	
3			51.28	
4			51.35	
20			51.33	
Mar. 1			51.34	
Oct. 5			51.32	
6			51.34	
Nov. 28			51.33	
Dec. 26			51.35	

B. A. C. 1736.

Feb. 23	5	25	41.69	
Mar. 2			41.80	

ε Orionis.

1860.	h.	m.	s.	Mag.
Feb. 4	5	29	6.60	
23			6.63	
Mar. 1			6.64	
Oct. 5			6.69	
6			6.65	

ζ Tauri.

Feb. 2	5	29	16.78	
3			16.60	
Nov. 28			16.70	

B. A. C. 1769.

Feb. 20	5	29	58.99	
Mar. 2			58.90	

Weisse (2) V, 912.

Jan. 25	5	30	13.82	7.0

α Columbæ.

Jan. 6	5	34	34.87	
25			34.77	
Feb. 3			34.87	
4			35.00	
23			34.89	

129 Tauri.

Feb. 20	5	38	42.45	
25			42.40	

131 Tauri.

Feb. 4	5	39	14.63	
Mar. 2			14.80	

B. A. C. 1851.

Oct. 6	5	42	19.97	

136 Tauri.

Jan. 6	5	44	31.68	
Oct. 5			31.61	

B. A. C. 1867.

Feb. 4	5	44	59.73	
Mar. 2			59 76	

χ^1 Orionis.

Feb. 2	5	46	5.58	
3			5.66	
4			5.58	
20			5.51	
25			5.62	
Mar. 2			5.57	

Weisse (2) V, 1534.

Jan. 25	5	46	55.79	8.5

α Orionis.

Mar. 1	5	47	35.55	

Weisse V, 1204.

1860.	h.	m.	s.	Mag.
Feb. 23	5	47	35.79	

36 Aurigæ.

Jan. 6	5	50	21.31	

(*), −14° 13′.

Jan. 25	5	51	24.02	7.5

Weisse V, 1335.

Jan. 25	5	52	27.44	8.0

B. A. C. 1930.

Feb. 4	5	54	47.54	7.5

χ^3 Orionis.

Feb. 20	5	55	10.11	
27			10.25	

1 Geminorum.

Jan. 6	5	55	36.62	
Feb. 3			36.62	
Mar. 1			36.56	
Oct. 5			36.61	

40 Aurigæ.

Feb. 23	5	56	55.90	

(*), − 14° 46′.

Oct. 6	5	58	3.91	9.0

ν Orionis.

Jan. 9	5	59	34.71	
Feb. 4			34.72	
25			34.73	
Mar. 1			34.67	
2			34.69	
17			34.73	

3 Geminorum.

Feb. 20	6	1	13.90	
Dec. 26			13.84	
27			13.90	

Weisse (2) VI, 12

Jan. 25	6	2	38.81	8.0

B. A. C. 1994.

Feb. 4	6	5	3.12	

η Geminorum.

Jan. 6	6	6	25.63	
Feb. 3			25.73	
25			25.59	
Mar. 1			25.51	
2			25.55	
17			25.62	
Oct. 5			25.63	
6			25.62	
Dec. 26			25.54	
27			25.57	

κ Aurigæ.

1860.	h.	m.	s.	Mag.
Jan. 9	6	6	27.25	
Feb. 20			27.33	
23			27.33	

l Orionis.

Dec. 27	6	9	23.49	

B. A. C. 2038.

Jan. 9	6	12	51.99	
Feb. 25			52.06	7.0

B. A. C. 2039.

Feb. 25	6	12	59.38	

μ Geminorum.

Jan. 6	6	14	29.42	
Feb. 3			29.46	
4			29.34	
Mar. 1			29.35	
2			29.44	
29			29.46	
Oct. 5			29.39	
Nov. 30			29.39	
Dec. 27			29.35	

47 Aurigæ.

Feb. 23	6	19	35.26	
25			35.40	

78 Orionis.

Dec. 27	6	20	6.21	

ν Geminorum.

Feb. 3	6	20	39.10	
4			39.01	

51 Aurigæ.

Mar. 22	6	28	57.23	

γ Geminorum.

Mar. 29	6	29	37.40	
Nov. 30			37.43	
Dec. 27			37.50	

54 Aurigæ.

Feb. 23	6	30	43.32	
Mar. 1			43.25	

ε Geminorum.

Mar. 29	6	35	19.04	
30			19.00	

α Canis Majoris.

Nov. 30	6	38	58.75	

θ Canis Majoris.

Feb. 23	6	47	41.12	
Mar. 1			41.17	
29			41.13	
30			41.16	

ε Canis Majoris.

1860.	h.	m.	s.	Mag.
Jan. 9	6	53	7.51	
25			7.47	
Feb. 20			7.52	
23			7.53	
Mar. 1			7.48	
2			7.43	
17			7.44	
29			7.44	
30			7.50	
Oct. 5			7.58	
Nov. 4			7.48	
30			7.55	
Dec. 27			7.49	

ω Geminorum.

Feb. 4	6	53	52.90	

ζ Geminorum.

Feb. 23	6	55	48.17	
Mar. 1			48.15	
Nov. 30			48.17	

γ Canis Majoris.

Jan. 9	6	57	25.46	
25			25.45	
Feb. 4			25.56	
25			25.51	
Mar. 2			25.50	
17			25.51	
29			25.47	
30			25.50	
Oct. 5			25.54	
Nov. 4			25.46	
Dec. 27			25.55	

τ Geminorum.

Jan. 20	7	2	13.48	
Mar. 30			13.34	

B. A. C. 2341.

Feb. 23	7	2	27.79	

(*), +22° 30′.

Jan. 25	7	3	36.60	8.0

(*), +22° 30′.

Jan. 25	7	3	37.00	8.0

48 Geminorum.

Dec. 27	7	3	55.86	

51 Geminorum.

Mar. 1	7	5	19.78	
2			19.75	

O. Arg. N. 7753.

Jan. 25	7	9	35.86	8.5

47 Camelopardi.

Jan. 25	7	9	59.67	7.5

Rumker 2175.

1860.	h.	m.	s.	Mag.
Mar. 17	7	10	0.37	7.0

δ Geminorum.

Feb. 4	7	11	45.57	
20			45.52	
23			45.53	
Mar. 2			45.54	
29			45.60	
30			45.47	
31			45.61	
Nov. 4			45.57	
30			45.49	
Dec. 27			45.48	

21 Lyncis.

Jan. 9	7	16	8.37	
Feb. 20			8.52	

22 Lyncis.

Feb. 23	7	19	17.56	
Mar. 2			17.56	

β Canis Minoris.

Mar. 30	7	19	33.38	
31			33.50	

(*), +10° 21′.

Jan. 25	7	19	39.27	8.5

Lalande 14637.

Jan. 25	7	25	15.84	7.0
Nov. 4			15.93	

α^1 Geminorum.

Feb. 23	7	25	39.28	
Mar. 17			39.36	
31			39.33	

α^2 Geminorum.

Feb. 20	7	25	39.71	
23			39.69	
Mar. 17			39.72	
31			39.74	

υ Geminorum.

Feb. 4	7	27	17.55	
Mar. 1			17.36	
2			17.42	

70 Geminorum.

Jan. 29	7	29	21.03	
Feb. 20			21.07	
Mar. 5			21.05	

Weisse (2) VII, 874.

Jan. 25	7	29	58.87	9.0
Nov. 4			58.92	9.0

f Geminorum.

Feb. 23	7	31	23.34	
Mar. 1			23.32	
2			23.29	
30			23.30	

α Canis Minoris.

1860.	h.	m.	s.	Mag.
Mar. 7	7	31	58.32	
17			58.42	
31			58.39	

(*), +10° 28′.

Jan. 25	7	33	23.94	9.0

κ Geminorum.

Mar. 30	7	35	59.46	
31			59.48	

β Geminorum.

Feb. 27	7	36	44.61	
Mar. 1			44.66	
2			44.66	
5			44.61	
7			44.56	
17			44.65	
Nov. 4			44.66	

11 Canis Minoris.

Jan. 9	7	38	33.74	
Feb. 23			33.69	

ξ Navis.

Jan. 25	7	43	24.32	
Mar. 5			24.51	
7			24.48	
15			24.40	
Nov. 4			24.36	

φ Geminorum.

Mar. 30	7	44	55.39	
31			55.41	

52 Camelopardi.

Jan. 9	7	45	4.43	
Feb. 23			4.64	
Mar. 2			4.60	

9 Puppis.

Feb. 27	7	45	17.34	
Mar. 1			17.36	

54 Camelopardi.

Jan. 9	7	51	10.10	
Feb. 23			10.31	
Mar. 5			10.12	
7			10.25	
15			10.25	

3 Cancri.

Feb. 27	7	52	45.70	

6 Cancri.

Mar. 31	7	54	54.79	
Nov. 4			54.83	

B. A. C. 2679

Mar. 2	7	55	35.31	
5			35.32	
15			35.34	7.5

B. A. C. 2677.

1860.	h.	m.	s.	Mag.
Mar. 30	7	57	3.84	

28 Lyncis.

Feb. 23	7	57	27.35	
27			27.23	

ρ Argus.

Jan. 9	8	1	34.97	
Feb. 27			34.99	
Mar. 5			35.00	
7			35.01	
15			34.97	
31			35.01	
Nov. 4			34.89	

B. A. C. 2732.

Mar. 2	8	2	39.37	

β Cancri.

Jan. 9	8	8	55.22	
Feb. 27			55.22	
Mar. 5			55.21	
7			55.34	
30			55.22	
31			55.22	

30 Lyncis.

Mar. 1	8	9	6.15	

λ Cancri.

Mar. 31	8	12	12.32	

31 Lyncis.

Mar. 1	8	13	14.38	

B. A. C. 2798.

Jan. 9	8	15	13.18	
Feb. 27			13.26	
Apr. 2			13.40	

d^2 Cancri.

Mar. 1	8	17	54.17	

ν^1 Cancri, (1st *.)

Mar. 7	8	18	19.83	

ν^1 Cancri, (2d *.)

Mar. 7	8	18	20.04	

Weisse (2) VIII, 408.

Mar. 15	8	18	28.33	8.0

29 Cancri.

Feb. 27	8	20	48.36	
Mar. 5			48.39	
28			48.38	
30			48.36	
Apr. 2			48.38	

B. A. C. 2855.

1860.	h.	m.	s.	Mag.
Feb. 27	8	23	48.19	

η Cancri.

Jan. 9	8	24	36.41	
Feb. 7			36.43	
Mar. 1			36.46	
2			36.46	
4			36.46	
5			36.44	
7			36.45	
15			36.41	
28			36.46	
30			36.48	
Apr. 2			36.48	
Nov. 4			36.47	

B. A. C. 2892.

Mar. 28	8	28	53.93	
30			53.94	
Apr. 2			53.93	

B. A. C. 2930.

Mar. 5	8	34	42.41	

γ Cancri.

Feb. 7	8	35	10.68	
Mar. 4			10.70	
7			10.74	
30			10.71	
31			10.73	
Apr. 2			10.81	
Nov. 4			10.70	

δ Cancri.

Jan. 9	8	36	43.45	
Mar. 31			43.42	

ε Hydræ.

Feb. 7	8	39	21.62	
27			21.58	
Mar. 4			21.57	
5			21.58	
7			21.60	
20			21.56	
22			21.57	
28			21.58	
30			21.58	
Apr. 2			21.48	
14			21.58	

Weisse VIII, 1012, (1st *.)

Mar. 15	8	39	32.26	8.5

B. A. C. 2991.

Jan. 9	8	42	46.71	
Feb. 7			46.62	

Rumker 2699.

Apr. 14	8	48	51.77	7.0

Lalande 17662.

Mar. 22	8	49	35.14	8.5
28			35.12	8.5

ι URSÆ MAJORIS.

1860.	h. m. s.	Mag.
FeL. 7	8 49 36.18	
27	36.21	
Mar. 5	36.31	
7	36.24	
30	36.32	
31	36.23	
Apr. 2	36.35	

O. Arg. N. 9460.

Mar. 20	8 49 41.29	8.5

68 CANCRI.

Mar. 5	8 53 51.86	

B. A. C. 3091.

Mar. 7	8 56 36.21	
20	36.28	
22	36.32	
Apr. 14	36.22	

WEISSE VIII, 1476.

Mar. 15	8 58 0.53	8.5

σ² URSÆ MAJORIS.

Apr. 2	8 58 1.41	

τ CANCRI.

Feb. 7	8 59 35.12	
27	35.14	

κ CANCRI.

Mar. 20	9 0 9.62	
22	9.66	
28	9.68	

WEISSE VIJI, 1529.

Mar. 15	9 0 34.52	
Apr. 14	34.61	7.0

ξ CANCRI.

Mar. 30	9 1 18.21	

79 CANCRI.

Mar. 4	9 2 17.84	
5	17.93	

36 LYNCIS.

Feb. 27	9 4 37.86	

B. A. C. 3138.

Feb. 7	9 5 37.06	
Mar. 22	37.14	
30	37.09	

(*), + 25° 14′.

Mar. 15	9 8 37.22	8.5

WEISSE (2) IX, 172.

1860.	h. m. s.	Mag.
Mar. 20	9 9 14.22	8.5
22	14.21	8.5
28	14.22	8.5

83 CANCRI.

Feb. 7	9 11 9.66	
27	9.66	
Mar. 4	9.69	
5	9.76	
20	9.71	
30	9.76	
Apr. 2	9.82	
14	9.72	

B. A. C. 3181.

Mar. 7	9 12 44.98	
22	44.92	

ο Arg. N. 9842.

Mar. 15	9 15 9.62	

ο Arg. N. 9844.

Mar. 28	9 15 12.08	9.0
Apr. 2	12.33	8.5

B. A. C. 3194.

Mar. 20	9 15 25.33	

(*), — 38° 49′.

Apr. 14	9 16 48.44	7.0

1 DRACONIS.

Mar. 30	9 16 48.44	

(*), — 38° 46′.

Apr. 14	9 16 57.08	7.5

(*), — 38° 52′.

Apr. 14	9 18 43.02	6.0

41 LYNCIS.

Mar. 5	9 19 28.33	
7	28.43	

α HYDRÆ.

Mar. 4	9 20 42.40	
15	42.41	
22	42.44	
31	42.43	

24 URSÆ MAJORIS.

Mar. 30	9 22 2.17	

WEISSE (2) IX, 478.

Mar. 28	9 23 3.81	
Apr. 2	3.84	9.0

WEISSE (2) IX, 471.

1860.	h. m. s.	Mag.
Mar. 20	9 23 13.51	7.0
22	13.56	7.0

θ URSÆ MAJORIS.

Mar. 27	9 23 28.29	

ξ LEONIS.

Mar. 5	9 24 23.78	

9 LEONIS MINORIS.

Mar. 7	9 24 54.05	

(*), — 36° 11′.

Apr. 14	9 25 45.33	7.0

WEISSE IX, 579.

Mar. 13	9 26 48.38	9.0

LACAILLE 3918.

Mar. 28	9 29 22.57	7.0
Apr. 2	22.60	

12 LEONIS.

Mar. 7	9 31 9.37	
22	9.38	
27	9.43	

WEISSE (2) IX, 660.

Mar. 15	9 31 17.63	9.0

(*), — 36° 21′.

Apr. 14	9 32 8.82	6.0

WEISSE (2) IX, 686.

Mar. 30	9 32 41.41	7.5

(*), — 38° 5′.

Apr. 2	9 33 25.73	6.0

ο LEONIS.

Feb. 7	9 33 40.52	
Mar. 5	40.53	
30	40.37	
Apr. 26	40.61	

B. A. C. 3314.

Mar. 22	9 34 31.18	
27	31.18	

15 LEONIS.

Feb. 7	9 36 32.40	

WEISSE (2) IX, 794.

Mar. 15	9 37 49.04	7.5

ε LEONIS.

1860.	h. m. s.	Mag.
Mar. 5	9 37 53.82	
27	53.87	
30	53.81	
Apr. 26	53.88	
30	53.85	

B. A. C., 3333.

Mar. 7	9 38 23.01	6.5
22	22.97	6.0

WEISSE IX, 868.

Mar. 20	9 39 58.52	8.0

LACAILLE 4006.

Apr. 2	9 40 4.80	6.5
14	4.90	6.0

WEISSE (2) IX, 867.

Mar. 15	9 41 21.12	8.0

20 LEONIS.

Mar. 5	9 41 59.58	

ο URSÆ MAJORIS.

Mar. 7	9 42 33.31	
22	33.25	

LACAILLE 4036.

Apr. 26	9 43 36.13	

LACAILLE 4045.

Apr. 14	9 44 17.18	7.0

μ LEONIS.

Mar. 27	9 44 47.67	

RUMKER 2981.

Mar. 20	9 45 43.82	

WEISSE IX, 998.

Mar. 15	9 46 29.67	

(*), — 39° 20′.

Apr. 2	9 47 0.32	8.0

19 LEONIS MINORIS.

Feb. 7	9 49 5.55	

ν LEONIS.

Mar. 7	9 50 41.33	
22	41.26	

B. A. C., 3409.

1860.	h.	m.	s.	Mag.
Mar. 27	9	51	31.20	

π Leonis.

1860.	h.	m.	s.	Mag.
Feb. 7	9	52	48.74	
Mar. 7			48.80	
15			48.72	
20			48.74	
28			48.79	
Apr. 2			48.72	
26			48.79	
30			48.76	

Lacaille 4107.

1860.	h.	m.	s.	Mag.
Apr. 14	9	55	21.80	6.0

B. A. C. 3427.

1860.	h.	m.	s.	Mag.
Mar. 20	9	55	48.47	
22			48.44	
27			48.50	

(*), — 38° 48′.

1860.	h.	m.	s.	Mag.
Apr. 14	9	57	11.61	6.0

B. A. C. 3439.

1860.	h.	m.	s.	Mag.
Mar. 7	9	57	33.25	

(*), +13° 13′.

1860.	h.	m.	s.	Mag.
Mar. 15	9	57	57.68	9.0

B. A. C. 3448.

1860.	h.	m.	s.	Mag.
Apr. 26	9	59	19.71	6.0

α Leonis.

1860.	h.	m.	s.	Mag.
Feb. 7	10	0	54.75	
9			54.78	
Mar. 9			54.74	
15			54.81	
22			54.76	
27			54.80	
28			54.74	
Apr. 2			54.70	
14			54.74	
30			54.79	

B. A. C, 3466.

1860.	h.	m.	s.	Mag.
Mar. 20	10	2	31.76	

B. A. C. 3468.

1860.	h.	m.	s.	Mag.
Mar. 7	10	2	54.20	

Lacaille 4165.

1860.	h.	m.	s.	Mag.
Apr. 26	10	3	20.42	7.0

Weisse X, 45.

1860.	h.	m.	s.	Mag.
Mar. 28	10	4	5.86	8.0

Weisse X, 70.

1860.	h.	m.	s.	Mag.
Feb. 9	10	5	25.04	8.0
Mar. 20			24.98	8.0

Lacaille 4185.

1860.	h.	m.	s.	Mag.
Apr. 26	10	5	36.73	7.0

B. A. C. 3497.

1860.	h.	m.	s.	Mag.
Apr. 14	10	7	48.56	6.0

B. A. C. 3498.

1860.	h.	m.	s.	Mag.
Apr. 14	10	7	58.56	6.0

23 Leonis Minoris.

1860.	h.	m.	s.	Mag.
Feb. 7	10	8	16.64	
Mar. 5			16.69	
7			16.62	

Rumker 3113.

1860.	h.	m.	s.	Mag.
Mar. 27	10	8	42.10	

Weisse X, 173.

1860.	h.	m.	s.	Mag.
Apr. 30	10	10	56.12	9.0

γ^1 Leonis.

1860.	h.	m.	s.	Mag.
Mar. 7	10	12	14.90	
15			14.89	
20			14.93	
22			14.92	
27			14.89	
28			14.93	
Apr. 11			14.97	
13			14.96	
14			14.91	

Lacaille 4242.

1860.	h.	m.	s.	Mag.
Apr. 26	10	12	28.87	6.0

26 Leonis Minoris.

1860.	h.	m.	s.	Mag.
Feb. 7	10	14	58.26	

(*), —3° 2′.

1860.	h.	m.	s.	Mag.
Mar. 20	10	15	34.46	7.5

B. A. C. 3553.

1860.	h.	m.	s.	Mag.
Mar. 5	10	16	27.31	
15			27.14	

Rumker 3172.

1860.	h.	m.	s.	Mag.
Mar. 27	10	17	32.31	9.0
Apr. 30			32.29	8.5

29 Leonis Minoris.

1860.	h.	m.	s.	Mag.
Apr. 13	10	17	39.81	

30 Leonis Minoris.

1860.	h.	m.	s.	Mag.
Apr. 11	10	17	52.72	

45 Leonis.

1860.	h.	m.	s.	Mag.
Feb. 7	10	20	15.17	

Weisse (2) X, 412.

1860.	h.	m.	s.	Mag.
Apr. 11	10	21	9.80	

(*), —33° 43′.

1860.	h.	m.	s.	Mag.
Apr. 14	10	21	30.00	6.0
26			30.01	6.5

32 Leonis Minoris.

1860.	h.	m.	s.	Mag.
Feb. 9	10	21	55.12	
Mar. 15			55.38	

Weisse X, 378.

1860.	h.	m.	s.	Mag.
Mar. 27	10	21	59.35	7.0
28			59.33	8.0

Rumker 3211.

1860.	h.	m.	s.	Mag.
Apr. 30	10	23	9.92	

B. A. C. 3607.

1860.	h.	m.	s.	Mag.
Mar. 22	10	25	2.99	
Apr. 13			2.98	

ρ Leonis.

1860.	h.	m.	s.	Mag.
Feb. 8	10	25	26.18	
9			26.16	
Mar. 5			26.21	
7			26.19	
15			26.25	
Apr. 2			26.27	
11			26.19	
26			26.19	
30			26.23	

34 Leonis Minoris.

1860.	h.	m.	s.	Mag.
Mar. 20	10	25	29.91	

(*), —33° 42′.

1860.	h.	m.	s.	Mag.
Apr. 14	10	25	40.40	8.0

Weisse X, 468.

1860.	h.	m.	s.	Mag.
Mar. 27	10	26	56.67	9.0
28			56.65	9.0

Weisse X, 474.

1860.	h.	m.	s.	Mag.
Mar. 27	10	27	27.05	8.0
28			27.06	8.0

B. A. C. 3630.

1860.	h.	m.	s.	Mag.
Apr. 26	10	29	0.12	5.0

Weisse X, 538.

1860.	h.	m.	s.	Mag.
Mar. 20	10	30	27.77	8.5

B. A. C. 3637

1860.	h.	m.	s.	Mag.
Feb. 9	10	30	38.47	
Mar. 7			38.54	

Weisse X, 548.

1860.	h.	m.	s.	Mag.
Mar. 20	10	30	47.90	

Weisse (2) X, 660.

1860.	h.	m.	s.	Mag.
Mar. 22	10	32	35.49	7.0
28			35.58	7.0
Apr. 13			35.62	
30			35.50	7.0

(*), —11° 27′.

1860.	h.	m.	s.	Mag.
Mar. 27	10	34	1.54	8.5

Lacaille 4399.

1860.	h.	m.	s.	Mag.
Apr. 26	10	34	28.25	5.5

Lacaille 4407.

1860.	h.	m.	s.	Mag.
Apr. 26	10	35	6.71	6.0

B. A. C. 3674.

1860.	h.	m.	s.	Mag.
Mar. 22	10	35	9.51	
Apr. 11			9.53	

34 Sextantis.

1860.	h.	m.	s.	Mag.
Feb. 8	10	35	23.65	
9			23.62	
Mar. 7			23.61	
Apr. 2			23.69	
30			23.64	

(*), —36° 13′.

1860.	h.	m.	s.	Mag.
Apr. 14	10	36	14.76	6.0

Weisse (2) X, 776.

1860.	h.	m.	s.	Mag.
Apr. 13	10	38	19.88	8.0

37 Sextantis.

1860.	h.	m.	s.	Mag.
Feb. 7	10	38	48.16	
Apr. 2			48.26	

Weisse X, 702.

1860.	h.	m.	s.	Mag.
Mar. 20	10	39	59.60	8.0

Weisse (2) X, 830.

1860.	h.	m.	s.	Mag.
Mar. 27	10	41	22.48	

l Leonis.

1860.	h.	m.	s.	Mag.
Feb. 7	10	41	53.72	
8			53.79	
Mar. 22			53.70	
28			53.71	
Apr. 2			53.71	
4			53.69	
13			53.71	
14			53.71	
26			53.69	

39 Sextantis.

1860.	h.	m.	s.	Mag.
Feb. 9	10	41	56.96	
Mar. 7			56.97	

1860.	h.	m.	s.	Mag.
B. A. C. 3720.				
Apr. 11 . .	10	43	42.83	
30 . .			42.79	
Lacaille 4498.				
Apr. 26 . .	10	46	30.82	7.0
B. A. C. 3732.				
Feb. 9 . .	10	46	35.95	
Mar. 7 . .			36.06	
22 . .			35.96	
(*), −33° 49′.				
Apr. 14 . .	10	47	24.07	6.5
B. A. C. 3741.				
Feb. 7 . .	10	47	58.39	
Weisse X, 879.				
Mar. 27 . .	10	48	32.56	9.0
(*), +35° 56′.				
Mar. 28 . .	10	49	15.76	8.0
Weisse X, 914.				
Apr. 11 . .	10	50	52.76	8.0
***d* Leonis.**				
Feb. 8 . .	10	53	19.66	
Apr. 2 . .			19.78	
α Ursæ Majoris.				
Mar. 7 . .	10	55	3.40	
20 . .			3.38	
22 . .			3.43	
28 . .			3.46	
Apr. 4 . .			3.13	
13 . .			3.41	
14 . .			3.06	
26 . .			3.24	
B. A. C. 3781.				
Apr. 11 . .	10	56	29.01	
30 . .			28.95	7.0
(*), +34° 34′.				
Mar. 27 . .	10	57	40.73	9.5
χ Leonis.				
Feb. 7 . .	10	57	47.61	
8 . .			47.61	
Apr. 2 . .			47.66	
27 . .			47.52	
May 28 . .			47.63	
(*), −32° 49′.				
Apr. 14 . .	11	0	32.20	6.5
26 . .			32.16	7.0

1860.	h.	m.	s.	Mag.
Weisse (2) XI, 58.				
Mar. 27 . .	11	4	31.82	8.5
Weisse (2) XI, 90.				
Mar. 20 . .	11	5	43.59	7.0
22 . .			43.62	7.0
ρ^5 Leonis.				
Mar. 7 . .	11	6	35.55	
Apr. 30 . .			35.54	
δ Leonis.				
Apr. 11 . .	11	6	39.44	
14 . .			39.44	
26 . .			39.40	
27 . .			39.40	
May 28 . .			39.46	
Weisse (2) XI, 126.				
Mar. 27 . .	11	7	40.03	9.0
72 Leonis.				
Feb. 8 . .	11	7	45.12	
9 . .			45.01	
B. A. C. 3846.				
Apr. 4 . .	11	8	47.28	
13 . .			47.49	
φ Leonis.				
Mar. 7 . .	11	9	32.66	
δ Crateris.				
Feb. 8 . .	11	12	20.62	
9 . .			20.66	
Mar. 20 . .			20.63	
22 . .			20.59	
27 . .			20.59	
Apr. 4 . .			20.61	
11 . .			20.63	
13 . .			20.57	
14 . .			20.62	
26 . .			20.65	
27 . .			20.66	
σ Leonis.				
Apr. 30 . .	11	13	54.96	
May 28 . .			54.97	
71 Leonis.				
Mar. 22 . .	11	15	9.09	
Apr. 11 . .			9.06	
B. A. C. 3875.				
Apr. 26 . .	11	16	26.26	5.0
ι Leonis.				
Apr. 4 . .	11	16	37.40	

1860.	h.	m.	s.	Mag.
(*), +31° 49′.				
Mar. 27 . .	11	17	3.55	9.0
Weisse XI, 318.				
Feb. 9 . .	11	18	51.41	7.0
τ Leonis.				
Mar. 7 . .	11	20	44.18	
Apr. 30 . .			44.20	
B. A. C. 3902.				
Mar. 20 . .	11	20	45.65	
22 . .			45.67	
Apr. 11 . .			45.62	
27 . .			45.67	
***e* Leonis.**				
Feb. 9 . .	11	23	9.68	
Apr. 4 . .			9.73	
86 Leonis.				
Mar. 20 . .	11	23	10.43	
Lacaille 4777.				
Apr. 26 . .	11	26	1.29	6.0
Rumker 3636.				
Mar. 27 . .	11	26	50.98	8.0
Weisse XI, 468.				
Apr. 13 . .	11	27	36.85	8.0
Weisse (2) XI, 509.				
Mar. 22 . .	11	27	45.24	6.0
Apr. 11 . .			45.26	7.0
B. A. C. 3940.				
Apr. 26 . .	11	29	22.37	
Lacaille 4805.				
Apr. 26 . .	11	29	44.50	7.0
υ Leonis.				
Feb. 8 . .	11	29	46.86	
9 . .			46.78	
Mar. 7 . .			46.89	
20 . .			46.82	
27 . .			46.84	
Apr. 4 . .			46.84	
13 . .			46.86	
30 . .			46.84	
ι Crateris.				
Mar. 22 . .	11	31	33.50	
Apr. 11 . .			33.49	
(*), +6° 51′.				
Apr. 27 . .	11	31	51.68	7.0

1860.	h.	m.	s.	Mag.
92 Leonis.				
Mar. 7 . .	11	33	30.01	
20 . .			29.95	
Rumker 3697.				
Mar. 27 . .	11	34	48.56	7.0
B. A. C. 3973.				
Feb. 8 . .	11	36	11.92	
B. A. C. 3974.				
Apr. 26 . .	11	36	29.38	6.0
Weisse XI, 641.				
Apr. 30 . .	11	36	57.99	8.0
χ Ursæ Majoris.				
Mar. 20 . .	11	38	38.68	
22 . .			38.66	
Apr. 4 . .			38.47	
11 . .			38.64	
27 . .			38.52	
β Leonis.				
Feb. 8 . .	11	41	54.88	
Mar. 20 . .			54.92	
22 . .			54.91	
27 . .			54.95	
Apr. 4 . .			54.92	
11 . .			54.92	
13 . .			54.92	
24 . .			54.95	
26 . .			54.94	
May 3 . .			54.92	
Weisse (2) XI, 838.				
Apr. 30 . .	11	42	51.83	9.0
β Virginis.				
May 28 . .	11	43	24.19	
29 . .			24.03	
B. A. C. 4006.				
Mar. 7 . .	11	43	52.88	
B. A. C. 4014.				
Apr. 13 . .	11	45	33.09	
27 . .			33.19	7.0
γ Ursæ Majoris.				
Feb. 8 . .	11	46	26.96	
9 . .			26.75	
Mar. 20 . .			26.95	
22 . .			26.98	
27 . .			26.96	
Apr. 11 . .			26.99	
24 . .			27.12	
30 . .			26.83	
May 3 . .			26.73	

(*), −33° 18′.

1860.	h. m. s.	Mag.
Apr. 26	11 48 21.91	

B. A. C. 4037.

Apr. 13	11 49 57.51	
27	57.59	

π Virginis.

Apr. 2	11 53 41.81	
11	41.81	
May 28	41.87	

1 Comæ.

Feb. 8	11 54 33.79	
Apr. 30	33.69	

B. A. C. 4063.

Feb. 9	11 56 25.71	
11	25.77	

2 Comæ.

Apr. 24	11 57 6.28	
26	6.13	

B. A. C. 4070.

May 3	11 57 36.18	

Lacaille 5015.

Apr. 27	11 58 54.56	

B. A. C. 4080.

Feb. 9	12 0 4.62	
Apr. 11	4.56	
13	4.51	

Weisse (2) XI, 1206.

Apr. 30	12 0 54.04	8.5

B. A. C. 4088.

Apr. 26	12 1 7.27	6.0

B. A. C. 4095.

Apr. 26	12 2 49.23	5.5

B. A. C. 4100.

Feb. 8	12 3 39.01	

B. A. C. 4122.

Apr. 13	12 8 25.98	
27	26.08	

(*), −23° 54′.

Apr. 24	12 11 31.40	8.0

8 Comæ.

1860.	h. m. s.	Mag.
Apr. 24	12 12 14.64	

η Virginis.

Feb. 8	12 12 44.61	
9	44.60	
Apr. 11	44.60	
May 3	44.61	
23	44.60	
28	44.60	
29	44.59	

B. A. C. 4153.

Apr. 13	12 13 17.06	

Weisse (2) XII, 320.

Apr. 24	12 15 32.10	7.5

B. A. C. 4171.

May 14	12 15 57.56	7.0

4 Canum Venaticorum.

Feb. 8	12 16 53.29	
Apr. 13	53.15	

(*), +43° 20′.

May 3	12 17 30.62	

δ Corvi.

Apr. 27	12 22 37.45	

7 Canum Venaticorum.

Apr. 13	12 23 24.80	

Weisse XII, 409.

May 3	12 24 43.61	8.0

q Virginis.

Feb. 9	12 26 33.32	
May 29	33.32	

β Corvi.

May 14	12 27 2.30	

B. A. C. 4241.

Apr. 13	12 28 4.81	6.0
24	4.81	
27	4.73	

24 Comæ.

Apr. 13	12 28 6.21	4.5
24	6.23	
27	6.25	

Weisse XII, 494.

May 3	12 30 7.44	8.0

χ Virginis.

1860.	h. m. s.	Mag.
Apr. 24	12 32 1.33	
27	1.39	
May 29	1.30	

Weisse XII, 549.

May 3	12 33 26.74	7.5

28 Virginis.

Feb. 9	12 34 43.35	

B. A. C. 4277.

Apr. 13	12 36 26.70	
24	26.73	

Weisse XII, 665.

May 16	12 39 34.66	9.0

28 Comæ.

Apr. 27	12 41 13.62	
May 3	13.47	
14	13.45	

Weisse (2) XII, 877.

Apr. 13	12 43 17.34	8.0
24	17.37	8.0

ψ Virginis.

Feb. 9	12 47 4.45	
May 3	4.55	
29	4.46	

α Canum Venaticorum.

Mar. 9	12 49 28.22	
Apr. 24	28.36	

37 Comæ.

Apr. 24	12 53 34.21	

B. A. C. 4382.

Mar. 9	12 59 3.98	
Apr. 13	3.97	
24	4.04	

θ Virginis.

Mar. 9	13 2 42.18	
Apr. 24	42.27	
May 16	42.22	
22	42.23	
23	42.19	
29	42.17	

(*), + 13° 4′.

May 14	13 3 6.61	9.0

53 Virginis.

May 3	13 4 36.79	

β Comæ.

1860.	h. m. s.	Mag.
Apr. 24	13 5 20.16	
May 16	20.16	

58 Virginis.

Mar. 9	13 10 7.25	

B. A. C. 4468.

Apr. 24	13 14 28.26	
May 16	28.22	

α Virginis.

Mar. 9	13 17 49.27	
Apr. 13	49.25	
27	49.28	
May 14	49.19	
16	49.28	
22	49.24	
29	49.26	
June 1	49.30	

B. A. C. 4519.

June 1	13 25 11.01	

75 Virginis.

Apr. 6	13 25 23.18	

ζ Virginis.

Mar. 9	13 27 33.70	
Apr. 24	33.68	
May 3	33.66	
16	33.65	
22	33.67	
June 1	33.66	

B. A. C. 4536.

May 14	13 28 32.50	

B. A. C. 4553.

Apr. 27	13 31 23.71	
May 16	23.74	

m Virginis.

May 23	13 34 15.92	
June 1	16.04	

2 Bootis.

Apr. 6	13 34 24.95	
24	24.87	
May 22	24.82	

86 Virginis.

May 23	13 38 28.89	

3 Bootis.

Apr. 24	13 40 13.13	
27	13.16	

1860.	h.	m.	s.	Mag.
τ Bootis.				
June 1	13	40	36.52	
84 Ursæ Majoris.				
May 16	13	41	21.78	
22			21.82	
η Ursæ Majoris.				
Apr. 6	13	42	1.24	
89 Virginis.				
Mar. 9	13	42	16.30	
10			16.30	
May 3			16.19	
4			16.26	
υ Bootis.				
Apr. 24	13	42	43.44	
B. A. C. 4627.				
Apr. 27	13	44	53.60	
June 1			53.62	
B. A. C. 4640.				
May 14	13	46	49.15	
16			49.27	
22			49.14	
η Bootis.				
Mar. 10	13	48	1.10	
Apr. 6			1.08	
May 3			1.05	
4			1.05	
June 1			1.08	
2			1.05	
15			1.10	
25			1.03	
Weisse (2) XIII, 1084.				
May 14	13	49	43.69	6.0
16			43.67	6.5
22			43.63	7.0
B. A. C. 4652.				
Apr. 24	13	49	57.62	
27			57.61	
τ Virginis.				
Mar. 9	13	54	31.40	
Apr. 6			31.39	
24			31.36	
27			31.34	
May 3			31.41	
4			31.40	
22			31.42	
June 2			31.42	
15			31.42	
25			31.39	
Weisse XIII, 974.				
June 1	13	56	32.12	9.0

1860.	h.	m.	s.	Mag.
B. A. C. 4682.				
Apr. 27	13	57	36.60	
May 16			36.61	
B. A. C. 4694.				
Apr. 24	14	0	13.62	
May 3			13.56	
4			13.69	
α Draconis.				
Apr. 6	14	0	36.05	
Weisse (2) XIV, 11.				
May 14	14	1	50.33	7.0
June 15			50.43	7.0
(*), + 66° 16′.				
June 1	14	1	56.32	9.0
2			56.51	9.0
B. A. C. 4700.				
Apr. 24	14	3	12.02	
27			12.03	
May 22			11.92	
d Bootis.				
June 25	14	4	0.78	
κ Virginis.				
May 3	14	5	25.91	
23			25.85	
June 22			25.88	
14 Bootis.				
Apr. 27	14	7	21.22	
May 4			21.22	
B. A. C. 4722.				
June 25	14	7	41.54	
Weisse XIV, 130.				
May 14	14	8	32.21	9.0
α Bootis.				
Mar. 9	14	9	16.55	
10			16.57	
June 22			16.54	
λ Virginis.				
May 3	14	11	32.38	
4			32.23	
23			32.40	
Weisse (2) XIV, 248.				
May 16	14	11	57.98	8.5
June 1			57.99	8.5

1860.	h.	m.	s.	Mag.
A Bootis.				
Apr. 27	14	12	4.51	
May 22			4.48	
B. A. C. 4752.				
June 2	14	12	22.32	
18 Bootis.				
June 22	14	12	29.74	
Lalande 26210.				
May 14	14	13	4.34	8.0
B. A. C. 4776.				
Apr. 6	14	17	43.43	
27			43.41	7.0
June 22			43.42	
B. A. C. 4783.				
May 4	14	19	46.25	
14			46.40	
June 2			46.20	
25			46.13	
Weisse XIV, 422.				
June 1	14	23	36.69	9.0
B. A. C. 4805.				
Apr. 27	14	24	5.70	
June 22			5.59	
25			5.70	
ρ Bootis.				
Mar. 10	14	25	47.76	
June 2			47.74	
July 25			47.60	
26 Bootis.				
Apr. 6	14	26	10.66	
γ Bootis.				
May 4	14	26	26.26	
14			26.32	
Rumker 4737.				
May 22	14	26	46.60	9.0
5 Ursæ Minoris.				
May 16	14	27	51.76	
Weisse XIV, 519.				
June 1	14	28	53.39	8.5
B. A. C. 4830.				
Apr. 27	14	29	45.96	
June 2			45.87	

1860.	h.	m.	s.	Mag.
B. A. C. 4841.				
Apr. 6	14	32	57.06	
May 14			56.97	
June 20			56.84	
22			56.82	
34 Bootis.				
May 16	14	37	16.08	
22			16.06	
5 Libræ.				
June 1	14	38	14.91	
108 Virginis.				
June 20	14	38	22.34	6.5
22			22.44	6.5
ο Bootis.				
Apr. 27	14	38	42.48	
May 14			42.56	
ε Bootis.				
Mar. 13	14	38	52.33	
June 2			52.34	
25			52.35	
29			52.30	
July 25			52.26	
56 Hydræ.				
Apr. 6	14	39	34.92	
B. A. C. 4888.				
May 22	14	41	13.71	6.0
α Libræ.				
Mar. 13	14	43	8.32	
Apr. 6			8.28	
27			8.25	
May 4			8.27	
14			8.32	
16			8.29	
23			8.29	
June 1			8.30	
15			8.24	
20			8.27	
22			8.36	
29			8.29	
July 25			8.27	
B. A. C. 4902.				
June 2	14	43	56.68	
Rumker 4840.				
May 22	14	45	49.47	9.0
ξ^2 Libræ.				
May 23	14	49	10.64	
June 26			10.59	
29			10.49	

GROOMBRIDGE 2168.

1860.	h. m. s.	Mag.
May 14	14 50 49.54	
16	49.35	8.5
June 25	49.54	8.5

GROOMBRIDGE 2169.

June 22	14 50 51.35	8.0

β URSÆ MINORIS.

Mar. 13	14 51 9.54	
Apr. 6	9.29	
27	9.35	
June 1	9.44	
2	9.07	
20	9.46	

β URSÆ MINORIS, S. P.

Jan. 16	14 51 9.39	

(*), +43° 54′.

May 22	14 53 53.07	9.0

2 SERPENTIS.

June 25	14 54 38.87	6.0

20 LIBRÆ.

May 4	14 55 52.91	
23	52.94	
June 1	52.99	
26	53.03	
28	53.10	
29	52.92	
July 25	52.99	

ω BOOTIS.

June 2	14 55 58.50	
13	58.46	

β BOOTIS.

Apr. 6	14 56 40.35	
May 16	40.24	
June 20	40.36	

WEISSE XIV, 1072.

May 22	14 57 17.98	9.0

B. A. C. 4965.

June 22	14 58 9.79	6.0

WEISSE XIV, 1118.

June 25	14 59 45.45	8.5

WEISSE XIV, 1121.

June 25	14 59 54.30	8.0

B. A. C. 4993.

Mar. 13	15 2 29.57	
Apr. 6	29.52	
June 20	29.53	

ι¹ LIBRÆ.

1860.	h. m. s.	Mag.
May 4	15 4 14.74	
23	14.79	
June 1	14.82	
26	14.87	
29	14.78	

WEISSE XV, 79.

June 22	15 6 3.38	7.5

WEISSE XV, 91.

June 2	15 6 34.19	

β LIBRÆ.

Mar. 13	15 9 28.60	
Apr. 6	28.58	
May 4	28.58	
16	28.58	
22	28.56	
June 11	28.63	
20	28.60	
26	28.58	
29	28.60	
July 25	28.66	

B. A. C. 5048.

Mar. 13	15 12 7.91	
June 2	7.70	

5 SERPENTIS.

June 25	15 12 10.09	

WEISSE XV, 210.

June 22	15 12 37.03	

φ² LUPI.

June 11	15 14 13.08	
20	13.18	

WEISSE XV, 249.

May 22	15 14 49.52	9.0

ο² LIBRÆ.

June 26	15 15 13.61	
28	13.70	
29	13.50	

WEISSE XV, 265.

June 25	15 15 43.66	8.0

WEISSE XV, 281.

June 22	15 16 18.81	8.0

τ¹ SERPENTIS.

Mar. 13	15 19 17.83	
May 22	17.76	
June 1	17.82	

B. A. C. 5091.

1860.	h. m. s.	Mag.
June 2	15 20 18.88	
20	18.80	
25	18.83	

ζ¹ LIBRÆ.

June 26	15 20 21.99	
28	22.08	
29	21.92	

B. A. C. 5092.

June 13	15 20 35.68	

WEISSE XV, 400.

June 22	15 22 8.54	8.5

γ LIBRÆ.

July 10	15 27 41.95	

α CORONÆ BOREALIS.

June 1	15 28 45.58	
11	45.54	
13	45.62	
22	45.52	
26	45.52	
29	45.59	
July 25	45.60	

τ³ SERPENTIS.

Mar. 13	15 29 12.00	

μ CORONÆ BOREALIS.

May 22	15 30 6.56	
June 2	6.51	

LALANDE 28453.

June 20	15 30 44.15	7.0

WEISSE XV, 585.

June 25	15 31 27.32	8.0

κ LIBRÆ.

June 29	15 33 53.03	
July 10	53.12	

B. A. C. 5184.

June 22	15 34 53.97	

χ SERPENTIS.

May 22	15 35 12.24	
June 1	12 16	

α SERPENTIS.

1860.	h. m. s.	Mag.
Mar. 13	15 37 22.37	
June 2	22.42	
9	22.39	
11	22.44	
13	22.38	
22	22.41	
25	22.37	
26	22.37	
29	22.41	
July 16	22.37	
25	22.40	

LALANDE 28697.

June 20	15 37 54.21	7.0

LALANDE 28766.

July 16	15 41 4.33	8.0

WEISSE XV, 845.

June 25	15 42 7.62	9.0

B. A. C. 5236.

Mar. 13	15 42 48.30	
May 22	48.26	

WEISSE XV, 828.

June 20	15 43 18.02	8.0
22	17.99	8.0

b SERPENTIS.

June 9	15 43 58.24	5.5
11	58.22	6.0

ρ SERPENTIS.

June 1	15 45 6.96	
2	7.02	

WEISSE XV, 864.

July 14	15 45 26.59	

47 LIBRÆ.

June 22	15 46 55.15	7.0

ρ SCORPII.

June 1	15 48 14.80	
2	14.77	

ζ URSÆ MINORIS.

May 22	15 49 8.45	
June 13	8.05	
26	8.05	
July 25	8.00	

ζ URSÆ MINORIS, S. P.

Jan. 16	15 49 8.22	

WEISSE XV, 939.

July 16	15 49 44.82	9.0

2 Herculis.

1860.	h.	m.	s.	Mag.
Mar. 13	15	49	57.93	
June 9			57.70	
19			57.63	

π Scorpii.

1860.	h.	m.	s.	Mag.
June 11	15	50	23.16	

4 Herculis.

1860.	h.	m.	s.	Mag.
May 6	15	50	47.89	
July 13			47.87	

Lalande 29043.

1860.	h.	m.	s.	Mag.
June 20	15	50	59.43	8.5

Lalande 29044.

1860.	h.	m.	s.	Mag.
June 20	15	51	0.21	8.0

δ Scorpii.

1860.	h.	m.	s.	Mag.
June 1	15	52	3.57	
2			3.69	
July 26			3.57	
27			3.60	

Gr. C. 1315.

1860.	h.	m.	s.	Mag.
June 9	15	54	59.13	7.0
25			59.16	
July 16			59.19	

β Scorpii.

1860.	h.	m.	s.	Mag.
Mar. 13	15	57	17.94	
May 6			18.02	
22			18.00	
June 1			18.03	
9			18.01	
11			17.98	
13			18.02	
15			18.01	
19			18.01	
20			18.05	
22			18.02	
25			18.05	
26			18.09	
29			18.02	
July 13			18.12	
16			18.05	
20			18.03	
25			18.04	
26			18.03	
27			18.04	

B. A. C. 5345.

1860.	h.	m.	s.	Mag.
June 20	15	59	27.82	7.0

11 Scorpii.

1860.	h.	m.	s.	Mag.
June 22	15	59	50.08	6.0

κ Herculis.

1860.	h.	m.	s.	Mag.
Mar. 13	16	1	45.41	
July 25			45.34	

B. A. C. 5368.

1860.	h.	m.	s.	Mag.
July 25	16	1	45.74	

Weisse XVI, 11.

1860.	h.	m.	s.	Mag.
June 15	16	2	16.66	

η Herculis.

1860.	h.	m.	s.	Mag.
Mar. 13	16	2	27.96	

Weisse XVI, 19.

1860.	h.	m.	s.	Mag.
June 19	16	2	30.97	6.0

ν¹ Scorpii.

1860.	h.	m.	s.	Mag.
June 13	16	3	50.61	7.0

ν² Scorpii.

1860.	h.	m.	s.	Mag.
May 6	16	3	51.69	
22			51.61	
June 13			51.67	

Groombridge 2319.

1860.	h.	m.	s.	Mag.
July 16	16	5	20.24	

B. A. C. 5395.

1860.	h.	m.	s.	Mag.
June 22	16	5	26.82	
25			26.81	

Weisse XVI, 83.

1860.	h.	m.	s.	Mag.
June 11	16	5	49.35	7.5
July 13			49.23	

B. A. C. 5408.

1860.	h.	m.	s.	Mag.
July 25	16	6	34.77	

δ Ophiuchi.

1860.	h.	m.	s.	Mag.
Mar. 13	16	7	0.60	
May 6			0.63	
22			0.65	
June 1			0.66	
2			0.62	
9			0.61	
15			0.62	
19			0.68	
20			0.61	
26			0.65	
29			0.64	
30			0.65	
July 10			0.65	
20			0.65	
26			0.64	
27			0.62	

σ Coronæ Borealis.

1860.	h.	m.	s.	Mag.
June 13	16	9	26.14	
19			26.04	

Weisse XVI, 173.

1860.	h.	m.	s.	Mag.
June 22	16	10	0.78	7.0
25			0.76	8.0

(*), −13° 7′.

1860.	h.	m.	s.	Mag.
July 25	16	10	10.18	8.0

O. Arg. S. 15490.

1860.	h.	m.	s.	Mag.
June 11	16	10	23.07	9.0
July 13			23.14	9.0

O. Arg. S. 15541.

1860.	h.	m.	s.	Mag.
June 15	16	12	26.08	8.0
July 16			26.07	8.0

σ Scorpii.

1860.	h.	m.	s.	Mag.
May 6	16	12	40.96	
26			41.06	
27			40.95	
30			40.95	
July 27			41.04	

B. A. C. 5452.

1860.	h.	m.	s.	Mag.
June 19	16	13	59.78	

B. A. C. 5460.

1860.	h.	m.	s.	Mag.
June 22	16	15	7.30	

(*), +71° 10′.

1860.	h.	m.	s.	Mag.
June 25	16	15	42.02	8.0

O. Arg. N. 16121.

1860.	h.	m.	s.	Mag.
June 11	16	15	50.38	8.5
July 25			50.88	

ψ Ophiuchi.

1860.	h.	m.	s.	Mag.
June 20	16	15	54.82	

ξ Coronæ Borealis.

1860.	h.	m.	s.	Mag.
June 13	16	16	38.60	

ν² Coronæ Borealis.

1860.	h.	m.	s.	Mag.
Mar. 13	16	17	12.71	

υ Ophiuchi.

1860.	h.	m.	s.	Mag.
July 25	16	20	13.94	

α Scorpii.

1860.	h.	m.	s.	Mag.
Mar. 14	16	20	49.66	
May 6			49.68	
June 2			49.64	
15			49.61	
19			49.68	
22			49.70	
25			49.64	
26			49.73	
29			49.60	
30			49.66	
July 13			49.67	
14			49.66	
16			49.68	
20			49.65	
26			49.69	
27			49.75	
Aug. 23			49.69	

η Draconis.

1860.	h.	m.	s.	Mag.
June 20	16	22	6.08	

g Herculis.

1860.	h.	m.	s.	Mag.
Mar. 13	16	24	2.75	
June 9			2.60	

B. A. C. 5529.

1860.	h.	m.	s.	Mag.
July 25	16	25	12.22	8.0

Lalande 30099.

1860.	h.	m.	s.	Mag.
June 15	16	26	1.28	8.0
22			1.23	8.0

h Herculis.

1860.	h.	m.	s.	Mag.
Mar. 14	16	26	3.30	
June 13			3.37	
July 25			3.13	

Groombridge 2356.

1860.	h.	m.	s.	Mag.
June 25	16	26	52.81	7.0

τ Scorpii.

1860.	h.	m.	s.	Mag.
May 6	16	27	10.28	
June 2			10.22	
30			10.30	
July 14			10.38	
24			10.37	
26			10.31	
27			10.32	

32 Herculis.

1860.	h.	m.	s.	Mag.
June 19	16	28	1.61	

B. A. C. 5549.

1860.	h.	m.	s.	Mag.
Mar. 13	16	29	15.48	

ζ Ophiuchi.

1860.	h.	m.	s.	Mag.
June 11	16	29	27.14	

Lalande 30207.

1860.	h.	m.	s.	Mag.
June 9	16	29	56.20	8.0
22			56.32	8.0

24 Scorpii.

1860.	h.	m.	s.	Mag.
June 11	16	33	28.70	
26			28.81	
July 14			28.70	
20			28.69	
21			28.78	
24			28.71	
26			28.75	

B. A. C. 5580.

1860.	h.	m.	s.	Mag.
June 15	16	33	40.05	6.5
July 25			40.01	6.5

42 Herculis.

1860.	h.	m.	s.	Mag.
Mar. 13	16	34	57.02	

B. A. C. 5598.

1860.	h.	m.	s.	Mag.
June 22	16	35	24.87	7.0
25			24.87	7.0

ζ HERCULIS.

1860.	h.	m.	s.	Mag.
Mar. 14	16	36	0.57	
June 13			0.54	
20			0.40	
July 10			0.40	
Aug. 23			0.32	

B. A. C. 5605.

May 6	16	36	24.39	6.5
June 19			24.34	

15 OPHIUCHI.

June 22	16	36	43.56	6.5
25			43.46	

B. A. C. 5615.

June 9	16	38	4.70	

25 SCORPII.

July 14	16	38	17.32	
21			17.23	
24			17.28	

LALANDE 30479.

June 15	16	38	42.37	8.0

B. A. C. 5625.

June 30	16	39	50.40	

LALANDE 30556.

July 25	16	41	31.52	7.5
27			31.63	7.5

WEISSE XVI, 792, (1st *.)

July 16	16	41	41.24	9.0
20			41.16	

WEISSE XVI, 792, (2d *.)

July 16	16	41	44.93	8.5
20			44.83	

20 OPHIUCHI.

Mar. 14	16	42	5.45	
June 26			5.52	
July 10			5.46	

LALANDE 30600.

June 15	16	42	41.76	9.0
22			41.76	9.0

LALANDE 30641.

June 9	16	44	8.88	8.5
25			8.84	8.5

LALANDE 30671.

June 11	16	45	4.46	8.0

B. A. C. 5663.

1860.	h.	m.	s.	Mag.
July 13	16	45	9.37	

51 HERCULIS.

June 30	16	45	57.06	

22 OPHIUCHI.

July 16	16	46	23.33	6.5
20			23.22	
25			23.34	

WEISSE XVI, 912.

June 15	16	48	12.82	9.0
22			12.91	

54 HERCULIS.

Mar. 13	16	49	13.01	
14			12.99	

LALANDE 30788.

June 25	16	49	20.49	8.5

O. ARG. S. 16158.

July 25	16	49	49.05	
27			49.08	

B. A. C. 5706.

June 19	16	50	17.86	
July 16			18.01	

O. ARG. S. 16168.

June 9	16	50	41.97	8.5
11			41.97	8.5

κ OPHIUCHI.

Mar. 13	16	51	2.46	
14			2.54	
May 6			2.53	
26			2.53	
July 10			2.55	
14			2.43	
18			2.53	
21			2.50	
24			2.40	
26			2.56	
Aug. 23			2.41	

O. ARG. S. 16206.

July 20	16	52	36.39	8.0
27			36.45	7.5

B. A. C. 5730.

June 11	16	54	58.73	
15			58.74	

B. A. C. 5742.

June 11	16	55	55.99	
15			55.96	

(*), + 73° 7′.

1860.	h.	m.	s.	Mag.
July 13	16	56	25.17	8.0
16			24.81	8.5

GROOMBRIDGE 2411.

June 19	16	59	4.82	
July 20			4.34	7.0

B. A. C. 5768.

July 26	16	59	51.19	

B. A. C. 5771.

June 15	17	0	7.19	

ε URSÆ MINORIS.

May 6	17	0	26.71	
June 22			26.86	
25			27.29	
26			26.93	
30			27.19	
July 10			26.72	
18			26.84	

η OPHIUCHI.

July 14	17	2	21.10	
21			20.90	
24			21.01	
Aug. 23			21.05	

B. A. C. 5788.

Mar. 13	17	3	4.31	
14			4.27	

A^1 OPHIUCHI.

July 27	17	6	44.44	

GROOMBRIDGE 2418.

July 13	17	7	21.23	8.0
16			20.93	8.0

α HERCULIS.

Mar. 14	17	8	15.85	
May 6			15.81	
June 9			15.86	
11			15.81	
15			15.86	
19			15.76	
22			15.82	
25			15.77	
30			15.80	
July 13			15.82	
14			15.85	
18			15.82	
21			15.87	
24			15.83	
26			15.79	
Aug. 23			15.83	

B. A. C. 5829.

July 16	17	9	28.50	

π HERCULIS.

June 19	17	10	10.17	

WEISSE XVII, 202.

1860.	h.	m.	s.	Mag.
June 9	17	12	30.08	7.0

B. A. C. 5846.

July 13	17	13	6.44	7.0

θ OPHIUCHI.

Mar. 13	17	13	24.76	
14			24.74	
May 6			24.81	
June 11			24.79	
15			24.81	
30			24.74	
July 10			24.82	
14			24.79	
16			24.75	
18			24.80	
20			24.80	
21			24.78	
24			24.81	
26			24.85	
27			24.78	
Aug. 7			24.75	

70 HERCULIS.

Aug. 23	17	15	8.21	

WEISSE XVII, 254.

June 19	17	15	11.97	8.5

b OPHIUCHI.

Mar. 13	17	17	49.27	
14			49.25	
July 10			49.31	

73 HERCULIS.

Aug. 23	17	18	15.14	

d OPHIUCHI.

May 6	17	18	24.96	
June 30			24.96	

B. A. C. 5884.

July 13	17	18	42.05	
14			42.04	

σ OPHIUCHI.

June 9	17	19	34.16	
19			34.14	
July 24			34.09	

B. A. C. 5892.

July 27	17	19	38.34	7.0

c^2 OPHIUCHI.

Mar. 13	17	22	52.45	
June 30			52.53	
July 10			52.55	
13			52.43	
21			52.45	
Aug. 23			52.52	

Weisse XVII, 409.

1860.	h.	m.	s.	Mag.
June 9	17	23	3.25	9.0
11			3.15	7.0

ζ Herculis.

July 14	17	25	4.84	
24			4.76	

Madras 1165.

June 9	17	26	59.51	8.0
11			59.55	8.0

β Draconis.

June 15	17	27	16.33	

α Ophiuchi.

Mar. 13	17	28	26.16	
14			26.16	
June 19			26.18	
30			26.20	
July 10			26.14	
13			26.10	
16			26.15	
18			26.15	
20			26.14	
21			26.09	
24			26.12	
25			26.06	
27			26.07	
Aug. 7			26.10	
23			26.10	

B. A. C. 5966.

July 25	17	31	54.26	
Aug. 7			54.29	
16			54.41	

ο Serpentis.

Mar. 13	17	33	32.81	
14			32.78	
July 10			32.87	

B. A. C. 5981.

July 14	17	34	28.84	
18			28.87	7.0
25			28.97	
Aug. 16			28.99	

β Ophiuchi.

July 24	17	36	33.29	
Aug. 12			33.47	

3 Sagittarii.

July 14	17	38	44.93	
16			44.90	
18			44.90	
Aug. 7			44.94	

μ Herculis.

1860.	h.	m.	s.	Mag.
Mar. 14	17	40	58.78	
June 11			58.67	
July 10			58.74	
24			58.71	
Aug. 12			58.77	
16			58.79	
23			58.75	

Weisse XVII, 810.

June 9	17	41	17.12	9.0
July 27			17.03	9.0

Weisse XVII, 834.

Aug. 9	17	42	33.11	8.0

Weisse XVII, 835.

Aug. 7	17	42	38.33	9.0

Lalande 32559.

July 18	17	43	14.46	8.5

Weisse XVII, 846.

Aug. 15	17	43	14.81	8.5

Weisse XVII, 857.

Aug. 15	17	43	38.34	

B. A. C. 6044.

July 13	17	44	47.37	7.0
14			47.40	
Aug. 14			47.39	
16			47.39	
23			47.46	

B. A. C. 6063.

June 11	17	47	51.42	7.0
July 18			51.40	7.0
27			51.49	7.0

B. A. C. 6065.

June 9	17	48	15.86	

Madras 1209.

June 9	17	48	45.27	8.0

B. A. C. 6074.

July 13	17	50	5.76	
14			5.79	
24			5.82	
Aug. 23			5.86	
25			5.71	

(*), — 15° 38′.

July 18	17	50	35.08	9.5

(*), —31° 13′.

Aug. 16	17	50	41.98	

4 Sagittarii.

1860.	h.	m.	s.	Mag.
Mar. 13	17	51	14.66	
July 10			14.63	

γ Draconis.

Mar. 14	17	53	21.36	
June 11			21.05	
July 16			21.23	
20			21.30	
25			21.33	
Aug. 7			21.23	
9			21.30	
12			21.43	

(*), — 15° 38′.

Aug. 15	17	53	47.90	9.5

O. Arg. S. 17533.

July 18	17	55	5.14	
27			5.14	6.0

O. Arg. S. 17576.

July 18	17	56	31.63	8.0
27			31.68	7.0
Aug. 1			31.85	7.5

γ² Sagittarii.

Mar. 13	17	56	48.79	
July 13			48.80	
14			48.83	
16			48.80	
24			48.79	
Aug. 25			48.63	
30			48.60	

(*), —30° 25′.

July 21	17	57	1.40	

(*), + 27° 48′.

Aug. 15	17	57	5.36	8.5

B. A. C. 6131.

July 21	17	59	55.60	
25			55.68	
Aug. 7			55.58	
12			55.59	7.0
30			55.56	

O. Arg. S. 17680.

July 18	18	0	5.03	8.0
27			5.06	6.5

B. A. C. 6132.

July 13	18	0	14.60	7.0
16			14.56	

O. Arg. S. 17695.

July 18	18	0	27.72	7.5
Aug. 9			27.73	7.5

(*), —31° 9′.

1860.	h.	m.	s.	Mag.
July 25	18	1	18.02	
Aug. 7			18.06	8.0

B. A. C. 6166.

Aug. 1	18	4	30.22	

μ Sagittarii.

Mar. 13	18	5	23.44	
Apr. 11			23.37	
July 10			23.40	
13			23.28	
16			23.40	
18			23.35	
21			23.40	
24			23.36	
25			23.44	
27			23.44	
30			23.35	
Aug. 7			23.42	
9			23.37	
12			23.40	
15			23.39	
22			23.45	
23			23.46	
25			23.39	
30			23.36	
Sept. 14			23.37	
21			23.36	

A Herculis.

July 20	18	6	38.02	
Aug. 12			38.03	

B. A. C. 6187.

July 14	18	8	8.93	

O. Arg. S. 18044.

Aug. 9	18	11	24.26	8.5

δ Sagittarii.

Mar. 13	18	12	1.76	
14			1.72	
21			1.73	
22			1.79	

B. A. C. 6210.

Aug. 1	18	12	5.10	

B. A. C. 6217.

July 14	18	12	54.24	
Aug. 14			54.14	

B. A. C. 6222.

June 9	18	13	33.50	

κ Lyræ.

Aug. 7	18	14	57.21	
22			57.18	

B. A. C. 6241.

July 25	18	16	18.33	

B. A. C. 6258.

1860.	h. m. s.	Mag.
Aug. 9	18 18 11.67	

λ Sagittarii.

Mar. 13	18 19 19.66	
Sept. 21	19.68	
22	19.69	

B. A. C. 6264.

Aug. 12	18 19 22.88	

O. Arg. S. 18234.

Aug. 12	18 19 24.59	8.5

B. A. C. 6271.

Aug. 15	18 20 17.24	
22	17.21	7.0

B. A. C. 6273.

July 14	18 20 43.74	
Aug. 14	43.76	

B. A. C. 6294.

June 9	18 23 14.00	5.5
Aug. 1	14.15	

Lalande 34222.

Aug. 29	18 24 4.37	9.0

B. A. C. 6319.

Aug. 7	18 26 46.16	
14	46.20	

B. A. C. 6322.

Aug. 22	18 26 56.53	

Lalande 34401.

June 9	18 28 19.19	7.5

(*), − 21° 49′.

July 18	18 28 37.64	

O. Arg. S. 18462.

Aug. 29	18 29 6.93	9.0

B. A. C. 6336.

Aug. 1	18 29 31.45	

(*), −18° 55′.

June 9	18 30 28.92	8.5

α Lyræ.

1860.	h. m. s.	Mag.
Apr. 11	18 32 11.83	
July 14	11.83	
24	11.69	
Aug. 14	11.71	
16	11.85	
23	11.84	
30	11.72	

O. Arg. S. 18531.

July 18	18 32 19.19	9.0
Aug. 15	19.27	8.5

B. A. C. 6358.

July 13	18 33 43.92	
Aug. 9	43.88	

B. A. C. 6365.

July 16	18 35 27.26	

(*), −18° 55′.

June 9	18 35 51.74	

B. A. C. 6369.

July 14	18 36 13.04	
Aug. 14	13.06	

(*), −21° 30′.

July 18	18 36 33.09	9.5
Aug. 29	33.26	9.5

φ Sagittarii.

Apr. 11	18 36 54.38	
July 24	54.32	
30	54.35	
Aug. 12	54.42	5.0
25	54.36	

O. Arg. S. 18636.

July 27	18 37 41.58	

B. A. C. 6382.

Aug. 7	18 38 47.52	
9	47.46	

B. A. C. 6396.

Aug. 14	18 40 52.05	
16	52.04	

29 Sagittarii.

July 30	18 41 21.50	

B. A. C. 6403.

July 13	18 41 57.23	

Lacaille 7874.

Aug. 12	18 41 57.94	7.5

B. A. C. 6422.

1860.	h. m. s.	Mag.
Aug. 16	18 44 20.75	

Madras 1304.

July 18	18 44 43.07	8.5

β Lyræ.

June 9	18 44 54.57	
11	54.61	
July 14	54.60	
27	54.48	
Aug. 1	54.62	
7	54.61	
9	54.49	
15	54.58	
22	54.53	
29	54.59	
30	54.58	
Sept. 13	54.51	

σ Sagittarii.

Apr. 11	18 46 34.84	
June 5	34.80	
July 30	34.86	
Aug. 25	34.80	
Sept. 21	34.79	

ξ^1 Sagittarii.

July 13	18 49 1.14	
Aug. 15	1.22	

B. A. C. 6455.

Aug. 7	18 49 7.07	
Sept. 13	7.14	

ε Coronæ Australis.

July 14	18 49 16.43	
Aug. 30	16.45	

B. A. C. 6457.

Aug. 14	18 49 16.50	
16	16.42	

ξ^2 Sagittarii.

Aug. 1	18 49 22.47	
12	22.51	4.0

O. Arg. S. 18907.

July 18	18 50 49.19	9.0
Aug. 29	49.35	9.0

O. Arg. S. 18916.

June 9	18 51 12.47	
Aug. 29	12.56	8.0

B. A. C. 6479.

Aug. 22	18 51 49.16	

(*), −22° 2′.

Aug. 9	18 52 44.76	9.5

ε Aquilæ.

1860.	h. m. s.	Mag.
Apr. 11	18 53 16.06	

ζ Sagittarii.

June 5	18 53 41.92	
Sept. 21	42.02	

B. A. C. 6490.

Sept. 15	18 53 53.37	
25	53.24	

Lalande 35468.

Aug. 1	18 54 0.31	7.5

O. Arg. S. 18978.

Aug. 12	18 54 22.72	9.5

O. Arg. S. 18979.

July 18	18 54 24.03	8.5
Aug. 12	24.04	8.5
15	23.96	

O. Arg. S. 18986.

Aug. 1	18 54 46.71	8.5
Sept. 14	46.55	8.5

Lalande 35497.

June 11	18 54 49.98	6.0
July 13	49.83	6.5

B. A. C. 6499.

Aug. 7	18 55 25.38	
22	25.38	
30	25.30	
Sept. 13	25.29	

Weisse (2) XVIII, 1790.

Aug. 9	18 57 41.94	7.0
29	41.82	7.0

Weisse (2) XVIII, 1806.

Sept. 14	18 58 11.16	8.5

τ Sagittarii.

Sept. 22	18 58 11.74	
25	11.63	

(*), −21° 37′.

June 9	18 58 39.84	8.5
11	39.82	

ζ Aquilæ.

1860.	h.	m.	s.	Mag.
Apr. 11	18	58	58.42	
June 5			58.40	
July 14			58.40	
24			58.41	
30			58.46	
Aug. 14			58.55	
16			58.49	
25			58.43	
Sept. 13			58.47	
15			58.50	
21			58.45	

Weisse (2) XVIII, 1834.

Aug. 1	18	58	58.72	
12			58.68	8.0
15			58.58	

B. A. C. 6536.

July 13	19	0	2.94	
18			2.95	

B. A. C. 6538.

Aug. 7	19	0	11.90	

B. A. C. 6546.

Sept. 25	19	1	1.15	

(*), −10° 2′.

Aug. 9	19	1	23.91	8.0

π Sagittarii.

Aug. 22	19	1	26.10	
Sept. 22			26.07	

B. A. C. 6550.

June 9	19	1	32.55	7.0

B. A. C. 6554.

Aug. 12	19	2	26.35	
29			26.44	
Sept. 13			26.32	
14			26.43	
15			26.39	

B. A. C. 6568.

July 13	19	5	42.99	
14			43.11	
Aug. 16			43.00	
30			43.06	
Sept. 25			42.86	

B. A. C. 6577.

Sept. 14	19	7	17.75	7.0

Madras 1351.

June 9	19	8	55.73	7.5
July 18			55.64	8.0

(*), −41° 16′.

1860.	h.	m.	s.	Mag.
Aug. 7	19	9	38.13	7.5

ω Aquilæ.

June 5	19	11	14.61	
July 14			14.56	
30			14.63	
Aug. 1			14.53	
14			14.72	
16			14.59	
29			14.66	
30			14.61	
Sept. 13			14.69	
14			14.62	
15			14.62	
21			14.62	
25			14.65	

B. A. C. 6609.

July 13	19	12	46.82	
27			46.77	6.5
Sept. 14			46.79	

(*), +46° 47′.

Aug. 22	19	12	50.35	

B. A. C. 6611.

Sept. 22	19	13	6.71	

B. A. C. 6613.

Sept. 14	19	13	11.79	

B. A. C. 6616.

June 9	19	13	24.74	7.0
Aug. 12			24.73	7.0

Gr. C. 1719.

Aug. 1	19	14	22.96	7.0
15			23.00	6.5

B. A. C. 6627.

Aug. 15	19	15	38.09	

χ¹ Sagittarii.

July 27	19	16	45.12	
Sept. 15			45.14	

χ² Sagittarii.

Sept. 14	19	16	51.79	7.0

2 Sagittarii.

Sept. 21	19	18	4.73	

δ Aquilæ.

1860.	h.	m.	s.	Mag.
June 9	19	18	26.29	
July 13			26.26	
14			26.31	
18			26.28	
30			26.30	
Aug. 1			26.24	
7			26.26	
9			26.26	
12			26.30	
15			26.34	
16			26.25	
22			26.26	
30			26.32	
Sept. 15			26.30	
22			26.20	
25			26.23	

4 Cygni.

Aug. 29	19	20	6.48	

B. A. C. 6665.

Sept. 14	19	20	45.53	

O. Arg. S. 19612.

July 27	19	21	9.20	8.5
Aug. 12			9.14	8.5

B. A. C. 6666.

Aug. 22	19	21	12.26	
Sept. 21			12.33	5.0

O. Arg. S. 19618.

Aug. 12	19	21	20.65	8.5

B. A. C. 6672.

Aug. 30	19	22	42.12	
Sept. 25			41.96	

α Vulpeculæ.

June 5	19	22	52.65	
Aug. 27			52.73	

(*), −20° 42′.

June 9	19	23	14.64	9.0

B. A. C. 6677.

July 13	19	23	19.04	

Lalande 36857.

Aug. 1	19	23	30.53	
Sept. 12			30.55	7.5

O. Arg. S. 19662.

Aug. 9	19	23	30.97	8.5

B. A. C. 6682.

July 18	19	23	56.41	
27			56.48	7.0
Aug. 7			56.40	
14			56.45	

B. A. C. 6685.

1860.	h.	m.	s.	Mag.
July 14	19	24	17.72	
Sept. 13			17.69	
15			17.68	
22			17.69	

O. Arg. S. 19685.

Aug. 15	19	24	23.11	9.0

O. Arg. S. 19694.

Aug. 15	19	25	17.26	9.0

h² Sagittarii.

June 5	19	28	10.99	
July 13			10.97	
14			10.94	
18			10.90	
Aug. 1			10.99	
29			11.01	
30			11.00	
Sept. 12			11.00	
13			11.02	
14			10.99	
15			10.93	
21			10.99	
22			10.95	
25			10.96	

O. Arg. S. 19758.

July 27	19	28	16.91	8.0

B. A. C. 6718.

Aug. 22	19	30	7.28	

O. Arg. S. 19830.

Aug. 12	19	31	19.25	8.5
15			19.32	8.5

O. Arg. S. 19839.

Sept. 14	19	31	52.11	9.0

Madras 1417.

July 18	19	31	54.86	7.5
Sept. 12			54.90	7.5

O. Arg. S. 19845.

July 13	19	32	8.14	7.5
Aug. 1			8.05	

O. Arg. S. 19874.

Aug. 29	19	33	47.86	8.5

B. A. C. 6738.

July 14	19	33	52.54	
Aug. 30			52.63	
Sept. 15			52.51	
22			52.59	

ρ² Sagittarii.

Aug. 27	19	34	30.52	

O. Arg. S. 19901.

1860.	h.	m.	s.	Mag.
July 27	19	35	42.20	7.0
Aug. 9			42.13	7.0
15			42.19	

O. Arg. S. 19908.

Sept. 14	19	36	15.74	8.5

B. A. C. 6753.

Sept. 25	19	36	31.98	

O. Arg. S. 19916.

July 13	19	36	36.19	8.0
Aug. 12			36.10	

O. Arg. S. 19924.

Sept. 14	19	37	11.74	

(*), −28° 51′.

Aug. 29	19	38	5.69	7.0

f Sagittarii.

June 5	19	38	11.50	

Lalande 37507.

Sept. 12	19	38	12.40	8.0

(*), −28° 41′.

July 18	19	39	5.79	
Aug. 14			5.93	
16			5.79	

B. A. C. 6770.

Aug. 7	19	39	23.23	7.5
9			23.23	

γ Aquilæ.

Aug. 22	19	39	36.15	
27			36.17	
30			36.15	
Sept. 21			36.11	
24			36.11	
25			36.17	

O. Arg. S. 19960.

Aug. 12	19	39	44.36	

(*), −28° 47′.

Aug. 29	19	40	23.24	8.0
Sept. 12			23.24	8.5

O. Arg. S. 19985.

July 13	19	41	22.36	

B. A. C. 6786.

July 18	19	41	46.59	
Aug. 15			46.63	
Sept. 15			46.63	
22			46.70	

B. A. C. 6792.

1860.	h.	m.	s.	Mag.
July 27	19	42	32.07	
Aug. 12			32.07	7.5

B. A. C. 6795.

Aug. 16	19	43	3.78	

α Aquilæ.

June 5	19	43	57.01	
July 14			57.09	
30			57.04	
Aug. 22			57.08	
27			57.03	
30			57.03	
Sept. 12			57.05	
13			56.98	
14			57.08	
24			57.07	
25			57.05	
Oct. 9			57.07	

O. Arg. S. 20046.

Aug. 12	19	45	23.20	9.0

O. Arg. S. 20051.

July 13	19	45	50.70	8.5

B. A. C. 6816.

Sept. 22	19	46	6.20	

ω Sagittarii.

July 14	19	47	15.44	

b Sagittarii.

July 18	19	48	20.94	
27			21.03	

β Aquilæ.

June 5	19	48	26 10	
July 30			26.07	
Aug. 7			26.08	
9			26.16	
14			25.99	
15			26.07	
22			26.15	
27			26.02	
29			26.08	
30			26.08	
Sept. 12			26.07	
14			26.02	
15			26.09	
21			26.04	
24			26.11	
25			26.08	

A Sagittarii.

July 13	19	50	25.03	
Aug. 12			24.98	
16			24.95	
Sept. 22			25.04	
Oct. 9			25.16	

B. A. C. 6854.

Sept. 15	19	51	55.82	

O. Arg. S. 20156.

1860.	h.	m.	s.	Mag.
Aug. 9	19	53	28.29	
15			28.36	8.0
Sept. 14			28.37	8.0

Lalande 38140.

Sept. 12	19	53	30.93	7.5
21			30.93	7.5

e Sagittarii.

July 27	19	54	2.60	
Aug. 7			2.53	4.0
Sept. 24			2.57	

B. A. C. 6872.

Aug. 30	19	54	14.76	
Sept. 13			14.75	
Oct. 9			14.69	

B. A. C. 6877.

Aug. 16	16	55	26.29	

O. Arg. S. 20185.

Aug. 12	19	55	31.11	
29			31.25	9.0
Sept. 14			31.20	9.0

B. A. C. 6886.

Sept. 22	19	56	35.82	

B. A. C. 6888.

July 18	19	56	39.11	7.0
Aug. 15			39.08	7.0

O. Arg. S. 20217.

Aug. 22	19	57	23.71	7.5
Sept. 12			23.61	7.5

O. Arg. S. 20234.

July 27	19	58	21.07	7.0
Aug. 7			21.06	7.0

B. A. C. 6899.

Aug. 30	19	58	40.82	
Sept. 13			40.96	

B. A. C. 6906.

Aug. 1	20	0	34.93	
15			34.88	7.0

B. A. C. 6920.

Sept. 14	20	1	40.01	
21			40.06	

B. A. C. 6922.

July 14	20	1	59.49	
Aug. 9			59.51	5.5
30			59.50	
Sept. 13			59.42	
22			59.44	

O. Arg. S. 20286.

1860.	h.	m.	s.	Mag.
July 27	20	3	0.88	8.5

O. Arg. S. 20316.

Aug. 1	20	5	5.29	8.5
7			5.15	

B. A. C. 6948.

July 14	20	7	8.27	
Aug. 29			8.26	
30			8.31	
Sept. 22			8.38	

a^1 Capricorni.

July 5	20	9	53.11	
Aug. 16			53.03	
Sept. 14			53.09	
21			53.03	

a^2 Capricorni.

July 6	20	10	16.97	
13			17.05	
18			16.97	
27			17.03	
Aug. 1			17.02	
7			16.96	
9			16.97	
12			16.97	
15			16.97	
27			17.01	
29			16.97	
31			17.08	
Sept. 13			17.01	
14			17.02	
21			16.92	
22			17.05	
24			16.98	
Oct. 9			17.06	

σ Capricorni.

Aug. 22	20	11	18.70	

B. A. C. 6982.

Sept. 12	20	11	22.13	

β Capricorni.

Aug. 31	20	13	8.57	
Sept. 24			8.52	

O. Arg. S. 20458.

Aug. 9	20	15	33.34	8.5
12			33.38	8.5

O. Arg. S. 20465.

Aug. 1	20	16	2.17	7.5

B. A. C. 7012.

July 13	20	16	11.62	
Aug. 30			11.56	
Sept. 13			11.66	
14			11.48	7.0
22			11.68	

O. Arg. S. 20470.

1860.		h.	m.	s.	Mag.
Aug. 9	. .	20	16	22.63	8.5
12	. .			22.70	8.5

B. A. C. 7018.

Sept. 15	. .	20	16	52.04	
25	. .			52.06	
Oct. 9	. .			52.11	

B. A. C. 7021.

July 14	. .	20	17	21.15	

O. Arg. S. 20502.

Sept. 21	. .	20	18	45.19	8.5

B. A. C. 7030.

Sept. 12	. .	20	18	53.89	

π Capricorni.

July 5	. .	20	19	18.23	

B. A. C. 7032.

Aug. 30	. .	20	19	22.64	
Sept. 13	. .			22.68	

B. A. C. 7033.

Sept. 25	. .	20	19	29.64	

B. A. C. 7034.

Sept. 14	. .	20	19	37.24	6.0

O. Arg. S. 20522.

Aug. 22	. .	20	19	53.33	8.5
29	. .			53.36	8.5

B. A. C. 7040.

Aug. 15	. .	20	20	25.96	

ρ Capricorni.

July 6	. .	20	20	52.22	
Aug. 12	. .			52.16	
27	. .			52.18	
Sept. 15	. .			52.22	
22	. .			52.27	
24	. .			52.21	

B. A. C. 7053.

Aug. 9	. .	20	21	50.57	7.5

ο Capricorni.

Aug. 9	. .	20	21	51.96	7.0
22	. .			52.05	

B. A. C. 7057.

Oct. 9	. .	20	22	21.91	

B. A. C. 7063.

1860.		h.	m.	s	Mag.
Sept. 21	. .	20	23	13.46	

B. A. C. 7071.

Sept. 13	. .	20	24	9.51	
14	. .			9.50	7.0

B. A. C. 7077.

Sept. 15	. .	20	24	31.88	
22	. .			31.89	

ε Delphini.

Aug. 12	. .	20	26	31.38	
27	. .			31.34	
31	. .			31.41	
Sept. 24	. .			31.43	
28	. .			31.35	

Weisse XX, 664.

Sept. 12	. .	20	26	56.00	9.5

B. A. C. 7113.

Aug. 30	. .	20	29	47.31	
Sept. 13	. .			47.37	
15	. .			47.41	
Oct. 9	. .			47.53	

O. Arg. S. 20675.

Aug. 29	. .	20	30	12.43	8.5

B. A. C. 7123.

Aug. 9	. .	20	31	8.78	
Sept. 28	. .			8.88	6.5

τ^2 Capricorni.

Aug. 1	. .	20	31	26.36	

B. A. C. 7133.

Aug. 30	. .	20	32	4.32	
Sept. 15	. .			4.38	
22	. .			4.40	

υ Capricorni.

Aug. 12	. .	20	32	4.41	
22	. .			4.56	
27	. .			4.56	
Sept. 24	. .			4.50	

B. A. C. 7135.

Sept. 21	. .	20	32	8.54	

B. A. C. 7139.

Sept. 25	. .	20	32	22.12	

B. A. C. 7148.

Sept. 14	. .	20	33	5.06	6.5

Weisse XX, 860.

1860.		h.	m.	s.	Mag.
Aug. 31	. .	20	34	2.01	9.5
Sept. 12	. .			2.08	9.0

B. A. C. 7159.

July 6	. .	20	34	41.51	7.0

α Cygni.

Sept. 28	. .	20	36	39.52	
Oct. 9	. .			39.60	

(*), — 21° 24′.

Aug. 9	. .	20	36	43.72	7.5

O. Arg. S. 20812.

Aug. 9	. .	20	37	38.08	9.0

ψ Capricorni.

Aug. 27	. .	20	37	48.01	

ε Aquarii.

Sept. 21	. .	20	40	5.52	

Weisse XX, 1031.

Aug. 12	. .	20	40	49.75	8.0

B. A. C. 7205.

Aug. 31	. .	20	40	58.38	7.0
Sept. 13	. .			58.45	
14	. .			58.42	
22	. .			58.52	

Weisse XX, 1036.

Aug. 12	. .	20	40	58.99	8.5

B. A. C. 7209.

Aug. 1	. .	20	41	23.74	
22	. .			23.85	

B. A. C. 7210.

July 6	. .	20	41	41.33	7.0
Aug. 29	. .			41.33	

B. A. C. 7219.

June 8	. .	20	42	32.97	

B. A. C. 7224.

Oct. 9	. .	20	43	10.45	

O. Arg. S. 20903.

Sept. 12	. .	20	43	13.80	7.5

β Microscopii.

Sept. 28	. .	20	43	16.36	

4 Aquarii.

1860.		h.	m.	s.	Mag.
Aug. 9	. .	20	44	0.24	
22	. .			0.24	

O. Arg. S. 20921.

Sept. 15	. .	20	44	54.73	8.5

B. A. C. 7244.

Aug. 29	. .	20	45	47.61	
Sept. 14	. .			47.38	

19 Capricorni.

July 6	. .	20	46	52.81	

32 Vulpeculæ.

Aug. 9	. .	20	48	35.58	
12	. .			35.60	
22	. .			35.52	
27	. .			35.54	
31	. .			35.54	
Sept. 12	. .			33.51	
13	. .			35.53	
15	. .			35.54	
21	. .			35.61	
22	. .			35.56	
24	. .			35.60	
25	. .			35.60	
28	. .			35.59	
Oct. 9	. .			35.59	
12	. .			35.61	
23	. .			35.56	

B. A. C. 7268.

Aug. 29	. .	20	51	6.41	

21 Capricorni.

July 6	. .	20	52	58.60	6.0

B. A. C. 7290.

Sept. 12	. .	20	53	18.81	

B. A. C. 7286.

Aug. 12	. .	20	53	27.41	
30	. .			27.58	
Sept. 22	. .			27.59	

ζ Microscopii.

Sept. 15	. .	20	54	0.45	
Oct. 12	. .			0.49	

f^1 Cygni.

Oct. 23	. .	20	55	3.84	

2 Piscis Australis.

Sept. 13	. .	20	57	50.43	
22	. .			50.42	
28	. .			50.40	

1860.	h. m. s.	Mag.
θ CAPRICORNI.		
June 8	20 58 4.42	
July 5	4.31	
Aug. 29	4.40	
Sept. 25	4.40	
O. ARG. S. 21105.		
Aug. 12	20 58 43.70	6.5
30	43.66	
31	43.80	
Sept. 14	43.71	7.0
15	43.77	
Oct. 9	43.68	
B. A. C. 7327.		
Aug. 12	20 58 55.60	6.0
31	55.65	6.5
Sept. 14	55.45	7.0
61¹ CYGNI.		
July 6	21 0 37.24	
Oct. 12	37.32	
Nov. 7	37.37	
61² CYGNI.		
Nov. 7	21 0 38.78	
ν AQUARII.		
July 5	21 1 57.81	
Aug. 1	57.83	
29	57.88	
Sept. 25	58.01	
Oct. 23	57.84	
B. A. C. 7366.		
Aug. 12	21 6 32.77	
30	32.83	
Sept. 15	32.92	
Oct. 9	32.86	
ζ CYGNI.		
Aug. 1	21 6 58.67	
Sept. 14	58.68	
28	58.69	
Oct. 10	58.60	
12	58.69	
23	58.66	
Nov. 7	58.65	
B. A. C. 7383.		
Aug. 22	21 8 56.74	
Sept. 12	56.73	
4 PISCIS AUSTRALIS.		
Aug. 12	21 9 26.08	
30	26.16	
Sept. 15	26.32	
22	26.31	
WEISSE (2) XXI, 226.		
Aug. 22	21 9 55.45	7.0
Sept. 12	55.46	7.0

1860.	h. m. s.	Mag.
(*), −32° 46′.		
Sept. 13	21 10 33.79	
A CYGNI.		
Sept. 12	21 13 14.02	
ι CAPRICORNI.		
July 5	21 14 26.70	
Aug. 1	26.64	
29	26.83	
α CEPHEI.		
Aug. 31	21 15 14.14	
Sept. 14	14.19	
15	14.09	
22	14.01	
25	14.21	
28	14.19	
Oct. 10	13.91	
12	13.93	
23	14.01	
Nov. 7	14.06	
B. A. C. 7417.		
Aug. 22	21 15 22.99	
WEISSE XXI, 346.		
Aug. 12	21 15 37.16	8.5
B. A. C. 7419.		
Aug. 30	21 15 47.56	
Sept. 13	47.56	
B. A. C. 7422.		
Oct. 9	21 16 6.14	
B. A. C. 7431.		
Sept. 12	21 17 8.71	
ζ CAPRICORNI.		
July 5	21 18 40.06	
Aug. 12	39.97	
(*), −23° 51′.		
Oct. 10	21 21 52.69	8.0
(*), −23° 49′.		
Oct. 10	21 22 4.16	8.5
B. A. C. 7466.		
Oct. 9	21 22 19.88	
B. A. C. 7467.		
Aug. 30	21 22 20.30	
Sept. 15	20.38	

1860.	h. m. s.	Mag.
(*), −16° 28′.		
Sept. 14	21 23 14.55	
(*), +69° 56′.		
Sept. 29	21 23 31.31	9.0
β AQUARII.		
July 6	21 24 11.09	
Aug. 1	11.09	
12	11.12	
22	11.14	
Sept. 15	11.17	
Oct. 23	11.18	
Nov. 7	11.13	
B. A. C. 7485.		
Aug. 31	21 25 55.92	
β CEPHEI.		
Aug. 29	21 26 50.63	
Sept. 12	50.38	
13	50.60	
28	50.58	
29	50.57	
Oct. 12	50.44	
24	50.27	
25	50.29	
β CEPHEI, S. P.		
Mar. 30	21 26 50.06	
7 PISCIS AUSTRALIS.		
Aug. 30	21 28 23.65	
Sept. 14	23.66	6.0
ξ AQUARII.		
Sept. 25	21 30 18.03	
Oct. 23	17.72	
Nov. 7	17.74	
B. A. C. 7523.		
Aug. 12	21 30 56.34	
(*), −25° 5′.		
Aug. 30	21 32 9.38	
Oct. 10	33 9.12	
γ CAPRICORNI.		
July 5	21 32 19.80	
6	19.57	
Aug. 1	19.55	
RUMKER 9349.		
Aug. 29	21 33 48.33	7.0
B. A. C. 7549.		
Oct. 12	21 35 21.36	7.0
B. A. C. 7558.		
Aug. 12	21 36 36.94	

1860.	h. m. s.	Mag.
77 CYGNI.		
Sept. 12	21 36 45.15	
ε PEGASI.		
Aug. 30	21 37 18.47	
31	18.49	
Sept. 13	18.59	
14	18.52	
28	18.54	
29	18.52	
Oct. 23	18.56	
24	18.60	
25	18.53	
B. A. C. 7565.		
Sept. 12	21 37 29.00	
δ CAPRICORNI.		
July 5	21 39 18.46	
6	18.37	
Aug. 1	18.37	
Sept. 25	(18.80)	
δ PISCIS AUSTRALIS.		
Sept. 28	21 39 30.62	
29	30.54	
Oct. 9	30.44	
B. A. C. 7610.		
Aug. 12	21 44 32.58	
Sept. 12	32.37	
γ GRUIS.		
Sept. 29	21 45 26.37	
μ CAPRICORNI.		
Aug. 29	21 45 39.61	
Nov. 20	39.59	
16 PEGASI.		
Oct. 10	21 46 41.56	
12	41.59	
24	41.55	
Nov. 7	41.42	
B. A. C. 7630.		
July 6	21 47 22.20	7.0
Sept. 28	22.28	7.0
B. A. C. 7632.		
Sept. 29	21 47 56.48	
Oct. 25	56.22	
(*), −21° 23′.		
Oct. 12	21 50 30.44	9.0
24	30.28	9.0
B. A. C. 7652.		
Aug. 30	21 51 25.34	
Oct. 10	25.10	

1860.	h.	m.	s.	Mag.
11 Piscis Australis.				
Nov. 20	21	51	32.81	
η Piscis Australis.				
Aug. 29	21	52	47.11	
Oct. 25			46.93	
(*), −21° 25′.				
Aug. 31	21	53	46.51	9.0
O. Arg. S. 21832.				
Sept. 12	21	55	39.39	9.0
28			39.41	
Lalande 42984.				
Aug. 31	21	56	21.69	8.0
B. A. C. 7675.				
Nov. 15	21	56	38.52	
Lalande 43040.				
Oct. 10	21	58	5.86	7.5
α Aquarii.				
July 6	21	58	35.45	
Aug. 12			35.45	
Sept. 26			35.47	
29			35.40	
Oct. 9			35.39	
25			35.51	
ι Aquarii.				
Aug. 29	21	58	52.38	
30			52.28	
Oct. 24			52.28	
Nov. 20			52.30	
B. A. C. 7697.				
Sept. 28	21	59	50.34	
Weisse XXI, 1375.				
Sept. 12	21	59	51.93	9.0
Lalande 43106.				
Aug. 31	22	0	3.51	8.0
Nov. 7			3.57	
Weisse XXII, 13.				
Oct. 24	22	2	5.79	8.5
B. A. C. 7729.				
Aug. 29	22	3	30.92	
Sept. 29			30.74	
Nov. 15			30.82	
(*), −18° 48′.				
Sept. 12	22	4	38.48	

1860.	h.	m.	s.	Mag.
B. A. C. 7739.				
Aug. 29	22	4	41.37	
30			41.24	
Oct. 25			41.38	
Lalande 43288.				
Aug. 31	22	4	54.15	8.5
B. A. C. 7745.				
Nov. 20	22	5	52.06	
B. A. C. 7765.				
Sept. 28	22	7	52.33	
B. A. C. 7768.				
Sept. 29	22	8	44.93	
θ Aquarii.				
July 6	22	9	26.60	
Aug. 29			26.65	
30			26.58	
31			26.57	
Sept. 12			26.59	
26			26.58	
28			26.61	
Oct. 10			26.67	
12			26.61	
24			26.64	
25			26.56	
26			26.56	
Nov. 7			26.61	
15			26.59	
20			26.60	
ρ Aquarii.				
Oct. 10	22	12	49.79	
12			49.83	
24			49.73	
26			49.70	
Nov. 7			49.72	
γ Aquarii.				
Aug. 29	22	14	25.51	
31			25.45	
Sept. 12			25.37	
B. A. C. 7803.				
Sept. 15	22	16	3.55	
O. Arg. S. 22142.				
Oct. 12	22	18	19.94	9.0
B. A. C. 7826.				
Sept. 28	22	20	25.79	
29			25.88	
Oct. 25			25.93	
(*), −16° 20′.				
Aug. 29	22	21	5.28	9.0
31			5.02	9.5

1860.	h.	m.	s.	Mag.
B. A. C. 7829.				
Nov. 15	22	29	5.98	
Lacaille 9144.				
Nov. 7	22	21	33.90	6.5
ζ Aquarii, (1st *.)				
July 6	22	21	37.32	
Sept. 1			37.36	
56 Aquarii.				
Oct. 10	22	22	46.96	
σ Aquarii.				
Sept. 26	22	23	14.12	
O. Arg. S. 22197.				
Oct. 12	22	23	31.40	8.0
Lacaille 9175.				
Oct. 24	22	26	27.00	7.0
η Aquarii.				
July 6	22	28	9.65	
Aug. 29			9.64	
Sept. 1			9.78	
26			9.59	
28			9.61	
29			9.69 :	
Oct. 12			9.74	
25			9.68	
26			9.63	
Nov. 7			9.65	
12			9.66	
15			9.67	
20			9.66	
B. A. C. 7872.				
Oct. 10	22	28	42.01	
(*), −32° 22′.				
Oct. 10	22	28	45.60	7.0
Piazzi 169.				
Sept. 12	22	29	33.43	8.0
κ Aquarii.				
Aug. 30	22	30	30.31	
Oct. 24			30.24	
Weisse XXII, 641.				
Sept. 28	22	31	1.22	6.5
Lacaille 9199.				
Nov. 7	22	30	56.88	6.5
ε Piscis Australis.				
Sept. 29	22	32	54.26	
Oct. 10			54.27	

1860.	h.	m.	s.	Mag.
30 Cephei.				
Nov. 15	22	33	41.20	
ζ Pegasi.				
Sept. 12	22	34	28.80	
26			28.78	
28			28.81	
Oct. 26			28.77	
Nov. 12			28.81	
20			28.71	
(*), −21° 38′.				
Oct. 12	22	35	2.06	8.0
(*), −21° 41′.				
Oct. 12	22	36	27.50	
20 Piscis Australis.				
Sept. 29	22	37	51.12	
Oct. 10			51.12	
25			51.17	
(*), −21° 35′.				
Oct. 12	22	38	9.41	
Weisse XXII, 815.				
Sept. 12	22	38	47.88	
28			47.77	9.0
B. A. C. 7951.				
Nov. 15	22	40	36.68	
(*), +6° 20′.				
Nov. 12	22	41	17.93	
Rumker 10641.				
Nov. 7	22	41	52.07	9.0
τ^2 Aquarii.				
Oct. 26	22	42	10.56	
(*), −6° 20′.				
Nov. 12	22	42	47.42	
Weisse XXII, 897.				
Nov. 12	22	42	58.34	
B. A. C. 7957.				
Sept. 29	22	43	3.18	
Oct. 10			3.28	
λ Aquarii.				
Aug. 30	22	45	18.64	
31			18.50	
Sept. 26			18.46	

WEISSE XXII, 951.

1860.	h.	m.	s.	Mag.
Nov. 7	22	45	55.56	9.0
12			55.61	

WEISSE XXII, 957.

Oct. 12	22	46	9.41	
Nov. 7			9.41	
12			9.35	

WEISSE XXII, 962.

Sept. 12	22	46	21.27	9.0
28			21.15	8.5

B. A. C. 7986.

Oct. 24	22	47	55.25	6.7

LALANDE 44823.

Oct. 26	22	47	59.35	7.0

LALANDE 44860.

Sept. 12	22	49	35.87	7.5

α PISCIS AUSTRALIS.

Aug. 31	22	49	54.38	
Sept. 1			54.35	
Oct. 10			54.44	
25			54.32	
Nov. 15			54.38	
Dec. 11			54.36	

B. A. C. 7993.

Oct. 24	22	50	2.25	7.0

WEISSE XXII, 1087.

Sept. 28	22	52	26.17	9.0

WEISSE XXII, 1088.

Sept. 28	22	52	26.75	8.5
Nov. 7			26.66	8.0
12			26.81	8.0

WEISSE XXII, 1149.

Oct. 10	22	55	2.87	9.0

WEISSE XXII, 1156.

Oct. 10	22	55	12.09	8.0

82 AQUARII.

Sept. 1	22	55	16.44	

RUMKER 10800.

Sept. 28	22	55	17.74	9.0

ο ANDROMEDÆ.

Nov. 15	22	55	29.05	

(*), −4° 15′.

1860.	h.	m.	s.	Mag.
Sept. 28	22	57	24.96	9.0
Oct. 26			24.98	
Nov. 7			24.93	9.0
12			25.11	9.0

α PEGASI.

Aug. 5	22	57	47.32	
Sept. 12			47.29	
Oct. 12			47.24	

WEISSE XXII, 1272.

Oct. 10	23	0	40.37	9.0

B. A. C. 8053.

Sept. 1	23	0	46.24	

WEISSE XXII, 1283.

Oct. 10	23	1	24.79	9.0

A PISCIUM.

Oct. 24	23	1	30.62	
25			30.66	

WEISSE XXIII, 9.

Oct. 26	23	2	6.55	

WEISSE XXIII, 12.

Nov. 12	23	2	18.91	9.0

WEISSE XXIII, 14.

Nov. 7	23	2	25.30	
12			25.25	

58 PEGASI.

Nov. 15	23	2	58.43	

WEISSE XXIII, 45.

Dec. 11	23	4	2.87	

WEISSE XXIII, 85.

Sept. 28	23	6	11.75	9.0

WEISSE XXIII, 111.

Nov. 12	23	6	53.35	

B. A. C. 8084.

Aug. 5	23	6	54.17	

φ AQUARII.

Oct. 24	23	7	4.19	
25			4.11	

LALANDE 45473.

1860.	h.	m.	s.	Mag.
Oct. 10	23	7	7.80	8.5
26			7.69	8.5

WEISSE XXIII, 136.

Dec. 11	23	8	6.75	

B. A. C. 8104.

Nov. 14	23	9	39.23	

WEISSE XXIII, 177.

Nov. 12	23	9	52.72	

γ PISCIUM.

Aug. 5	23	9	54.49	
Sept. 28			54.43	
Oct. 26			54.48	
Nov. 7			54.48	
15			54.44	

WEISSE XXIII, 183.

Nov. 12	23	10	10.97	

ψ^2 AQUARII.

Oct. 10	23	10	37.55	
Nov. 7			37.52	

b PISCIUM.

Sept. 28	23	13	12.63	6.0

b^1 AQUARII.

Sept. 1	23	15	36.92	
Nov. 15			36.86	
Dec. 11			36.82	

LALANDE 45804.

Nov. 12	23	16	31.56	

LALANDE 45838.

Oct. 10	23	17	51.12	9.0
26			51.02	8.5

WEISSE XXIII, 377.

Oct. 26	23	19	20.20	8.5
Nov. 12			20.29	8.5

κ PISCIUM.

Aug. 5	23	19	45.29	
Sept. 1			45.32	
28			45.39	
Oct. 24			45.28	
25			45.32	
Nov. 7			45.31	
14			45.35	
15			45.36	
Dec. 11			45.33	

B. A. C. 8184.

1860.	h.	m.	s.	Mag.
Nov. 14	23	22	17.83	

SANTINI 1635.

Nov. 7	23	22	24.64	8.5

WEISSE XXIII, 463.

Sept. 28	23	23	36.29	9.0

SANTINI 1636.

Aug. 31	23	25	5.69	

b^4 AQUARII.

Nov. 15	23	25	56.81	

WEISSE XXIII, 534.

Oct. 10	23	26	44.20	9.0

16 PISCIUM.

Oct. 25	23	29	14.66	
26			14.58	

B. A. C. 8223.

Nov. 14	23	30	42.00	

ι PISCIUM.

Aug. 31	23	32	45.06	
Sept. 1			44.99	
28			44.99	
Oct. 24			45.05	
25			45.03	
26			44.90	
Nov. 12			44.99	
14			45.02	
15			44.94	
20			45.04	
22			44.99	

γ CEPHEI.

Oct. 10	23	33	37.79	

WEISSE XXIII, 710.

Nov. 12	23	34	48.81	6.0

λ PISCIUM.

Aug. 31	23	34	54.27	

i^2 AQUARII.

Dec. 11	23	38	44.35	

WEISSE XXIII, 817.

Oct. 10	23	40	31.64	8.0
26			31.56	8.5

WEISSE XXIII, 828.

Nov. 12	23	40	58.42	9.0

Weisse XXIII, 830.

1860.	h.	m.	s.	Mag.
Oct. 26	23	41	1.54	8.5

B. A. C. 8272.

Nov. 14	23	41	3.26	7.0

δ Sculptoris.

Sept. 1	23	41	37.71	
Oct. 24			37.59	
Nov. 13			37.75	

B. A. C. 8287.

Oct. 24	23	43	19.46	7.0

Weisse XXIII, 916.

Oct. 10	23	45	32.30	9.0

25 Piscium.

Nov. 13	23	45	54.67	
15			54.67	
Dec. 11			54.63	

26 Piscium.

1860.	h.	m.	s.	Mag.
Sept. 28	23	47	58.12	

B. A. C. 8314.

Nov. 14	23	48	3.34	

Weisse XXIII, 994.

Oct. 26	23	49	7.55	9.0
Nov. 12			7.60	9.0

Rumker 11777.

Nov. 12	23	49	37.08	7.0
Dec. 22			37.04	7.5

ψ Pegasi.

Oct. 24	23	50	37.78	

Weisse XXIII, 1032.

Dec. 21	23	50	37.91	9.0

Weisse XXIII, 1039.

1860.	h.	m.	s.	Mag.
Oct. 10	23	50	54.65	9.0
26			54.56	9.0

ω Piscium.

Sept. 28	23	52	7.41	
Oct. 10			7.39	
24			7.44	
Nov. 13			7.40	
14			7.39	
15			7.45	
Dec. 11			7.33	
20			7.40	
21			7.41	

Weisse XXIII, 1110.

Dec. 22	23	54	25.70	9.0

B. A. C. 8351.

Nov. 13	23	54	52.09	

c^1 Piscium.

Nov. 12	23	55	14.02	7.0

Weisse XXIII, 1142.

1860.	h.	m.	s.	Mag.
Oct. 26	23	55	35.15	8.5

Weisse XXIII, 1205.

Dec. 21	23	58	57.74	8.5
22			57.66	8.5

B. A. C. 8372.

Oct. 24	23	58	57.61	

Weisse XXIII, 1218.

Nov. 14	23	59	41.38	9.0

Weisse XXIII, 1222.

Oct. 10	23	59	53.87	8.0
Nov. 12			53.83	8.0

MEAN DECLINATIONS OF STARS FOR 1850.0.

MURAL CIRCLE.

α ANDROMEDÆ, $0^{h}\ 0^{m}\ 38^{s}$.

1853.		°	′	″
March	3	+28	15	42.92

B. A. C. 18, $0^{h}\ 2^{m}\ 44^{s}$.

		°	′	″
November	1	+58	50	20.36
	2			19.89

B. A. C. 25, $0^{h}\ 4^{m}\ 23^{s}$.

		°	′	″
October	6	−43	0	21.09
	8			21.09

B. A. C. 28, $0^{h}\ 5^{m}\ 44^{s}$.

		°	′	″
November	4	+40	12	24.55
	5			25.02

B. A. C. 39, $0^{h}\ 7^{m}\ 49^{s}$.

		°	′	″
November	26	+76	7	2.08
	30			1.55

B. A. C. 49, $0^{h}\ 9^{m}\ 9^{s}$.

		°	′	″
October	15	−33	31	18.00
November	14			16.02

B. A. C. 83, $0^{h}\ 17^{m}\ 1^{s}$.

		°	′	″
November	1	+52	12	55.67
	2			55.11
	4			55.40

B. A. C. 91, $0^{h}\ 18^{m}\ 16^{s}$.

		°	′	″
November	14	+19	18	56.59
	26			55.86

B. A. C. 92, $0^{h}\ 18^{m}\ 28^{s}$.

		°	′	″
September	26	+55	48	36.85
October	6			36.33
	15			38.09

B. A. C. 109, $0^{h}\ 22^{m}\ 13^{s}$.

		°	′	″
September	26	+28	55	25.94
October	6			26.83
	8			26.84

B. A. C. 133, $0^{h}\ 25^{m}\ 49^{s}$.

		°	′	″
November	1	+19	36	19.23
	2			19.09
	4			19.37

B. A. C. 147, $0^{h}\ 27^{m}\ 51^{s}$.

		°	′	″
November	5	− 1	19	47.55
	14			47.61

B. A. C. 149, $0^{h}\ 28^{m}\ 10^{s}$.

1853.		°	′	″
November	26	+12	23	14.61
December	7			14.78

B. A. C. 158, $0^{h}\ 29^{m}\ 20^{s}$.

		°	′	″
September	26	+34	34	23.94
October	6			24.10
	8			23.69
	15			24.19

α CASSIOPEÆ, $0^{h}\ 32^{m}\ 2^{s}$.

		°	′	″
March	3	+55	42	49.69
	16			50.63

β CETI, $0^{h}\ 36^{m}\ 3^{s}$.

		°	′	″
November	26	−18	48	38.75
	30			38.07
December	7			37.94
	8			37.86
	10			37.66
	13			37.87
	15			38.53

B. A. C. 197, $0^{h}\ 36^{m}\ 7^{s}$.

		°	′	″
November	1	+47	2	28.41
	2			28.72
	4			27.91

B. A. C. 219, $0^{h}\ 40^{m}\ 22^{s}$.

		°	′	″
September	26	+50	8	56.47
October	6			56.11
	8			56.58

B. A. C. 224, $0^{h}\ 41^{m}\ 7^{s}$.

		°	′	″
November	5	+27	54	4.00
	14			3.93

B. A. C. 239, $0^{h}\ 44^{m}\ 9^{s}$.

		°	′	″
November	26	+60	18	2.78
	30			1.88

B. A. C. 244, $0^{h}\ 46^{m}\ 8^{s}$.

		°	′	″
December	8	+58	9	34.45
	10			35.23

B. A. C. 260, $0^{h}\ 48^{m}\ 30^{s}$.

		°	′	″
December	13	−12	4	46.88

B. A. C. 263, $0^{h}\ 49^{m}\ 10^{s}$.

		°	′	″
November	5	+26	11	12.64
	14			12.98
December	7			13.04

B. A. C. 281, $0^{h}\ 54^{m}\ 19^{s}$.

1853.		°	′	″
November	5	+ 7	7	49.95
	26			50.24
December	30			50.33

B. A. C. 284, $0^{h}\ 54^{m}\ 34^{s}$.

		°	′	″
December	13	−39	1	11.71
	14			10.89

B. A. C. 290, $0^{h}\ 55^{m}\ 27^{s}$.

		°	′	″
December	8	+53	24	0.31
	10			1.35
	12			0.04

POLARIS, $1^{h}\ 5^{m}\ 1^{s}$.

		°	′	″
February	25	+88	30	(32.17)
March	3			34.34
	10			35.81
	16			34.88
	25			34.74
November	1			33.98
	2			33.95
	4			34.09
	5			34.62
	14			34.04
	26			35.15
	30			34.43
December	7			35.30
	8			34.94
	10			35.25
	12			34.46
	13			34.39
	14			34.44
	15			34.71
	20			34.11

POLARIS, S. P.

		°	′	″
April	5	+88	30	36.01
	22			33.02

(*), $1^{h}\ 14^{m}\ 56^{s}$.

		°	′	″
October	6	− 1	14	8.22
	8			8.65

θ^{1} CETI, $1^{h}\ 16^{m}\ 32^{s}$.

		°	′	″
November	1	− 8	57	32.84
	2			32.54
	4			31.51
	5			32.06
	14			31.67
	26			31.89
	30			30.97
December	7			31.01
	8			30.29
	10			31.01
	12			32.45
	13			31.17
	14			31.26
	15			32.16
	20			31.81

B. A. C. 472, $1^{h}\ 27^{m}\ 5^{s}$.

1853.		°	′	″
November	2	+ 0	11	6.81
	26			8.17
	30			8.58

B. A. C. 482, $1^{h}\ 28^{m}\ 22^{s}$.

		°	′	″
December	12	+57	12	52.54
	13			54.24
	15			54.18

O. ARG. N. 1812, $1^{h}\ 31^{m}\ 17^{s}$.

		°	′	″
December	8	+67	16	53.38
	10			53.66

B. A. C. 524, $1^{h}\ 34^{m}\ 22^{s}$.

		°	′	″
November	1	+15	1	8.60
	2			8.60

B. A. C. 547, $1^{h}\ 40^{m}\ 9^{s}$.

		°	′	″
November	30	+47	8	50.82
December	10			52.17
	24			51.51
	27			51.25

B. A. C. 549, $1^{h}\ 40^{m}\ 14^{s}$.

		°	′	″
December	12	+16	16	14.23
	13			14.90
	15			13.75

B. A. C. 562, $1^{h}\ 43^{m}\ 17^{s}$.

		°	′	″
November	2	+50	44	51.49
	4			52.02

WEISSE I, 847, $1^{h}\ 47^{m}\ 2^{s}$.

		°	′	″
December	24	+ 2	39	15.24
	27			15.94

B. A. C. 594, $1^{h}\ 49^{m}\ 39^{s}$.

		°	′	″
December	13	−23	15	38.96
	15			40.22

B. A. C. 598, $1^{h}\ 50^{m}\ 22^{s}$.

		°	′	″
November	30	− 2	47	34.85
December	7			34.39
	8			35.16
	10			34.26
	12			34.97

B. A. C. 613, $1^{h}\ 52^{m}\ 12^{s}$.

		°	′	″
November	2	−41	54	7.03
	5			7.98
	20			5.69

α ARIETIS, 1^h 58^m 44^s.

1853.		°	′	″
January	6	+22	45	4.13
March	29			1.04
December	12			2.47
	13			3.15
	15			1.96
	20			1.57
	24			2.45
	27			2.30

B. A. C, 662, 2^h 1^m 49^s.

November	2	+38	19	57.01
	4			58.68
	5			57.99

B. A. C. 667, 2^h 2^m 40^s.

November	30	+30	49	1.23
December	8			1.33

B. A. C. 702, 2^h 8^m 45^s.

December	10	+63	38	28.62
	12			29.89
	13			30.10

67 CETI, 2^h 9^m 30^s.

December	14	− 7	6	55.46
	15			57.00
	20			56.30

B. A. C. 718, 2^h 11^m 21^s.

November	2	+56	33	7.93
	5			7.94
	26			8.29

B. A. C. 725, 2^h 12^m 37^s.

December	24	+56	41	54.26

O. ARG. N. 2729, 2^h 15^m 41^s.

November	5	+56	32	47.98
	26			47.94
December	8			47.59

B. A. C. 745, 2^h 16^m 47^s.

January	6	+ 9	55	46.02

LALANDE 4460, 2^h 17^m 17^s.

January	5	+18	52	25.41

B. A. C. 758, 2^h 19^m 25^s.

December	14	+ 9	31	49.80
	15			48.39
	20			48.62

B. A. C. 764, 2^h 21^m 35^s.

November	2	+ 8	53	36.06
	5			35.78

B. A. C. 768, 2^h 22^m 8^s.

December	10	−31	46	26.22
	12			27.09
	13			25.35

B. A. C. 776, 2^h 23^m 45^s.

1853.		°	′	″
December	24	+ 1	35	59.20

RUMKER 654, 2^h 25^m 4^s.

January	4	+19	46	31.16

B. A. C. 807, 2^h 30^m 9^s.

November	26	− 4	2	52.57

B. A. C. 809, 2^h 30^m 45^s.

November	2	−35	13	18.83
	5			19.53

γ CETI, 2^h 35^m 32^s.

January	6	+ 2	36	(5.16)
	8			4.51
	11			4.82
	29			3.64
February	3			(2.06)
	10			3.47
December	12			4.36
	13			4.31
	14			4.60
	15			3.43
	20			3.32
	24			4.03
	27			4.05

B. A. C. 857, 2^h 38^m 13^s.

November	26	+56	24	11.49
December	10			10.50

B. A. C. 858, 2^h 38^m 29^s.

December	12	+56	27	16.57
	13			15.35
	14			15.34

B. A. C. 880, 2^h 43^m 12^s.

November	2	−25	10	47.06
	5			46.72

RUMKER 742, 2^h 46^m 52^s.

January	5	+22	19	16.39

B. A. C. 920, 2^h 50^m 18^s.

November	26	+21	0	52.12

B. A. C. 922, 2^h 50^m 44^s.

January	6	−24	27	57.15
	11			57.59

(*), 2^h 51^m 4^s.

December	15	+14	36	12.63

B. A. C. 944, 2^h 53^m 27^s.

November	2	−33	6	27.21
	5			27.05

α CETI, 2^h 54^m 27^s.

1853.		°	′	″
January	4	+ 3	29	55.93
	6			55.04
	8			55.26
	11			55.36
	29			53.37
February	3			52.26
December	10			54.24
	12			54.07
	14			55.46

B. A. C. 960, 2^h 57^m 40^s.

November	26	+84	21	54.48
	27			54.25

B. A. C. 980, 3^h 1^m 33^s.

December	10	+26	19	8.47
	12			9.08
	13			8.50

B. A. C. 1019, 3^h 10^m 1^s.

November	26	−31	22	58.10
December	15			59.89
	27			62.14

WEISSE III, 172, 3^h 10^m 1^s.

January	5	+12	16	16.35

α PERSEI, 3^h 13^m 38^s.

January	4	+49	19	23.61
	6			21.54
	8			22.31
	10			22.14
	11			23.54
	29			21.61
February	3			21.43
December	10			22.58
	12			23.18
	13			22.30
	14			23.20
	15			21.65

B. A. C. 1057, 3^h 16^m 45^s.

January	19	+ 8	29	49.21

B. A. C. 1063, 3^h 18^m 9^s.

January	29	+49	19	21.05

(*), 3^h 21^m.

January	5	+ 9	26	8.43

B. A. C. 1097, 3^h 25^m 41^s.

December	14	+31	30	40.45
	15			39.80

B. A. C. 1101, 3^h 26^m 18^s.

November	26	+31	10	29.32
December	10			29.56
	13			29.79

B. A. C., 1130, 3^h 32^m 33^s.

December	20	−28	26	10.58
	24			10.12

η TAURI, 3^h 38^m 35^s.

1853.		°	′	″
January	8	+23	38	15.10
	11			14.40
December	10			14.75
	12			14.36
	13			15.59
	14			14.50
	15			14.57
	20			15.02
	27			13.42

B. A. C. 1171, 3^h 39^m 35^s.

November	26	+23	52	47.03
	27			49.22

B. A. C. 1205, 3^h 44^m 32^s.

December	15	− 1	36	6.23
	24			6.10

γ^1 ERIDANI, 3^h 51^m 2^s.

January	4	−13	56	16.32
	5			16.32
	6			19.46
February	3			18.84
	17			18.80
December	10			18.99
	12			18.61
	13			19.63
	14			19.04
	27			19.55

(*), 2^h 51^m.

December	15	+14	36	12.63

B. A. C. 1244, 3^h 53^m 36^s.

November	26	+ 9	34	25.19
December	14			24.78

B. A. C. 1282, 4^h 2^m 37^s.

December	10	+48	42	11.48
	12			11.33

(*), 4^h 4^m.

January	4	+28	2	33.66

B. A. C. 1330, 4^h 11^m 31^s.

January	6	+13	40	10.11
	10			8.75

B. A. C. 1351, 4^h 14^m 53^s.

December	10	+16	16	28.59
	12			28.08

ε TAURI, 4^h 19^m 52^s.

January	19	+18	50	32.73

WEISSE (2) IV, 458, 4^h 21^m 0^s.

January	29	+27	47	45.02
February	3			44.48

B. A. C. 1408, $4^h 25^m 15^s$.

1853.		°	′	″
February	17	+28	38	33.11

α Tauri, $4^h 27^m 19^s$.

January	4	+16	12	13.39
	8			12.21
	11			13.10
	19			(9.15)

B. A. C. 1422., $4^h 27^m 38^s$.

December	14	−30	4	23.48
	15			23.27

Weisse (2) IV, 606, $4^h 27^m 51^s$.

January	6	+27	36	56.10
	10			55.66
February	3			54.18

Weisse (2) IV, 610, $4^h 28^m 1^s$.

February	17	+29	4	47.49

B. A. C. 1427, $4^h 28^m 32^s$.

December	27	− 3	55	23.94

B. A. C. 1459, $4^h 35^m 50^s$.

December	14	+55	19	40.58
	15			40.22

B. A. C. 1463, $4^h 36^m 39^s$.

December	27	+23	20	49.95

Weisse (2) IV, 986, $4^h 43^m 42^s$.

January	6	+26	31	23.56
	10			23.49
	29			21.31
February	3			21.59

B. A. C. 1518, $4^h 47^m 8^s$.

December	15	+24	20	51.42
	27			51.88

ι Tauri, $4^h 54^m 8^s$.

January	21	+21	22	10.49

B. A. C. 1591, $5^h 1^m 7^s$.

January	21	+15	23	57.63

α Aurigæ, $5^h 5^m 37^s$.

January	4	+45	50	22.20
	8			21.66
	11			21.63
	29			20.68
February	3			21.55

β Orionis, $5^h 7^m 20^s$.

1853.		°	′	″
January	6	− 8	22	42.04
	10			43.34
February	10			44.58
	12			44.34
	17			43.85

β Tauri, $5^h 16^m 49^s$.

January	4	+28	28	(33.36)
	6			31.76
	8			31.83
	10			31.56
	11			32.10
	29			30.53
February	10			31.31
	12			30.85
	17			32.39

δ Orionis, $5^h 24^m 21^s$.

January	8	− 0	24	51.82
	29			52.34
February	12			51.82

α Leporis, $5^h 26^m 7^s$.

January	4	−17	55	57.87
	11			58.68

ε Orionis, $5^h 28^m 36^s$.

February	24	− 1	18	5.81

α Columbæ, $5^h 34^m 13^s$.

January	4	−34	9	24.08
	6			(22.28)
	29			27.06

α Orionis, $5^h 47^m 3^s$.

January	4	+ 7	22	29.58
	6			29.27
	10			28.97
	11			28.80
	29			26.23
February	11			26.42
	12			26.77
	24			27.62
	26			28.14

μ Geminorum, $6^h 13^m 53^s$.

January	4	+22	35	9.83
	6			9.40
	11			8.42
February	10			7.05
	11			7.62

51 Cephei, $6^h 28^m 34^s$.

January	4	+87	15	21.69
	6			21.52
	10			21.37
	29			22.35
February	11			22.29
	17			21.30
	24			19.32
	25			19.16
	26			21.25
	28			22.23
March	7			(23.37)

α Canis Majoris, $6^h 38^m 32^s$.

1853.		°	′	″
February	10	−16	30	50.90
	21			50.96

ε Canis Majoris, $6^h 52^m 44^s$.

January	10	−28	46	15.65
	29			17.04
February	10			16.52
	12			15.47
	21			15.21
	25			16.36
	26			16.71
March	11			15.37

B. A. C. 2305, $6^h 55^m 13^s$.

March	19	+20	47	6.19

δ Geminorum, $7^h 11^m 10^s$.

January	6	+22	15	14.00
	10			14.08
	29			12.43
February	10			12.31
	12			12.49
	24			12.44
	26			12.50
	28			12.42
March	11			15.26
	19			13.07
	21			14.38

B. A. C. 2469, $7^h 20^m 29^s$.

February	11	+28	13	14.26
	17			12.93
	24			12.48
	25			11.96
	26			13.86
	28			13.90
March	21			14.26

α^2 Geminorum, $7^h 25^m 1^s$.

January	6	+32	12	44.99
	10			43.72
	29			42.71
February	10			44.46

B. A. C. 2504, $7^h 28^m 42^s$.

February	17	+35	22	45.82
	25			44.27
	26			45.87
	28			45.57
March	21			45.40

α Canis Minoris, $7^h 31^m 27^s$.

January	10	+ 5	36	20.60
	29			18.82
February	10			20.38

B. A. C. 2605, $7^h 43^m 13^s$.

February	24	+19	42	15.60
	25			13.85
	26			16.53
	28			15.12
March	29			17.98

B. A. C. 2691, $7^h 56^m 45^s$.

1853.		°	′	″
February	16	+43	41	7.78
	24			7.52
	25			7.61
March	11			8.07
	16			7.29
	25			8.34
	29			8.82

ρ Argus, $8^h 1^m 9^s$.

February	10	−23	52	29.65
	17			28.93
March	15			29.18

B. A. C. 2788, $8^h 11^m 36^s$.

February	10	+21	13	61.31
	16			59.44
	24			59.74
March	11			59.67

B. A. C. 2798, $8^h 14^m 32^s$.

March	16	+42	28	57.44
	25			58.38
	29			58.56

B. A. C. 2818, $8^h 17^m 44^s$.

February	24	+25	1	23.45
	26			23.78
March	16			24.32

B. A. C. 2855, $8^h 23^m 9^s$.

February	10	+38	31	34.49
	16			32.09
	24			32.43
March	15			34.74
	29			35.48

B. A. C. 2912, $8^h 31^m 0^s$.

March	15	+32	28	3.62
	16			3.99
	29			5.06
April	5			3.63

B. A. C. 2952, $8^h 36^m 9^s$.

February	10	+31	14	14.45
	16			12.91
	24			12.45
	26			14.24
March	7			13.42
	16			12.55
	29			13.54
April	8			11.49

ε Hydræ, $8^h 38^m 50^s$.

April	2	+ 6	57	55.57
	10			56.59

Lalande 17647, $8^h 49^m$.

April	10	−13	28	11.73

B. A. C. 3033, $8^h\ 47^m\ 41^s$.

1853.		°	′	″
February	10	+33	28	60.97
	16			59.66
	24			59.34
	26			60.96
March	2			(63.05)
	7			61.56
	15			60.90
	16			59.72
	23			60.86
	29			61.43

Lalande 17662, $8^h\ 49^m$.

April	11	−13	19	59.43

B. A. C. 3109, $8^h\ 58^m\ 59^s$.

February	10	+30	15	14.53
	16			13.43
	24			13.78
	26			14.82
March	2			15.36
	7			14.42
	15			12.31
	16			13.21
	19			13.41
	23			13.61
	29			13.92

Weisse VIII, 1529, $9^h\ 0^m\ 5^s$.

April	10	−12	42	27.57

B. A. C. 3131, $9^h\ 3^m\ 58^s$.

March	16	+43	49	56.26
	23			56.05
	25			57.15
	29			57.47
April	2			55.70
	8			55.57

B. A. C. 3181, $9^h\ 12^m\ 11^s$.

March	16	+19	43	20.80
	19			21.08
	23			21.46
	25			21.62
	29			21.93
April	10			21.64

B. A. C. 3201, $9^h\ 15^m\ 23^s$.

February	10	+26	33	33.67
	16			32.46
	24			32.52
	26			34.63
March	2			33.97
	7			35.82
April	2			32.52

Weisse IX, 488, $9^h\ 22^m\ 36^s$.

April	10	−12	4	48.30
	11			48.71

B. A. C. 3252, $9^h\ 24^m\ 17^s$.

February	24	+37	8	53.37
	26			55.12
March	2			54.66
	7			56.74
	23			54.91
	25			55.79
	29			55.89
April	2			(52.60)

B. A. C. 3261, $9^h\ 25^m\ 1^s$.

1853.		°	′	″
April	5	+37	3	36.05
	8			36.12
	15			36.80
	18			36.23

ε Leonis, $9^h\ 37^m\ 20^s$.

February	16	+24	27	42.43

Weisse IX, 868, $9^h\ 39^m\ 30^s$.

April	10	−11	14	49.06
	11			48.87

B. A. C. 3355, $9^h\ 41^m\ 26^s$.

February	26	+21	52	32.90
March	7			34.32
	23			33.46
	25			33.74
April	2			32.31
	5			32.13

B. A. C. 3399, $9^h\ 48^m\ 29^s$.

April	2	+41	46	0.41
	5			1.94
	15			2.07
	18			2.47

B. A. C. 3409, $9^h\ 50^m\ 57^s$.

February	26	+30	21	41.36
March	7			42.69
	16			42.00
	23			41.75
	25			42.08

B. A. C. 3427, $9^h\ 55^m\ 14^s$.

March	7	+33	22	9.79
	16			8.15
	19			10.35
	23			8.45
	29			8.35
April	5			7.50

α Leonis, $10^h\ 0^m\ 23^s$.

April	11	+12	41	52.92

B. A. C. 3466, $10^h\ 1^m\ 36^s$.

April	27	+41	23	46.50
	28			45.53
	30			47.96

B. A. C. 3500, $10^h\ 7^m\ 42^s$.

April	27	+30	3	20.59
	28			(18.60)
	30			21.44

B. A. C. 3539, $10^h\ 14^m\ 24^s$.

April	27	+35	58	22.64
	28			(20.81)
	30			23.78

B. A. C. 3584, $10^h\ 21^m\ 20^s$.

1853.		°	′	″
February	24	+39	41	25.74
March	7			28.09
	16			26.48
	19			28.83
	25			26.67
	29			26.63
April	5			25.81
	11			28.14

B. A. C. 3610, $10^h\ 24^m\ 56^s$.

April	27	+35	45	33.28
	28			32.02
	30			34.33

B. A. C. 3671, $10^h\ 35^m\ 15^s$.

February	24	+23	58	20.49
March	7			19.66
	16			17.78
	19			20.71
	23			18.64
	25			19.23
	29			20.06
April	2			18.81
	5			18.01
	8			18.31
	10			18.89
	11			18.89

B. A. C. 3710, $10^h\ 41^m\ 38^s$.

February	24	+28	45	51.53
March	7			53.34
	16			52.91
	19			52.96
	23			52.45
	29			53.17
April	2			50.96
	5			52.05
	8			51.83
	10			51.67

B. A. C. 3736, $10^h\ 46^m\ 37^s$.

March	25	+34	50	4.01
April	18			2.75
	20			2.79
	21			(1.44)

B. A. C. 3741, $10^h\ 47^m\ 25^s$.

April	27	+34	18	22.52
	28			(20.87)
	30			24.00

B. A. C. 3781 ,$10^h\ 55^m\ 56^s$.

March	7	+39	40	30 81
	16			29.44
	19			31.83
	23			31.60
	25			30.27
April	5			29.44
	8			29.51
	10			29.64

B. A. C. 3811, $11^h\ 1^m\ 4^s$.

April	27	+37	7	18.78
	30			19.78
May	2			18.28

δ Leonis, $11^h\ 6^m\ 7^s$.

1853.		°	′	″
April	10	+21	20	40.99
	18			40.61
	22			41.02
	27			40.17
	28			39.04

B. A. C. 3842, $11^h\ 7^m\ 13^s$.

March	16	+23	54	43.51
	19			45.30
	23			44.38
	25			43.88
April	5			42.85
	8			43.09
	21			(41.07)

B. A. C. 3846, $11^h\ 8^m\ 14^s$.

April	30	+50	17	38.42
May	2			37.43
	9			35.94

δ Crateris, $11^h\ 11^m\ 51^s$.

April	8	−13	58	3.96
	10			2.45
	18			2.06
	22			3.18

Weisse XI, 509, $11^h\ 27^m\ 14^s$.

April	28	+21	16	11.19

Weisse XI, 618, $11^h\ 35^m\ 10^s$.

April	22	− 5	35	4.20
	27			4.84

B. A. C. 3973, $11^h\ 35^m\ 39^s$.

March	16	+42	33	17.30
	23			17.63
	25			17.18
April	5			16.38
	18			17.77

B. A. C. 3981, $11^h\ 38^m\ 7^s$.

April	30	+48	36	39.86
May	2			38.18
	9			38.17

β Leonis, $11^h\ 41^m\ 24^s$.

May	9	+15	24	34.72

B. A. C. 4014, $11^h\ 45^m\ 3^s$.

March	16	+16	16	22.20
	23			23.82
	25			22.90
April	5			21.73
	18			23.42

B. A. C. 4026, $11^h\ 47^m\ 17^s$.

April	21	+47	18	38.78

B. A. C. 4028, $11^h\ 47^m\ 22^s$.

April	21	+47	18	14.14

B. A. C. 4056, $11^h\ 54^m\ 3^s$.

1853.		°	′	″
April	28	+22	55	45.42
May	2			47.26
	9			47.00

B. A. C. 4066, $11^h\ 56^m\ 35^s$.

March	16	+22	17	39.68
	23			40.37
	25			40.91
April	5			39.74
	18			40.26

B. A. C. 4100, $12^h\ 3^m\ 9^s$.

April	26	+28	6	60.03
	28			(57.80)
	30			60.66
May	2			59.73
	9			59.27

B. A. C. 4177, $12^h\ 16^m\ 23^s$.

April	26	+43	22	26.42
	27			28.15
	28			(25.77)
	30			27.57
May	2			27.82

WEISSE (2) XII, 424, $12^h\ 20^m\ 4^s$.

April	18	+25	3	29.43
	20			30.14

WEISSE (2) XII, 478, $12^h\ 22^m\ 36^s$.

April	18	+25	10	11.05
	20			12.16

B. A. C. 4217, $12^h\ 22^m\ 56^s$.

April	26	+52	21	50.15
	27			50.55
May	2			50.31
	9			50.50

B. A. C. 4242, $12^h\ 27^m\ 36^s$.

May	2	+19	12	13.00
	9			12.43

WEISSE (2) XII, 599, $12^h\ 27^m\ 38^s$.

April	20	+22	42	34.69

B. A. C. 4285, $12^h\ 37^m\ 53^s$.

April	26	+40	5	39.75
	27			40.95
	28			39.56
May	2			40.75
	9			40.56

WEISSE (2) XII, 877. $12^h\ 42^m\ 8^s$.

April	18	+18	28	16.41
	20			17.07
	22			16.01

B. A. C. 4360, $12^h\ 53^m\ 6^s$.

1853.		°	′	″
April	26	+31	35	41.76
	27			41.82
May	2			40.54
	9			41.45

(*), $13^h\ 2^m\ 0^s$.

April	15	+13	7	17.81
	18			16.72
	20			15.89

B. A. C. 4421, $13^h\ 4^m\ 52^s$.

April	26	+28	38	21.30
	27			21.77
May	2			21.11
	9			22.15

(*) $13^h\ 20^m\ 0^s$.

April	18	+7	41	17.85
	20			17.64

B. A. C. 4519, $13^h\ 24^m\ 45^s$.

April	26	+42	52	45.64
	27			45.58
May	2			44.27
	9			44.20

B. A. C. 4594, $13^h\ 39^m\ 45^s$.

April	15	+26	27	24.22
	18			23.66
	20			24.19
	22			23.95

B. A. C. 4605. $13^h\ 41^m\ 0^s$.

April	27	+55	11	1.56
May	2			0.89
	9			2.39

B. A. C. 4615, $13^h\ 42^m\ 15^s$.

May	11	+16	32	38.83
June	3			37.77
	4			38.10

B. A. C. 4627, $13^h\ 44^m\ 27^s$.

April	18	+35	31	2.47
	20			3.59
	22			2.85

η BOOTIS, $13^h\ 47^m\ 33^s$.

May	11	+19	9	6.88

B. A. C. 4700, $14^h\ 2^m\ 39^s$.

June	3	−15	35	28.05
	4			26.66
	5			26.24

B. A. C. 4706, $14^h\ 3^m\ 33^s$.

April	18	+25	48	16.77
	20			16.92
	21			(14.83)
	22			16.36

LALANDE 26054, $14^h\ 6^m\ 19^s$.

1853.		°	′	″
May	9	−16	45	34.62

B. A. C. 4731, $14^h\ 9^m\ 1^s$.

April	27	+19	36	44.45
May	2			43.31
June	3			44.48

B. A. C. 4747, $14^h\ 11\ 39^s$.

April	15	+36	12	13.48
	18			13.16
	20			13.65
	21			(12.06)
	22			14.26

B. A. C. 4752, $14^h\ 12^m\ 1^s$

June	4	+52	0	9.17
	5			9.39
	24			7.71

B. A. C. 4783, $14^h\ 19^m\ 22^s$.

April	18	+39	4	22.98
	20			22.69

B. A. C. 4805, $14^h\ 23^m\ 41^s$.

June	4	+42	28	29.46
	5			28.23
	24			28.18

B. A. C. 4810, $14^h\ 25^m\ 43^s$.

April	15	+22	55	22.49
	18			21.70
May	2			21.49

B. A. C. 4814, $14^h\ 26^m\ 25^s$.

April	20	−19	46	41.07
	22			41.45
	27			41.32

B. A. C. 4841, $14^h\ 32^m\ 35^s$.

April	15	+44	17	29.03
	18			28.45
May	2			29.32

B. A. C. 4873, $14^h\ 38^m\ 15^s$.

April	20	+17	36	8.26
	22			8.38
	27			7.99

ε BOOTIS, $14^h\ 38^m\ 26^s$.

June	3	+27	42	33.31
	4			33.44
	5			31.77

α^2 LIBRÆ, $14^h\ 42^m\ 35^s$.

April	26	−15	24	55.35

B. A. C. 4902, $14^h\ 43^m\ 31^s$.

June	3	+29	14	22.28
	4			22.24
	5			21.94

B. A. C. 4958, $14^h\ 56^m\ 18^s$.

1853.		°	′	″
April	22	+40	59	5.70
	27			5.30
May	4			5.61

B. A. C. 4993, $15^h\ 2^m\ 3^s$.

April	18	+25	41	6.91
	22			8.45
	27			8.37
May	2			7.71

β LIBRÆ, $15^h\ 8^m\ 56^s$.

May	11	− 8	49	33.97

B. A. C. 5048, $15^h\ 11^m\ 41^s$.

April	18	+21	7	25.85
	22			27.39
May	9			25.78

B. A. C. 5061, $15^h\ 13^m\ 56^s$.

June	4	+30	9	47.38
	5			47.27
	24			46.31

B. A. C. 5072, $15^h\ 15^m\ 48^s$.

May	2	+33	28	22.60
	11			23.18
June	4			21.75

B. A. C. 5084, $15^h\ 18^m\ 50^s$.

April	20	+37	54	20.48
	22			21.54
May	9			20.42

B. A. C. 5092, $15^h\ 20^m\ 16^s$.

May	11	+47	35	29.79
June	3			29.21
	5			28.95

B. A. C. 5130, $15^h\ 26^m\ 25^s$.

June	4	+41	24	38.13
	24			37.68
	25			38.78

B. A. C. 5146, $15^h\ 28^m\ 45^s$.

April	18	+18	9	29.40
	20			29.30
May	2			29.70
	9			28.66

B. A. C. 5168, $15^h\ 32^m\ 26^s$.

April	18	+40	50	38.60
	20			39.02
May	2			39.60
	11			39.08

B. A. C. 5223, $15^h\ 40^m\ 20^s$.

April	18	+14	34	52.45
	20			53.24
May	2			53.48

B. A. C. 5234, $15^{h}\ 42^{m}\ 0^{s}$.

1853.		°	′	″
May	9	+18	36	28.63
	11			29.21
June	3			28.97

B. A. C. 5236, $15^{h}\ 42^{m}\ 24^{s}$.

June	4	+28	37	11.08
	24			9.32
	25			9.78

B. A. C. 5271, $15^{h}\ 47^{m}\ 29^{s}$.

June	24	+42	52	24.57
	25			24.26
	28			25.39

B. A. C. 5273, $15^{h}\ 47^{m}\ 58^{s}$.

April	18	+20	45	12.78
	20			13.64
May	2			14.29

B. A. C. 5287, $15^{h}\ 49^{m}\ 38^{s}$.

May	9	+43	34	38.78
	11			40.26
June	3			39.88

B. A. C. 5295, $15^{h}\ 50^{m}\ 20^{s}$.

June	4	+38	22	59.47
July	4			57.95
	5			58.75

B. A. C. 5298, $15^{h}\ 50^{m}\ 28^{s}$.

July	6	+43	0	18.48
	7			17.25
	9			17.92

B. A. C. 5315, $15^{h}\ 54^{m}\ 30^{s}$.

June	28	+18	14	9.72
July	4			9.16
	6			10.44

β^{1} SCORPII, $15^{h}\ 56^{m}\ 43^{s}$.

April	20	−19	23	24.71

B. A. C. 5341, $15^{h}\ 58^{m}\ 16^{s}$.

June	4	+53	20	3.21
	24			2.06
	25			2.62

δ OPHIUCHI, $16^{h}\ 6^{m}\ 29^{s}$.

June	25	− 3	18	15.48
	28			16.05

B. A. C. 5426, $16^{h}\ 8^{m}\ 50^{s}$.

April	18	+19	11	23.89
	20			24.59
May	2			25.25
	11			24.46

B. A. C. 5460, $16^{h}\ 14^{m}\ 47^{s}$.

1853.		°	′	″
April	20	+40	4	12.99
May	2			13.13
July	9			12.15
	23			12.27

B. A. C. 5473, $16^{h}\ 16^{m}\ 15^{s}$.

April	18	+31	14	34.47
May	11			34.73
June	3			35.46

B. A. C. 5527, $16^{h}\ 24^{m}\ 1^{s}$.

April	20	+20	48	37.79
May	2			38.62
	9			36.94

B. A. C. 5541, $16^{h}\ 27^{m}\ 39^{s}$.

May	11	+30	49	1.17
June	4			0.79
	28			0.13

B. A. C. 5546, $16^{h}\ 28^{m}\ 28^{s}$.

June	28	+38	24	12.95
July	5			13.13
	7			12.07

B. A. C. 5549, $16^{h}\ 28^{m}\ 59^{s}$.

July	8	+50	27	32.77
	9			33.50
	23			33.00

B. A. C. 5597, $16^{h}\ 34^{m}\ 48^{s}$.

May	11	+25	9	4.72
June	3			5.10
	4			5.12

B. A. C. 5615, $16^{h}\ 37^{m}\ 41^{s}$.

June	25	+36	47	36.08
	28			36.66
July	4			36.80

B. A. C. 5619, $16^{h}\ 38^{m}\ 20^{s}$.

July	5	+34	19	4.85
	7			3.80
	8			4.80
	9			5.43

B. A. C. 5652, $16^{h}\ 43^{m}\ 25^{s}$.

May	11	+30	13	30.13
June	3			31.61
	4			30.88

B. A. C. 5677, $16^{h}\ 45^{m}\ 32^{s}$.

June	25	+24	54	42.78
	28			43.18
July	4			43.42

B. A. C. 5693, $16^{h}\ 47^{m}\ 17^{s}$.

July	6	+31	57	10.28
	7			10.21
	8			10.72
	9			11.08

B. A. C. 5706, $16^{h}\ 50^{m}\ 1^{s}$.

1853.		°	′	″
June	28	+46	47	1.06
July	4			1.00
	5			1.81

B. A. C. 5732, $16^{h}\ 54^{m}\ 44^{s}$.

May	11	+15	10	20.80
June	3			20.80
	4			20.45

B. A. C. 5775, $17^{h}\ 0^{m}\ 31^{s}$.

June	7	+44	1	5.66
	9			6.65
	23			5.64

B. A. C. 5788, $17^{h}\ 2^{m}\ 43^{s}$.

May	11	+36	7	59.15
June	3			58.82
	4			57.44

B. A. C. 5790, $17^{h}\ 2^{m}\ 53^{s}$.

July	28	+40	42	53.03
	30			52.98
August	6			53.17

B. A. C. 5795, $17^{h}\ 4^{m}\ 37^{s}$.

June	25	+51	2	1.36
	28			2.73
July	4			2.65
	9			3.22

B. A. C. 5828, $17^{h}\ 8^{m}\ 52^{s}$.

June	28	+25	1	9.52
July	4			9.40
	6			10.16
	7			9.62

B. A. C. 5841, $17^{h}\ 11^{m}\ 34^{s}$.

May	11	+11	1	51.64
June	3			51.75
	4			51.51
July	23			52.15

B. A. C. 5860, $17^{h}\ 14^{m}\ 44^{s}$.

June	25	+24	39	6.33
July	6			7.85
	7			7.28

B. A. C. 5883, $17^{h}\ 17^{m}\ 50^{s}$.

May	11	+23	6	12.03
	28			10.73
July	4			11.83

B. A. C. 5886, $17^{h}\ 18^{m}\ 31^{s}$.

July	8	+37	17	12.21
	9			12.21
	23			11.51

B, A. C. 5900, $17^{h}\ 20^{m}\ 21^{s}$.

July	28	+20	12	44.11
	30			44.46
August	6			44.92

B. A. C. 5927, $17^{h}\ 25^{m}\ 15^{s}$.

1853.		°	′	″
June	6	+31	16	24.48
	7			24.43
	8			24.16

B. A. C. 5929, $17^{h}\ 25^{m}\ 40^{s}$.

July	9	+38	59	49.51
	28			48.90
	30			49.93

B. A. C. 5962, $17^{h}\ 30^{m}\ 54^{s}$.

June	4	+30	52	50.94
	6			50.77
	7			50.23
	23			50.24

B. A. C. 5986, $17^{h}\ 34^{m}\ 18^{s}$.

July	8	+31	17	6.08
	9			6.61
	15			6.52
	28			6.54

μ HERCULIS, $17^{h}\ 40^{m}\ 35^{s}$.

June	28	+27	48	41.73
July	4			42.43
	6			41.94
	7			42.22

B. A. C. 6032, $17^{h}\ 42^{m}\ 41^{s}$.

August	9	−31	16	53.72
	10			53.90
	19			52.58

B. A. C. 6087, $17^{h}\ 52^{m}\ 46^{s}$.

May	11	+30	12	18.67
June	3			18.94
	4			18.24
	8			18.27

γ DRACONIS, $17^{h}\ 53^{m}\ 7^{s}$.

June	28	+51	30	28.87
July	4			30.72
	6			30.37
	7			30.71
	9			29.51
	23			30.59
	28			30.91
August	8			31.16

B. A. C. 6113, $17^{h}\ 56^{m}\ 7^{s}$.

August	9	−29	16	44.44
	10			44.47
	19			43.05

B. A. C. 6130, $17^{h}\ 59^{m}\ 18^{s}$.

August	8	−30	0	28.73
	12			28.49

B. A. C. 6147, $18^{h}\ 1^{m}\ 20^{s}$.

May	11	+30	32	37.75
June	3			37.64
	4			35.92
	23			36.58

B. A. C. 6150, 18^h 1^m 42^s.

1853.		°	′	″
June	28	+28	44	41.42
July	4			42.09
	6			42.33
	8			41.68

B. A. C. 6166, 18^h 3^m 52^s.

August	9	−31	59	55.98
	10			55.92

B. A. C. 6178, 18^h 6^m 16^s.

May	11	+31	22	16.61
June	3			17.37
	4			15.32
	28			16.63

B. A. C. 6202, 18^h 10^m 46^s.

August	23	−31	22	28.25
	26			27.05

B. A. C. 6212, 18^h 11^m 41^s.

August	9	−32	14	29.48
	10			29.04

B. A. C. 6235, 18^h 14^m 36^s.

June	28	+35	59	58.46
July	4			59.75
	6			59.73
	30			59.72

B. A. C. 6241, 18^h 15^m 53^s.

July	8	+23	12	44.27
	15			45.07
	23			45.63
	28			45.74

B. A. C. 6261, 18^h 18^m 23^s.

August	8	−26	43	2.86
	12			2.41
	19			2.50

B. A. C. 6264, 18^h 18^m 45^s.

August	26	−26	50	28.49
	29			27.84

B. A. C. 6270, 18^h 19^m 37^s.

August	9	−26	40	12.91
	10			12.51

B. A. C. 6271, 18^h 19^m 38^s.

August	13	−29	20	50.17
	23			47.93

δ URSÆ MINORIS, S. P., 18^h 20^m 44^s.

February	12	+86	35	50.67
	17			51.42
	24			52.19
	25			(53.61)
	26			50.45
	28			49.61

B. A. C. 6295, 18^h 22^m 40^s.

1853.		°	′	″
August	23	−29	17	25.92
	31			26.85

B. A. C. 6322, 18^h 26^m 32^s.

May	11	+23	30	31.15
June	3			31.09
	4			30.28
	28			30.92

B. A. C. 6349, 18^h 30^m 20^s.

June	28	+38	46	31.16
July	4			31.61
	6			32.16
	8			32.59

α LYRÆ, 18^h 31^m 52^s.

January	6	+38	38	49.14
	9			48.36
	16			49.09
	17			49.23
	20			47.17
	26			49.49
	27			50.42
	28			49.85
	31			50.34
May	11			47.53
June	3			48.55
	4			(46.56)
July	15			48.82
	23			48.93
	28			48.59
	30			48.67
August	6			50.67
	8			47.34
	9			49.47
	10			49.44
	11			49.86
	12			48.81
	13			49.30
	19			48.27
	20			47.88
	22			48.57
	23			48.88
	26			47.97
	29			47.88
	30			49.16
	31			48.79

B. A. C. 6372, 18^h 36^m 26^s.

August	10	+52	3	25.70
	12			24.83
	13			25.19

B. A. C. 6382, 18^h 38^m 10^s.

August	30	−28	26	6.99
September	8			5.19

B. A. C. 6387, 18^h 39^m 12^s.

June	3	+20	24	23.53
	4			22.47
	28			22.81

B. A. C. 6390, 18^h 39^m 22^s.

July	6	+39	30	57.33
	8			57.05
	23			58.54
	28			57.26

B. A. C. 6391, 18^h 39^m 25^s.

1853.		°	′	″
July	6	+39	27	30.03
	8			29.74
	23			30.90
	28			29.54

BRISBANE 6501, 18^h 40^m.

August	6	−44	38	20.15
	11			18.90

(*), 18^h 42^m.

August	6	−44	42	17.66
	11			17.72

B. A. C. 6426, 18^h 44^m 11^s.

August	9	+32	38	34.62
	12			34.67
	13			35.56

B. A. C. 6452, 18^h 48^m 13^s.

July	30	+52	46	58.85
August	8			58.06
	9			59.94
	10			61.08

B. A. C. 6453, 18^h 48^m 25^s.

June	3	+22	27	30.71
	4			29.23
	28			29.35

B. A. C. 6465, 18^h 49^m 9^s.

August	6	−25	4	15.68
	7			15.89
	8			15.43

B. A. C. 6466, 18^h 49^m 16^s.

July	4	+36	42	39.01
	6			38.78
	8			38.22
	23			39.75

B. A. C. 6497, 18^h 54^m 21^s.

July	28	+31	56	20.43
	30			19.06
August	6			21.59
	8			18.89
	9			20.24

ζ AQUILÆ, 18^h 58^m 31^s.

July	4	+13	38	39.23
	6			39.53
	8			38.55
	23			41.11
	28			40.46
August	6			41.17
	8			39.12
	9			40.57
	10			41.51
	12			40.30
	13			40.51
September	9			39.87

B. A. C. 6549, 19^h 0^m 54^s.

August	20	−30	14	28.13
	22			26.72
	26			27.52
September	6			27.05

(*), 19^h 9^m.

1853.		°	′	″
June	4	−41	16	31.42
August	6			30.06

B. A. C. 6589, 19^h 9^m 46^s.

June	28	+21	7	44.23
July	4			45.05
	6			44.68

B. A. C. 6594, 19^h 10^m 47^s.

August	11	−32	5	18.74
	12			19.58

B. A. C. 6599, 19^h 11^m 10^s.

July	8	+37	52	9.58
	23			10.11
	28			10.00
	30			9.76

B. A C. 6602, 19^h 11^m 23^s.

August	26	+22	45	31.88
	30			32.80

B. A. C. 6609, 19^h 12^m 8^s.

August	13	−29	52	49.38
	19			49.44
	20			49.72

B. A. C. 6627, 19^h 15^m 1^s.

September	7	−31	4	59.17
	13			58.89

B. A. C. 6631, 19^h 15^m 37^s.

September	5	−29	35	38.63
	6			39.34

δ AQUILÆ, 19^h 17^m 56^s.

August	8	+ 2	49	12.37
	9			11.79
	10			13.08
September	6			11.40
October	7			12.09
	8			10.60

B. A. C. 6648, 19^h 18^m 13^s.

July	4	+29	19	52.24
	6			52.31
	8			51.40

B. A. C. 6665, 19^h 20^m 8^s.

August	11	−31	5	22.43
	12			22.98

B. A. C. 6672, 19^h 22^m 5^s.

August	13	−26	2	36.46
	19			35.27

B. A. C. 6673, 19^h 22^m 18^s.

July	23	+29	8	51.44
	28			51.76
	30			51.89

B. A. C. 6677, $19^h\ 22^m\ 42^s$.

1853.		°	′	″
August	29	−28	31	22.90
	30			23.27

B. A. C. 6680, $19^h\ 22^m\ 56^s$.

August	20	−31	10	50.49
	22			49.38
	26			50.01

B. A. C. 6714, $19^h\ 28^m\ 54^s$.

July	6	+29	8	10.58
	8			9.91
	23			9.65
	28			10.51
September	7			10.52
	8			10.74

B. A. C. 6716, $19^h\ 29^m\ 33^s$.

August	13	−28	56	27.99
	19			27.00

B. A. C. 6728, $19^h\ 31^m\ 46^s$.

July	30	+43	22	20.89
August	9			22.20
	10			22.60
	11			22.15

B. A. C. 6738, $19^h\ 33^m\ 17^s$.

August	22	−25	12	15.59
	26			15.70

B. A. C. 6740, $19^h\ 33^m\ 27^s$.

July	6	+29	48	38.30
	8			37.69
	23			38.11
	28			39.03

B. A. C. 6744, $19^h\ 34^m\ 19^s$.

September	26	+17	7	55.07
October	8			54.87
	14			55.90

B. A. C. 6745, $19^h\ 34^m\ 34^s$.

September	27	+42	28	25.85
	29			25.30
October	6			25.38
	7			25.66

B. A. C. 6768, $19^h\ 38^m\ 30^s$.

September	16	−29	31	27.21
	17			27.06

B. A. C. 6769, $19^h\ 38^m\ 45^s$.

August	12	+41	24	57.64
	13			57.78
	19			57.20
	29			56.25

γ AQUILÆ, $19^h\ 39^m\ 8^s$.

September	26	+10	15	4.72
	27			5.60

(*), $19^h\ 39^m\ 46^s$.

1853.		°	′	″
September	5	−28	46	40.50
	8			41.24

B. A. C. 6777, $19^h\ 40^m\ 16^s$.

September	29	+34	38	59.80
October	6			59.58
	7			59.66

δ CYGNI, $19^h\ 40^m\ 17^s$.

October	8	+44	46	1.47
	14			1.91
	17			1.56

B. A. C. 6794, $19^h\ 42^m\ 19^s$.

July	30	+18	46	8.86
August	10			10.28
	11			9.37

α AQUILÆ, $19^h\ 43^m\ 28^s$.

January	27	+ 8	28	34.42
February	10			34.27

B. A. C. 6817, $19^h\ 45^m\ 28^s$.

July	6	+40	13	14.82
	8			14.13
	28			13.89

B. A. C. 6829, $19^h\ 47^m\ 23^s$.

August	30	−30	57	44.90
September	5			44.90
	6			44.94

B. A. C. 6831, $19^h\ 47^m\ 44^s$.

September	13	−23	27	25.43
	15			26.91

B. A. C. 6841, $19^h\ 49^m\ 29^s$.

August	20	−30	56	9.03
	22			6.29
	30			7.61
September	5			6.37
	6			7.40

B. A. C. 6851, $19^h\ 50^m\ 41^s$.

July	30	+34	41	15.67
August	6			15.90
	10			16.08
	11			15.21
September	26			14.92

B. A. C. 6854, $19^h\ 51^m\ 17^s$.

September	17	−28	59	29.26
	19			29.64

B. A. C. 6861, $19^h\ 52^m\ 16^s$.

August	12	+60	25	37.18
	13			36.70
	19			35.99
	29			36.42

B. A. C. 6868, $19^h\ 53^m\ 17^s$.

1853.		°	′	″
September	27	+17	6	35.24
	29			34.79
October	6			35.32
	7			35.16

B. A. C. 6882, $19^h\ 55^m\ 23^s$.

July	6	+24	23	14.21
	8			14.00
	28			13.89

B. A. C. 6883, $19^h\ 55^m\ 40^s$.

July	30	+24	31	16.11
August	6			16.21
	10			16.75
	11			16.50

B. A. C. 6899, $19^h\ 58^m\ 4^s$.

August	30	−30	8	54.42
September	8			55.51

RUMKER 7943, $19^h\ 57^m\ 10^s$.

October	8	+16	17	27.35
	14			28.64

B. A. C. 6906, $19^h\ 59^m\ 58^s$.

September	5	−26	39	11.40
	13			11.51

B. A. C. 6908, $20^h\ 0^m\ 3^s$.

September	23	−28	52	15.07
	24			15.78

B. A. C. 6912, $20^h\ 0^m\ 26^s$.

August	12	+23	11	7.65
	13			6.19
	19			6.56
	29			5.90

B. A. C. 6932, $20^h\ 3^m\ 9^s$.

August	20	+61	33	39.80
	30			41.23
September	6			41.08

GR. C. 1805, $20^h\ 3^m\ 52^s$.

September	26	+36	24	1.66
	27			1.28
	29			1.58

B. A. C. 6941, $20^h\ 4^m\ 27^s$.

September	16	+20	41	27.87
	17			29.03

(*), $20^h\ 7^m\ 9^s$.

October	6	+16	16	32.63
	14			33.87

(*), $20^h\ 8^m\ 18^s$.

September	29	+16	17	42.88
October	6			41.91

GR. C. 1809, $20^h\ 8^m$.

1853.		°	′	″
October	6	+16	17	39.78
	8			39.78
	17			39.98

GR. C. 1810, $20^h\ 8^m$.

October	7	+16	19	14.10
	8			14.07
	14			14.71
	17			13.81

O. ARG. N. 20223, $20^h\ 8^m\ 41^s$.

August	29	+48	44	11.08

B. A. C. 6973, $20^h\ 9^m\ 33^s$.

July	6	+27	21	24.64
	8			24.46
	28			25.14

B. A. C. 6977, $20^h\ 10^m\ 7^s$.

September	5	−30	5	14.46
	6			15.37

RUMKER 8156, $20^h\ 10^m\ 4^s$.

September	26	+16	18	24.11
	27			23.84
October	8			24.01

B. A. C. 6978, $20^h\ 10^m\ 14^s$.

July	30	+27	18	60.57
August	6			61.95
	10			61.25
	11			61.57
September	23			61.01
	24			59.87

B. A. C. 6982, $20^h\ 10^m\ 48^s$.

September	13	−25	41	15.17
	16			15.83
	19			15.28

B. A. C. 7011, $20^h\ 15^m\ 29^s$.

August	20	−29	33	19.32
	22			19.02

B. A. C. 7018, $20^h\ 16^m\ 15^s$.

August	30	−29	8	44.09
September	6			43.23

B. A. C. 7021, $20^h\ 16^m\ 45^s$.

September	8	−27	2	21.05
	10			20.09

B. A. C. 7029, $20^h\ 17^m\ 52^s$.

July	6	+31	42	30.26
	8			29.91
	28			30.32

O. ARG. S. 20521, $20^h\ 18^m$.

August	11	−23	30	15.28
	12			15.72
	13			16.36

B. A. C. 7040, $20^{h}\ 19^{m}\ 51^{s}$.

1853.		° ′ ″
September	24	−24 28 25.57
October	14	22.92
	17	24.43

B. A. C. 7057, $20^{h}\ 21^{m}\ 44^{s}$.

September	13	−29 36 38.20
	16	39.13
	19	38.61

B. A. C. 7073, $20^{h}\ 23^{m}\ 37^{s}$.

July	30	+35 57 23.12
August	6	23.76
	9	24.12

B. A. C. 7091, $20^{h}\ 26^{m}\ 41^{s}$.

August	20	+48 42 57.87
	29	57.80
	30	58.36

B. A. C. 7093, $20^{h}\ 26^{m}\ 51^{s}$.

September	6	−27 17 13.07
	8	12.14

B. A. C. 7108, $20^{h}\ 28^{m}\ 55^{s}$.

September	8	−25 37 37.96
	19	37.94

B. A. C. 7111, $20^{h}\ 28^{m}\ 57^{s}$.

September	24	−22 57 42.69
October	14	41.22

B. A. C. 7112, $20^{h}\ 29^{m}\ 0^{s}$.

August	6	+46 10 53.55
	10	53.24
	22	52.34

B. A. C. 7128, $20^{h}\ 31^{m}\ 12^{s}$.

September	13	−24 19 2.87
	16	2.39

B. A. C. 7146, $20^{h}\ 32^{m}\ 7^{s}$.

September	27	+15 18 50.21
	29	51.03
October	6	50.29

a DELPHINI, $20^{h}\ 32^{m}\ 40^{s}$.

October	7	+15 23 9.32
	8	9.95
	14	10.84

B. A. C. 7158, $20^{h}\ 34^{m}\ 4^{s}$.

October	17	+40 3 5.01
	19	5.05
	28	5.78

B. A. C. 7167, $20^{h}\ 35^{m}\ 23^{s}$.

August	9	+38 33 1.94
	29	0.06
	30	1.83

a CYGNI, $20^{h}\ 36^{m}\ 19^{s}$.

1853.		° ′ ″
February	9	+44 44 47.11
	10	48.15
October	17	47.79
	19	47.25
	28	47.81

(*), $20^{h}\ 36^{m}\ 9^{s}$.

August	10	−21 25 47.39
	11	47.61

B. A. C. 7188, $20^{h}\ 38^{m}\ 23^{s}$.

August	6	+24 44 12.21
	20	13.10
	22	11.25

B. A. C. 7193, $20^{h}\ 39^{m}\ 27^{s}$.

September	5	+60 3 45.48
	6	44.72
	8	43.61

B. A. C. 7202, $20^{h}\ 39^{m}\ 53^{s}$.

September	10	−18 44 58.96
	15	60.97

B. A. C. 7210, $20^{h}\ 41^{m}\ 5^{s}$.

September	17	−27 55 8.50
	19	8.26

B. A. C. 7216, $20^{h}\ 41^{m}\ 40^{s}$.

September	13	−25 31 55.87
October	6	56.32
	7	56.64

B. A. C. 7219, $20^{h}\ 42^{m}\ 12^{s}$.

August	9	+45 1 51.40
	22	51.23
	29	49.68

B. A. C. 7222, $20^{h}\ 42^{m}\ 28^{s}$.

September	26	+ 7 18 34.36
	27	34.35
	29	35.05

B. A. C. 7224, $20^{h}\ 42^{m}\ 33^{s}$.

October	8	−28 33 9.04
	14	7.36

B. A. C. 7248, $20^{h}\ 46^{m}\ 13^{s}$.

August	30	−19 21 32.58
	31	33.09

B. A. C. 7254, $20^{h}\ 48^{m}\ 4^{s}$.

September	26	+44 36 55.66
	27	56.37
October	6	56.49
	19	55.39
	28	56.76

B. A. C. 7262, $20^{h}\ 49^{m}\ 2^{s}$.

September	5	+53 56 37.28
	6	36.60

B. A. C. 7274, $20^{h}\ 51^{m}\ 31^{s}$.

1853.		° ′ ″
September	10	+48 37 13.59
	17	14.30
	23	13.75
October	7	13.72

B. A. C. 7285, $20^{h}\ 52^{m}\ 41^{s}$.

September	8	+ 6 56 4.75
	15	4.02

B. A. C. 7290, $20^{h}\ 52^{m}\ 58^{s}$.

October	8	+43 53 22.06
	14	23.41

B. A. C. 7297, $20^{h}\ 54^{m}\ 11^{s}$.

August	11	+39 40 3.13
	12	2.51
	13	2.82
	20	1.42

61^{1} CYGNI, $21^{h}\ 0^{m}\ 10^{s}$.

August	11	+38 0 53.03
	12	52.75
	13	52.64
	20	51.87
	29	51.87
	30	52.43
	31	52.14
September	5	53.30
	6	52.45
	8	51.78
	10	51.96
	13	52.46
	15	51.82
	16	51.35
	23	52.18
	24	51.52
	26	51.95
	27	51.92
	29	51.40
October	6	52.29
	7	51.88
	8	52.73
	14	51.89
	15	52.44
	17	52.27
	19	51.86
	28	53.04
	31	52.89

61^{2} CYGNI, $21^{h}\ 0^{m}\ 11^{s}$.

September	27	+38 0 48.32
October	8	48.57
	15	47.83
	28	48.98
	31	48.40

B. A. C. 7366, $21^{h}\ 5^{m}\ 57^{s}$.

September	6	−26 31 41.59
	10	40.54

ζ CYGNI, $21^{h}\ 6^{m}\ 33^{s}$.

August	11	+29 36 51.08
	12	50.75
	13	50.66

14 AQUARII, $21^{h}\ 8^{m}\ 27^{s}$.

1853.		° ′ ″
September	23	− 9 50 10.09
	24	11.42

B. A. C. 7383, $21^{h}\ 8^{m}\ 34^{s}$.

September	29	+40 31 35.40
October	6	35.79
	7	35.79

WEISSE (2) XXI, 226, $21^{h}\ 9^{m}\ 30^{s}$.

September	26	+40 35 14.47
October	14	15.36
	28	15.73

B. A. C. 7401, $21^{h}\ 12^{m}\ 45^{s}$.

August	30	+55 10 10.90
	31	10.51
September	5	10.62

B. A. C. 7402, $21^{h}\ 12^{m}\ 52^{s}$.

October	17	+43 19 0.47
	19	0.62

a CEPHEI, $21^{h}\ 15^{m}\ 0^{s}$.

February	10	+61 57 4.53
March	2	4.97
August	20	4.44
	29	3.58
September	17	3.28
	19	4.55

B. A. C. 7417, $21^{h}\ 15^{m}\ 5^{s}$.

October	8	+57 59 25.63
	31	26.54

B. A. C. 7431, $21^{h}\ 16^{m}\ 48^{s}$.

August	11	+48 44 54.46
	12	54.42
	13	53.94

B. A. C. 7436, $21^{h}\ 17^{m}\ 10^{s}$.

September	6	−24 27 53.97
	13	54.63

B. A. C. 7450, $21^{h}\ 19^{m}\ 29^{s}$.

September	16	+18 43 40.89
	28	42.05

B. A. C. 7453, $21^{h}\ 19^{m}\ 39^{s}$.

August	30	+36 1 18.26
	31	18.13
September	5	19.13

β Aquarii, $21^h\ 23^m\ 39^s$.

1853.		°	′	″
August	20	− 6	13	42.70
	29			42.64
September	10			41.55
	17			42.57
	19			43.68
	23			42.26
	24			42.97
	26			42.66
	27			42.88
	29			41.63
October	6			40.15
	14			40.11
	17			42.39
	19			40.17
	28			40.50
	31			41.75
November	25			40.54

B. A. C. 7503, $21^h\ 28^m\ 21^s$.

September	5	+44	55	50.00
	6			49.44
	8			51.19
	13			48.95

O. Arg. S. 21515, $21^h\ 28^m\ 59^s$.

October	8	−25	7	15.93
	14			14.51
	15			14.89

B. A. C. 7515, $21^h\ 29^m\ 52^s$.

September	15	− 1	3	37.30
	16			38.03

O. Arg. S. 21534, $21^h\ 30^m\ 24^s$.

September	23	−25	7	15.86
	24			17.26
October	8			17.22
	14			15.31
	15			17.03

B. A. C. 7521, $21^h\ 30^m\ 56^s$.

August	29	+39	44	29.92
	30			31.20
	31			30.27

B. A. C. 7528, $21^h\ 32^m\ 1^s$.

October	17	+19	35	26.56
	19			26.81

B. A. C. 7549, $21^h\ 34^m\ 48^s$.

September	19	−24	49	23.66
	25			23.19

B. A. C. 7558, $21^h\ 36^m\ 4^s$.

October	17	−16	39	16.31
November	14			15.69

B. A. C. 7559, $21^h\ 36^m\ 21^s$.

September	26	+40	23	39.13
October	12			38.24
	28			39.66
	31			39.24

B. A. C. 7565, $21^h\ 37^m\ 4^s$.

1853.		°	′	″
October	8	+40	28	16.53
	14			16.98
	15			16.74

B. A. C. 7569, $21^h\ 37^m\ 26^s$.

September	10	+28	4	0.61
	13			0.99

B. A. C. 7584, $21^h\ 39^m\ 9^s$.

September	16	+24	53	38.32
	17			38.92

(*), 21 37^m.

September	29	+40	21	50.98
October	6			51.88

B. A. C. 7590, $21^h\ 39^m\ 57^s$.

August	31	+16	30	10.70
September	6			11.30

B. A. C. 7610, $21^h\ 44^m\ 22^s$.

September	15	+69	27	21.25
	19			22.17

O. Arg. N. 22961, $21^h\ 45^m\ 33^s$.

September	17	+69	29	1.58

B. A. C. 7620, $21^h\ 45^m\ 35^s$.

October	19	−11	0	55.28
	28			54.67
November	14			54.92

B. A. C. 7631, $21^h\ 47^m\ 6^s$.

September	16	+55	5	36.42
	23			36.98

B, A. C. 7641, $21^h\ 49^m\ 38^s$.

September	26	+11	21	58.48
	29			58.95
October	6			59.06

B. A. C. 7644, $21^h\ 50^m\ 7^s$.

September	10	+71	46	58.24
	13			58.52

B. A. C. 7677, $21^h\ 56^m\ 23^s$.

September	23	+74	16	44.79
October	6			45.61

B. A. C. 7680, $21^h\ 56^m\ 45^s$.

September	16	− 5	33	52.64
	17			52.08

α Aquarii, $21^h\ 58^m\ 5^s$.

1853.		°	′	″
August	31	− 1	2	47.81
September	5			46.87
	6			47.17
	8			46.72
	13			47.43
	19			47.40
	24			47.81
	26			47.12
October	8			47.51
	12			47.74
	15			46.31
November	14			47.38
	25			46.43

B. A. C. 7697, $21^h\ 59^m\ 19^s$.

October	17	−11	10	33.86
	19			33.28

B. A. C. 7752, $22^h\ 6^m\ 3^s$.

October	17	− 5	11	29.99
	19			28.69
	31			30.00
November	25			29.20

B. A. C. 7754, $22^h\ 6^m\ 24^s$.

September	16	+56	5	40.87
	17			41.69

B. A. C. 7759, $22^h\ 7^m\ 4^s$.

September	8	+60	1	6.57
	10			6.84

B. A. C. 7765, $22^h\ 7^m\ 27^s$.

August	30	+38	58	21.87
	31			21.73
September	5			22.44
	6			21.91

B. A. C. 7775, $22^h\ 9^m\ 7^s$.

September	23	+62	25	8.18
	24			8.35

B. A. C. 7796, $22^h\ 14^m\ 8^s$.

September	26	+11	27	3.98
October	6			3.68
	8			3.63

B. A. C. 7800, $22^h\ 14^m\ 50^s$.

August	30	+45	46	57.32
	31			57.14
September	5			58.13
	6			57.18

B. A. C. 7803, $22^h\ 15^m\ 39^s$.

October	17	+42	59	27.50
	19			28.11
	31			26.96

B. A. C. 7806, $22^h\ 16^m\ 25^s$.

September	15	−14	17	16.22
	16			17.23
	17			16.95

B. A. C. 7807, $22^h\ 16^m\ 27^s$.

1853.		°	′	″
September	8	+20	5	30.06
	13			30.57

B. A. C. 7812, $22^h\ 17^m\ 28^s$.

September	24	+56	31	38.61
October	14			38.61

B. A. C. 7835, $22^h\ 22^m\ 0^s$.

October	19	−13	40	51.06
	29			52.53
	31			51.34

B. A. C. 7840, $22^h\ 22^m\ 42^s$.

November	1	−11	26	37.84
	2			38.24

B. A. C. 7846, $22^h\ 23^m\ 30^s$.

September	23	+53	28	45.04
October	14			45.07
November	14			46.35

B. A. C. 7858, $22^h\ 25^m\ 49^s$.

September	26	+39	0	34.12
October	6			35.27
	17			34.47

B. A. C. 7866, $22^h\ 27^m\ 21^s$.

September	6	−24	45	53.78
	8			52.69
	13			53.36
	24			53.38
October	8			54.17

B. A. C. 7879, $22^h\ 29^m\ 11^s$.

September	16	+38	51	13.04
	17			12.93

Piazzi XXII, 169, $22^h\ 29^m$.

December	12	+ 3	45	6.55

B. A. C. 7907, $22^h\ 33^m\ 58^s$.

September	19	+74	35	32.18
	23			31.25
October	15			32.03

ζ Pegasi, $22^h\ 33^m\ 59^s$.

November	1	+10	2	58.90
	2			59.24
	14			59.31
	25			59.17

Weisse XXII, 772, 22 6 .

December	12	+ 3	5	19.23
	15			21.47

B. A. C. 7932, $22^h\ 37^m\ 25^s$.

September	6	+41	1	59.69
	8			58.64
	13			59.60

B. A. C. 7943, 22^{h} 39^{m} 12^{s}.

1853.		°	′	″
September	26	+11	24	16.43
October	6			17.52
	8			17.33

B. A. C. 7948, 22^{h} 39^{m} 31^{s}.

September	15	+43	45	23.52
	16			23.74
	17			23.22
November	4			22.64
	5			23.60

B. A. C. 7950, 22^{h} 39^{m} 48^{s}.

October	17	+45	25	38.02
	19			38.57
	31			39.09

B. A. C. 7953, 22^{h} 41^{m} 26^{s}.

September	24	+57	41	34.44
October	14			34.52

B. A. C. 7960, 22^{h} 43^{m} 4^{s}.

September	19	−30	19	47.21
	23			47.58
October	15			46.15

B. A. C. 7978, 22^{h} 46^{m} 20^{s}.

October	17	+39	22	17.65
	19			17.68
	31			17.57

B. A. C. 7983, 22^{h} 46^{m} 58^{s}.

August	31	+43	57	8.90
September	6			9.05
	8			7.92

B. A. C. 7994, 22^{h} 49^{m} 33^{s}.

September	15	+40	48	15.79
	16			15.83
	17			15.80

RUMKER 10753, 22^{h} 49^{m} 15^{s}.

September	26	+56	34	35.71
November	1			35.98

a PISCIS AUSTRALIS, 22^{h} 49^{m} 21^{s}.

October	6	−30	24	57.64
November	2			58.92
	4			57.46
	5			58.30

B. A. C. 8016, 22^{h} 53^{m} 36^{s}.

November	1	− 7	51	54.76
	2			55.06

B. A. C. 8028, 22^{h} 55^{m} 42^{s}.

September	8	+41	57	6.74
	15			7.06
	16			7.15

WEISSE XXII, 1221, 22^{h} 57^{m} 40^{s}.

1853.		°	′	″
September	13	− 7	58	16.24
	26			16.54

B. A. C. 8054, 23^{h} 0^{m} 18^{s}.

October	17	+58	36	36.22
	19			35.91
	31			35.42

B. A. C. 8056, 23^{h} 0^{m} 26^{s}.

November	5	+45	15	28.93
	14			30.39

B. A. C. 8076, 23^{h} 3^{m} 32^{s}.

September	8	+42	44	20.86
	15			21.60
	16			21.68

B. A. C. 8079, 23^{h} 4^{m} 33^{s}.

October	17	+26	2	16.48
	19			17.27
	31			16.18

B. A. C. 8091, 23^{h} 7^{m} 39^{s}.

November	1	+27	15	18.95
	2			18.63

B. A. C. 8094, 23^{h} 7^{m} 51^{s}.

November	4	− 4	18	45.32
	5			45.48

B. A. C. 8104, 23^{h} 9^{m} 17^{s}.

November	14	+73	24	52.21
December	7			52.14

B. A. C. 8123, 23^{h} 12^{m} 28^{s}.

September	26	− 4	44	6.35
October	6			5.96

B. A. C. 8158, 23^{h} 17^{m} 19^{s}.

September	24	+56	42	45.94
October	6			46.11

B. A. C. 8173, 23^{h} 19^{m} 59^{s}.

October	31	+69	51	36.33
November	2			36.91

B. A. C. 8184, 23^{h} 21^{m} 47^{s}.

November	5	− 5	20	55.08
December	7			54.86

WEISSE XXIII, 463, 23^{h} 23^{m} 4^{s}.

September	8	−10	58	57.62
November	1			55.47

B. A. C. 8187, 23^{h} 23^{m} 7^{s}.

October	15	+74	23	58.02
November	14			57.78

B. A. C. 8204, 23^{h} 26^{m} 9^{s}.

1853.		°	′	″
October	31	+71	10	27.36
November	2			27.43

B. A. C. 8217, 23^{h} 28^{m} 30^{s}.

September	26	+70	48	48.67
October	8			49.67

B. A. C. 8223, 23^{h} 30^{m} 13^{s}.

September	19	+43	35	59.29
	23			58.47

ι PISCIUM, 23^{h} 32^{m} 14^{s}.

November	5	+ 4	48	50.14
	26			49.38
December	7			50.64

B. A. C. 8246, 23^{h} 34^{m} 57^{s}.

October	17	−15	22	26.81
	19			26.30

B. A. C. 8247, 23^{h} 34^{m} 57^{s}.

November	1	+17	50	9.34
	2			9.62
	4			9.27

B. A. C. 8252, 23^{h} 35^{m} 48^{s}.

September	24	+52	19	13.78
	26			14.33

B. A. C. 8269, 23^{h} 40^{m} 5^{s}.

November	5	+ 3	23	49.27
	14			49.71

B. A. C. 8280, 23^{h} 41^{m} 34^{s}.

October	8	+59	8	42.38
	15			42.21

B. A. C. 8284, 23^{h} 42^{m} 4^{s}.

September	15	+28	0	26.83
	19			27.63
	23			26.97

B. A. C. 8287, 23^{h} 42^{m} 48^{s},

November	1	−21	3	58.69
	2			58.80
	4			57.37
	26			58.57

B. A. C. 8310, 23^{h} 46^{m} 54^{s}.

September	15	+56	39	54.45
	23			53.11
	24			53.69

B. A. C. 8315, 23^{h} 47^{m} 58^{s}.

October	17	+ 7	23	19.78
	19			20.33

B. A. C. 8317, 23^{h} 48^{m} 4^{s}.

1853.		°	′	″
September	19	+56	34	39.77
November	14			40.34

B. A. C. 8324, 23^{h} 50^{m} 8^{s}.

September	26	+24	18	26.41
October	6			27.77
	8			27.71

B. A. C. 8336, 23^{h} 52^{m} 34^{s}.

November	4	+85	52	16.20
	5			18.27
	26			18.16

B. A. C. 8338, 23^{h} 53 7^{s}.

November	1	+61	20	33.62
	2			34.05

B. A. C. 8344, 23^{h} 53^{m} 59^{s}.

September	15	+60	23	15.39
	23			14.04
	24			14.24

B. A. C. 8355, 23^{h} 54^{m} 57^{s}.

October	15	+65	15	49.63
November	14			51.16

B. A. C. 8360, 23^{h} 56^{m} 38^{s}.

October	17	−17	21	42.43
	19			43.28

B. A. C. 8372, 23^{h} 58^{m} 25^{s}.

November	30	+57	36	2.25

ι PISCIUM, 23^{h} 32^{m} 14^{s}.

1854.				
September	21	+ 4	48	50.21
	29			49.55
	30			49.62
October	6			49.38
	17			49.98
	23			49.35
	25			50.30
November	28			49.71

γ CEPHEI, 23^{h} 33^{m} 14^{s}.

October	7	+76	47	42.27
November	9			42.28
December	1			41.81

SANTINI 1649, 23^{h} 34^{m} 17^{s}.

October	24	+ 6	25	14.44
November	23			13.65

WEISSE XXIII, 803, 23^{h} 39^{m} 22^{s}.

October	11	+ 4	25	2.62
	19			3.19

WEISSE XXIII, 817, 23^h 40^m 0^s.

1854.		°	′	″
October	5	− 1	35	39.58
	9			41.22
	23			40.89

WEISSE XXIII, 830, 23^h 40^m 30^s.

November	8	− 1	36	27.65
	9			27.62

B. A. C. 8272, 23^h 40^m 33^s.

November	23	+ 7	24	47.18
	28			48.50
December	20			46.85

LALANDE 46632, 23^h 40^m 39^s.

September	28	+ 7	21	18.76

WEISSE XXIII, 934, 23^h 45^h 32^s.

October	25	+ 4	19	24.56
December	1			24.36

(*), 59 W., 23^h 47^m 11^s.

October	7	− 1	6	54.55
	17			52.92

SANTINI 1664, 23^h 47^m 58^s.

October	5	+ 7	23	20.56
	9			18.22
November	28			19.96

WEISSE XXIII, 994, 23^h 48^m 35^s.

October	11	+ 3	47	34.33
	21			33.45

WEISSE XXIII, 1006, 23^h 49^m 6^s.

November	8	+ 3	53	24.29
	9			23 33

WEISSE XXIII, 1032, 23^h 50^m 7^s.

November	23	+ 4	34	11.18

B. A. C. 8327, 23^h 50^m 38^s.

September	28	−16	40	56.61
December	12			56.00

WEISSE XXIII, 1058, 23^h 51^m 59^s.

November	9	+ 3	53	19.58
December	20			21.00

WEISSE XXIII, 1110, 23^h 53^m 54^s.

October	19	+ 4	13	12.01
	25			11.35

B. A. C. 8353, 23^h 54^m 43^s.

November	27	+ 8	7	19.00

WEISSE XXIII, 1142, 23^h 55^m 4^s.

November	8	+ 5	11	59.17
December	1			59.33

WEISSE XXIII, 1178, 23^h 57^m 1^s.

1854.		°	′	″
October	7	+ 5	41	21.70
	9			21.35

WEISSE XXIII, 1180, 23^h 57^m 9^s.

October	11	+ 5	34	54.67
	17			56.00

B. A. C. 8370, 23^h 58^m 0^s.

September	28	+12	33	40.49
December	12			40.62

WEISSE XXIII, 1205, 23^h 58^m 26^s,

October	21	− 0	42	47.45
	23			47.55

WEISSE XXIII, 1222, 23^h 59^m 23^s.

November	9	+ 6	2	28.05
	23			28.70

α ANDROMEDÆ, 0^h 0^m 39^s.

October	5	+28	15	44.21

WEISSE XXIII, 1251, 0^h 0^m 43^s.

November	27	+ 5	46	54.93
December	1			54.27

SANTINI O, 8, 0^h 4^m 6^s.

December	12	+ 8	18	21.61

WEISSE O, 83, 0^h 5^m 5^s.

November	23	+ 5	20	31.42
December	11			32.76

γ PEGASI, 0^h 5^m 31^s.

September	28	+14	20	57.42
October	11			57.68
	23			57.67
	25			57.92
November	8			56.94

WEISSE O, 192, 0^h 11^m 24^s.

December	1	+ 6	26	55.24

B. A. C. 66, 0^h 12^m 53^s.

November	28	+ 7	21	24.97
December	12			24.34

WEISSE O, 229, 0^h 13^m 16^s.

November	27	+11	56	19.85
December	11			20.29

B. A. C. 72, 0^h 13^m 59^s.

October	25	−29	48	40.01
November	8			41.43
	9			41.89

B. A. C. 75, 0^h 15^m 10^s.

1854.		°	′	″
September	28	−13	2	40.45
October	11			40.72
	21			40.27

O. ARG. S. 163, 0^h 16^m 48^s.

November	9	−29	48	47.19
December	12			46.10

B. A. C. 96, 0^h 19^m 26^s.

October	23	− 5	50	0.45
November	8			1.32
	30			1.05

B. A. C. 113, 0^h 22^m 26^s.

October	21	+ 4	1	47.47
	25			46.73

B. A. C. 129, 0^h 24^m 40^s.

November	9	+ 6	7	34.42
	23			33.90
	27			34.76
	28			36.10
December	14			34.46

B. A. C. 130, 0^h 24^m 44^s.

September	28	+19	28	3.27
October	9			1.88
	11			3.38

WEISSE O, 436, 0^h 25^m 43^s.

December	1	+ 8	56	33.18
	11			33.16

B. A. C. 137, 0^h 26^m 25^s.

December	12	+ 9	28	40.70
	20			39.83

B. A. C. 147, 0^h 27^m 51^s.

December	30	− 1	19	47.97

WEISSE O, 491, 0^h 28^m 39^s.

November	23	+ 8	2	53.68
	27			54.11

WEISSE O, 572, 0^h 33^m 15^s.

October	21	+ 6	26	29.39
	23			28.91

α CASSIOPEÆ, 0^h 32^m 2^s.

September	28	+55	42	50.58
October	9			49.16
	11			51.36
	25			50.06
November	8			49.75

B. A. C. 177, 0^h 33^m 27^s.

November	28	+ 8	32	6.35
December	1			6.81
	14			6.40

β CETI, 0^h 36^m 3^s.

1854.		°	′	″
November	9	−18	48	39.24

WEISSE O, 635, 0^h 36^m 34^s.

December	12	+ 6	57	3.34
	30			3.90

WEISSE O, 647, 0^h 37^m 21^s.

November	23	+ 4	21	34.77
	27			35.84

WEISSE O, 657, 0^h 37^m 55^s.

November	28	+ 7	1	24.71
December	30			23.55

WEISSE O, 711, 0^h 40^m 38^s.

December	20	+ 3	19	24.61

WEISSE O, 712, 0^h 40^m 41^s.

December	1	− 1	18	28.57
	11			26.86

WEISSE O, 732, 0^h 42^m 15^s.

December	14	− 1	2	32.81

B. A. C. 233, 0^h 42^m 37^s.

September	28	−11	27	10.58
October	9			11.23
	11			10.47

B. A. C. 237, 0^h 43^m 35^s.

November	8	+ 2	34	12.45
	9			13.02

B. A. C. 242, 0^h 45^m 21^s.

November	23	− 1	57	35.15
	27			34.99

WEISSE O, 806, 0^h 45^m 57^s.

December	20	+ 1	5	41.23

B. A. C. 244, 0^h 46^m 8^s.

October	21	+58	9	33.05
	25			33.69
November	8			34.38

WEISSE O, 815, 0^h 46^m 34^s.

November	28	− 2	19	0.58
December	1			2.52

B. A. C. 271, 0^h 51^m 13^s.

September	28	−12	11	25.93
October	9			27.24
	11			26.10

Weisse O, 893, $0^h\ 51^m\ 19^s$.

1854.	°	′	″
December 30	+ 1	50	54.78

Weisse O, 908, $0^h\ 51^m\ 56^s$.

November 27	− 2	8	12.77
December 12			13.36

Weisse O, 918, $0^h\ 52^m\ 23^s$.

December 30	+ 1	49	23.61

Weisse O, 965, $0^h\ 54^m\ 53^s$.

October 21	+ 8	19	33.26
23			33.08
November 23			33.10
December 14			34.02

Weisse O, 1033, $0^h\ 58^m\ 35^s$.

November 8	− 1	4	11.06
9			11.00
December 12			10.63

Lamont 187, $1^h\ 3^m\ 17^s$.

November 27	− 1	47	31.31
December 12			32.11

Polaris, $1^h\ 5^m\ 1^s$.

September 28	+88	30	33.16
October 9			33.33
25			33.01
November 9			34.54

Polaris, S. P., $1^h\ 5^m\ 1^s$.

April 24	+88	30	34.98
May 1			35.89
4			35.35
5			35.81
8			35.74
20			36.76
22			36.10
June 1			35.95
5			35.65

Weisse I, 100, $1^h\ 7^m\ 0^s$.

November 28	+ 8	56	47.18
December 1			46.19

B. A. C. 374, $1^h\ 7^m\ 10^s$.

October 21	− 1	46	39.20
23			38.81
November 8			38.89
23			39.09
27			38.82

Weisse I, 113, $1^h\ 7^m\ 56^s$.

December 11	+ 8	59	20.72
20			20.39

B. A. C. 389, $1^h\ 10^m\ 11^s$.

October 11	− 8	27	10.33
December 14			11.05

B. A. C. 400, $1^h\ 12^m\ 8^s$.

1854.	°	′	″
December 1	− 1	17	53.56
20			53.31

Weisse I, 202, $1^h\ 12^m\ 58^s$.

December 22	− 4	2	9.11
30			8.17

Weisse I, 206, $1^h\ 13^m\ 14^s$.

October 23	− 2	5	55.77
25			55.73

θ^1 Ceti, $1^h\ 16^m\ 32^s$.

September 28	− 8	57	31.72
October 9			32.16
November 9			32.40
23			32.71
December 12			31.86

Weisse I, 280, $1^h\ 17^m\ 13^s$.

October 21	− 3	37	50.24
November 8			51.82
27			51.37
28			49.97

Weisse I, 299, $1^h\ 18^m\ 4^s$.

December 11	+ 9	37	29.63
22			28.92

Weisse I, 336, $1^h\ 19^m\ 53^s$.

December 1	+ 7	59	59.14

Weisse I, 382, $1^h\ 22^m\ 23^s$.

November 23	+10	18	50.48
28			50.83

Weisse I, 410, $1^h\ 23^m\ 59^s$.

December 20	+ 9	12	51.67
30			52.40

B. A. C. 460, $1^h\ 24^m\ 47^s$.

September 28	−31	3	17.31
October 9			16.10

Weisse I, 432, $1^h\ 25^m\ 5^s$.

October 25	− 2	25	33.57
November 8			33.42
9			33.71

Weisse I, 441, $1^h\ 25^m\ 31^s$.

November 27	− 2	33	48.09
December 12			47.43

Weisse I, 450, $1^h\ 26^m\ 0^s$.

October 11	− 2	38	14.42
21			13.46

Weisse I, 497, $1^h\ 28^m\ 41^s$.

1854.	°	′	″
December 1	+ 3	1	4.77
11			6.00

π Piscium, $1^h\ 29^m\ 7^s$.

December 22	+11	22	21.01
30			21.47

Weisse I, 562, $1^h\ 31^m\ 58^s$.

November 23	+ 2	41	30.66
December 20			31.19

Weisse I, 582, $1^h\ 32^m\ 49^s$.

November 9	− 2	21	48.91
December 12			48.53

Weisse I, 646, $1^h\ 35^m\ 13^s$.

November 28	+12	11	53.25
December 30			53.81

(*), $1^h\ 35^m\ 4^s$.

November 8	+ 4	58	37.98

Weisse I, 655, $1^h\ 35^m\ 49^s$.

November 8	+ 4	59	16.36

Weisse I, 675, $1^h\ 36^m\ 37^s$.

December 1	+ 1	51	36.57
22			38.51

Lalande 3237, $1^h\ 38^m\ 12^s$.

September 28	− 1	40	46.32
October 9			46.35
11			46.22
25			46.99

Weisse I, 732, $1^h\ 40^m\ 33^s$.

December 12	+13	18	52.86

B. A. C. 551, $1^h\ 40^m\ 40^s$.

December 11	+ 2	56	6.51
14			5.06

Weisse I, 767, $1^h\ 42^m\ 52^s$.

November 27	+10	17	54.43
28			55.60

Weisse I, 773, $1^h\ 43^m\ 1^s$.

September 28	− 2	48	29.70
October 9			30.30
11			28.80
November 23			30.56

Weisse I, 790, $1^h\ 44^m\ 1^s$.

December 1	− 3	22	53.40
30			52.32

Weisse I, 808, $1^h\ 44^m\ 58^s$.

1854.	°	′	″
September 28	− 2	46	(12.65)
October 9			16.08
November 8			15.90

Weisse I, 821, $1^h\ 45^m\ 37^s$.

October 21	− 2	54	42.40
25			42.60
November 9			43.69

Weisse I, 847, $1^h\ 47^m\ 1^s$.

December 14	+ 2	39	14.16

Weisse I, 855, $1^h\ 47^m\ 36^s$.

December 12	+11	50	8.43

B. A. C. 598, $1^h\ 50^m\ 22^s$.

December 11	− 2	47	35.54
30			36.05

Weisse I, 896, $1^h\ 50^m\ 28^s$.

November 27	+15	11	49.57
28			49.45

Weisse I, 973, $1^h\ 54^m\ 29^s$.

December 14	+12	45	3.59
30			4.02

Weisse I, 984, $1^h\ 54^m\ 54^s$.

December 12	+ 3	7	18.09

Weisse (2) I, 1411, $1^h\ 58^m$ 25.

November 27	+16	21	57.89
28			57.88

α Arietis, $1^h\ 58^m\ 44^s$.

October 9	+22	45	3.31
December 11			2.25
20			1.94

Weisse II, 7, $2^h\ 1^m\ 50^s$.

December 22	+ 3	31	11.88
30			12.68

O. Arg. N. 2443, $2^h\ 2^m\ 11^s$.

December 12	+48	53	16.82

O. Arg. N. 2511, $2^h\ 4^m\ 43^s$.

December 14	+53	49	37.33

Weisse II, 102, $2^h\ 7^m\ 8^s$.

November 27	+ 4	10	3.42
December 11			4.29

Lalande 4238, $2^h\ 9^m\ 28^s$.

December 22	+17	45	24.32
30			25.07

Weisse II, 143, $2^{h}\,9^{m}\,52^{s}$.

1854.	°	′	″
November 23 . .	+13	46	15.12

Weisse II, 158, $2^{h}\,10^{m}\,45^{s}$.

November 28 . .	+ 7	29	8.09
December 1 . .			7.50

Weisse II, 235, $2^{h}\,14^{m}\,58^{s}$.

December 11 . .	+ 7	51	33.85
14 . .			33.70

B. A. C. 741, $2^{h}\,16^{m}\,30^{s}$.

November 27 . .	+ 9	1	58.77

Lalande 4460, $2^{h}\,16^{m}\,17^{s}$.

November 23 . .	+18	52	26.18
December 22 . .			26.34

Weisse II, 278, $2^{h}\,17^{m}\,13^{s}$.

December 14 . .	+ 7	52	10.30

Weisse II, 305, $2^{h}\,18^{m}\,41^{s}$.

December 1 . .	+ 9	53	14.67

B. A. C. 771, $2^{h}\,22^{m}\,36^{s}$.

November 28 . .	+17	2	15.19
December 11 . .			15.16
30 . .			15.96

Rumker 654, $2^{h}\,25^{m}\,4^{s}$.

November 23 . .	+19	46	28.12
27 . .			28.12
December 12 . .			28.22

B. A, C. 789, $2^{h}\,27^{m}\,8^{s}$.

December 1 . .	+ 6	48	55.34
14 . .			56.47
22 . .			56.21

B. A. C. 807, $2^{h}\,30^{m}\,9^{s}$.

January 4 . .	− 4	2	53.02

Weisse II, 569, $2^{h}\,32^{m}\,58^{s}$.

November 23 . .	+15	23	38.12
December 11 . .			38.56

γ Ceti, $2^{h}\,35^{m}\,32^{s}$.

January 4 . .	+ 2	36	3.62
27 . .			3.17
November 27 . .			3.57
28 . .			3.10
December 1 . .			2.81
12 . .			3.57
22 . .			3.96
30 . .			3.70

(*68) W., $2^{h}\,48^{m}$.

January 4 . .	+14	45	17.09

Weisse II, 742, $2^{h}\,42^{m}\,58^{s}$.

1854.	°	′	″
December 12 . .	− 7	25	45.28
14 . .			45.70

Weisse II, 741, $2^{h}\,43^{m}\,0^{s}$.

November 23 . .	− 7	23	24.49
December 11 . .			23.25

Weisse II, 790, $2^{h}\,45^{m}\,41^{s}$.

December 22 . .	+ 8	43	13.78
30 . .			14.50

B. A. C. 905, $2^{h}\,48^{m}\,13^{s}$.

November 28 . .	+ 7	46	29.36
December 30 . .			30.41

Weisse II, 880, $2^{h}\,50^{m}\,17^{s}$.

December 11 . .	+ 9	35	58.46
14 . .			58.36

Weisse II, 893, $2^{h}\,51^{m}\,10^{s}$.

November 23 . .	+ 9	36	27.34
December 22 . .			28.22

Rumker, 767, $2^{h}\,52^{m}\,44^{s}$.

December 14 . .	+ 9	38	44.14

α Ceti, $2^{h}\,54^{m}\,27^{s}$.

November 28 . .	+ 3	29	52.81
December 12 . .			53.29

Rumker 755, $2^{h}\,49^{m}\,56^{s}$.

January 27 . .	+15	23	19.45
February 3 . .			20.82

Weisse II, 1037, $2^{h}\,58^{m}\,20^{s}$.

November 23 . .	+14	11	24.93

B. A. C. 975, $3^{h}\,0^{m}\,37^{s}$.

December 22 . .	+ 7	53	21.00
30 . .			22.28

Weisse (2) III, 45, $3^{h}\,2^{m}\,38^{s}$.

December 14 . .	+16	43	51.67

Weisse III, 114, $3^{h}\,6^{m}\,44^{s}$.

December 11 . .	+11	52	15.57

Lalande 6167, $3^{h}\,12^{m}\,28^{s}$.

December 14 . .	+ 8	29	21.96
30 . .			23.66

α Persei, $3^{h}\,13^{m}\,38^{s}$.

January 3 . .	+49	19	21.85
4 . .			22.58
November 23 . .			20.36

64 Arietis, $3^{h}\,15^{m}\,27^{s}$.

1854.	°	′	″
December 11 . .	+24	11	19.92

Rumker 870, $3^{h}\,21^{m}\,14^{s}$.

December 14 . .	+18	13	8.43

B. A. C. 1105, $3^{h}\,27^{m}\,52^{s}$.

January 3 . .	+42	5	2.21
4 . .			3.26

B. A. C 1110, $3^{h}\,29^{m}\,6^{s}$.

January 27 . .	+ 0	5	41.05
February 3 . .			40.79

Weisse (2) III, 639, $3^{h}\,29^{m}\,34^{s}$.

December 14 . .	+18	51	49.70

Weisse (2) III, 721, $3^{h}\,32^{m}\,51^{s}$.

December 14 . .	+18	54	3.62

η Tauri, $3^{h}\,38^{m}\,35^{s}$.

January 3 . .	+23	38	13.69
4 . .			14.95
December 11 . .			14.28
14 . .			12.35
21 . .			14.45

Weisse (2) III, 887, $3^{h}\,39^{m}\,29^{s}$.

January 23 . .	+16	29	43.66
27 . .			43.77
February 3 . .			44.65

Rumker 1023, $3^{h}\,45^{m}\,55^{s}$.

January 23 . .	+16	10	31.61
27 . .			31.52
February 3 . .			31.98
December 22 . .			31.41

Weisse (2) III, 1030, $3^{h}\,47^{m}\,1^{s}$.

December 21 . .	+35	33	40.32

γ^{1} Eridani, $3^{h}\,51^{m}\,2^{s}$.

January 3 . .	−13	56	19.69
4 . .			18.78
February 3 . .			18.01
December 22 . .			18.93

Weisse (2) III, 1212, $3^{h}\,56^{m}\,10^{s}$.

December 21 . .	+20	26	33.64

B. A. C. 1272, $3^{h}\,59^{m}\,24^{s}$.

January 4 . .	+16	56	6.44
February 3 . .			4.03

B. A. C. 1307, $4^{h}\,7^{m}\,58^{s}$.

January 3 . .	+49	40	39.04
4 . .			40.05

B. A. C. 1314, $4^{h}\,8^{m}\,51^{s}$.

1854.	°	′	″
January 27 . .	+50	33	1.70
February 2 . .			0.99
3 . .			1.23

B. A. C. 1334, $4^{h}\,12^{m}\,14^{s}$.

January 27 . .	−23	20	24.36
February 2 . .			24.46

B. A. C. 1374, $4^{h}\,19^{m}\,26^{s}$.

January 3 . .	−35	5	57.24
4 . .			57.98

Lalande 8479, $4^{h}\,21^{m}\,49^{s}$.

December 21 . .	−11	23	26.11

B. A. C. 1415, $4^{h}\,26^{m}\,36^{s}$.

January 4 . .	+56	19	43.08
27 . .			43.14

B. A. C. 1427, $4^{h}\,28^{m}\,32^{s}$.

February 4 . .	− 3	55	23.35

B. A. C. 1463, $4^{h}\,36^{m}\,39^{s}$.

January 3 . .	+23	20	49.60
4 . .			50.28
February 2 . .			49.11
4 . .			50.56

Weisse IV, 806, $4^{h}\,36^{m}\,53^{s}$.

December 21 . .	+ 2	55	31.49

B. A. C. 1485, $4^{h}\,41^{m}\,9^{s}$.

February 6 . .	+15	38	17.33
March 1 . .			16.46

Weisse (2) IV, 1098, $4^{h}\,48^{m}\,30^{s}$.

December 21 . .	+29	53	11.66

B. A. C. 1518, $4^{h}\,47^{m}\,8^{s}$.

February 2 . .	+24	20	50.78

B. A. C. 1531, $4^{h}\,49^{m}\,22^{s}$.

January 3 . .	−25	58	16.69
4 . .			15.86
23 . .			12.44

B. A. C. 1555, $4^{h}\,55^{m}\,25^{s}$.

February 2 . .	+21	3	44.17
4 . .			44.92
6 . .			45.09

B. A. C. 1540, $4^{h}\,51^{m}\,13^{s}$.

February 4 . .	+43	35	41.65
6 . .			41.84
21 . .			43.41
March 1 . .			42.44

B. A. C. 1561, $4^{h}\ 56^{m}\ 35^{s}$.

1854.		°	′	″
January	4	−39	56	22.53
	23			21.76

B. A. C. 1582, $4^{h}\ 59^{m}\ 33^{s}$.

February	21	+46	46	12.65
March	1			12.71

B. A. C. 1609, $5^{h}\ 5^{m}\ 21^{s}$.

February	2	+46	14	19.88
	4			19.76
	6			19.87

α Aurigæ, $5^{h}\ 5^{m}\ 37^{s}$.

January	3	+45	50	20.81
	4			21.03
	23			21.08
	27			21.30

B. A. C. 1637, $5^{h}\ 10^{m}\ 16^{s}$.

February	2	+21	56	8.94
	4			9.88
	21			10.09

β Tauri, $5^{h}\ 16^{m}\ 49^{s}$.

January	3	+28	28	29.89
	4			29.89
	27			31.00

B. A. C. 1711, $5^{h}\ 21^{m}\ 20^{s}$.

February	2	+20	25	40.58
	4			40.90
	21			41.61

δ Orionis, $5^{h}\ 24^{m}\ 21^{s}$.

January	27	− 0	24	51.49

B. A. C. 1736, $5^{h}\ 24^{m}\ 56^{s}$.

February	21	+47	36	32.92
	27			33.34
March	1			32.92

α Leporis, $5^{h}\ 26^{m}\ 7^{s}$.

January	4	−17	56	1.66

ε Orionis, $5^{h}\ 28^{m}\ 36^{s}$.

January	28	− 1	18	7.96

B. A. C. 1769, $5^{h}\ 29^{m}\ 11^{s}$.

February	2	+53	24	44.40
	4			44.30
	27			43.77

α Columbæ, $5^{h}\ 34^{m}\ 13^{s}$.

January	4	−34	9	28.22
	23			25.54
	28			25.67
March	1			27.64

B. A. C. 1827, $5^{h}\ 38^{m}\ 41^{s}$.

1854.		°	′	″
February	2	+14	25	40.01
	4			40.08
	6			41.21
	21			41.00

B. A. C. 1867, $5^{h}\ 44^{m}\ 24^{s}$.

February	27	+20	15	31.21
March	1			31.76

B. A. C. 1876, $5^{h}\ 45^{m}\ 30^{s}$.

February	6	+20	14	35.08
	21			35.00
	27			34.86
March	1			34.03

α Orionis, $5^{h}\ 47^{m}\ 3^{s}$.

January	4	+ 7	22	28.02
	23			29.30

B. A. C. 1902, $5^{h}\ 49^{m}\ 36^{s}$.

February	2	+47	53	9.62
	27			7.82
March	1			8.48

B. A. C. 1930, $5^{h}\ 54^{m}\ 13^{s}$.

January	28	+17	39	39.02

B. A. C. 1942, $5^{h}\ 56^{m}\ 14^{s}$.

February	2	+38	29	23.21
	6			24.58
	21			23.62
	27			23.58

B. A. C. 1994, $6^{h}\ 4^{m}\ 33^{s}$.

January	28	− 6	31	12.54
March	1			13.10

B. A. C. 2001, $6^{h}\ 5^{m}\ 49^{s}$.

January	31	+29	32	52.31
February	2			49.73
	6			50.55
	21			50.92

B. A. C. 2038, $6^{h}\ 12^{m}\ 16^{s}$.

February	4	+21	11	35.46
March	1			35.74

B. A. C. 2039, $6^{h}\ 12^{m}\ 24^{s}$.

February	2	+21	15	41.66
	6			41.43
	27			42.10

μ Geminorum, $6^{h}\ 13^{m}\ 53^{s}$.

January	4	+22	35	9.03
	23			9.34
February	21			7.26

B. A. C. 2081, $6^{h}\ 18^{m}\ 50^{s}$.

1854.		°	′	″
January	31	+46	46	28.96
February	2			27.58
	4			27.65
	6			28.29

B. A. C. 2155, $6^{h}\ 28^{m}\ 16^{s}$.

February	21	+39	31	0.39
	27			0.28

51 Cephei, $6^{h}\ 28^{m}\ 33^{s}$.

January	4	+87	15	22.95
	23			22.49
	31			23.39
February	2			22.89
	4			22.03
	6			21.63

51 Cephei, S. P., $6^{h}\ 28^{m}\ 33^{s}$.

July	1	+87	15	23.47
	11			23.41
	12			24.40

B. A. C. 2170, $6^{h}\ 30^{m}\ 5^{s}$.

March	1	+28	23	24.16
	8			23.52

(*), S. P., $6^{h}\ 24^{m}\ 49^{s}$.

June	30	+61	8	34.88
July	14			32.83
	15			32.89

B. A. C. 2197, $6^{h}\ 35^{m}\ 16^{s}$.

February	21	+29	7	1.35
	27			0.81
March	1			0.89

α Canis Majoris, $6^{h}\ 38^{m}\ 32^{s}$.

March	8	−16	30	50.94

B. A. C. 2235, $6^{h}\ 42^{m}\ 42^{s}$.

February	4	+39	2	31.65
	6			31.45
	27			31.37

B. C. A. 2261, $6^{h}\ 46^{m}\ 40^{s}$.

February	6	+45	16	57.94
	21			57.14
March	1			56.59
	8			56.97

O. Arg. N. 7442, S. P., $6^{h}\ 49^{m}\ 52^{s}$.

June	30	+60	48	35.53

ε Canis Majoris, $6^{h}\ 52^{m}\ 44^{s}$.

March	1	−28	46	16.29

B. A. C. 2313, $6^{h}\ 56^{m}\ 16^{s}$.

1854.		°	′	″
February	4	+22	51	24.63
	6			24.57
	21			24.59
	27			24.34

Rumker 2086, S. P., $6^{h}\ 56^{m}\ 17^{s}$.

June	30	+60	58	18.92

B. A. C. 2341, $7^{h}\ 1^{m}\ 41^{s}$.

February	21	+51	40	14.26
	27			14.86
March	1			14.48

B. A. C. 2362, $7^{h}\ 4^{m}\ 45^{s}$.

January	31	+16	24	31.45
February	4			31.20
	6			31.37
March	4			30.95

δ Geminorum, $7^{h}\ 11^{m}\ 10^{s}$.

January	31	+22	15	13.70
February	2			11.92
	4			12.16
	6			11.60

B. A. C. 2432, $7^{h}\ 14^{m}\ 22^{s}$.

February	21	+18	33	23.89
	27			23.88

B. A. C. 2441, $7^{h}\ 15^{m}\ 23^{s}$.

March	1	+49	30	10.58
	4			9.55
	8			10.26

B. A. C. 2459, $7^{h}\ 18^{m}\ 31^{s}$.

January	31	+49	58	(35.38)
February	2			33.58
	4			33.36
March	4			32.86

α^{2} Geminorum, $7^{h}\ 25^{m}\ 1^{s}$.

January	31	+32	12	44.05
February	6			43.55
March	8			41.75

B. A. C. 2519, $7^{h}\ 30^{m}\ 49^{s}$.

February	4	+18	0	42.15
	6			41.64
	27			41.19

α Canis Minoris, $7^{h}\ 31^{m}\ 27^{s}$.

March	4	+ 5	36	19.23
	8			18.01

β Geminorum, $7^{h}\ 36^{m}\ 8^{s}$.

January	31	+28	23	1.95

B. A. C. 2564, $7^h 58^m 1^s$.

1854.		°	′	″
February	27	+11	7	45.07
March	1			45.00
	4			44.93

B. A. C. 2616, $7^h 44^m 16^s$.

January	31	+56	53	34.26
February	4			33.44
	27			31.41

B. A. C. 2622, $7^h 44^m 50^s$.

March	8	−13	30	14.48

B. A. C. 2650, $7^h 50^m 21^s$.

February	4	+57	40	57.29
March	1			57.16
	4			57.66

B. A. C. 2679, $7^h 55^m 3^s$.

January	31	+10	21	30.45
February	27			29.18
March	1			29.69

ρ Argus, $8^h 1^m 9^s$.

January	31	−23	52	30.77
February	6			29.32
March	8			31.59

B. A. C. 2732, $8^h 1^m 51^s$.

February	27	+56	53	44.94
March	1			44.61
	4			44.80

B. A. C. 2806, $8^h 11^m 43^s$.

January	31	+11	6	42.97
February	6			42.17
	27			41.66

B. A. C. 2836, $8^h 20^m 15^s$.

January	31	+14	42	13.33
February	6			12.64
March	4			12.20

Weisse VIII, 618, $8^h 23^m 54^s$.

February	24	+13	18	21.10
	27			20.52

B. A. C. 2892, $8^h 28^m 9^s$.

January	31	+53	13	56.03
March	4			55.54
	8			55.04

Weisse VIII, 736, $8^h 28^m 15^s$.

February	24	+12	22	15.85
	27			16.12

ε Hydræ, $8^h 38^m 50^s$.

January	31	+ 6	57	56.24
February	24			56.56
	27			55.99
April	21			55.16

B. A. C. 2991, $8^h 42^m 12^s$.

1854.		°	′	″
March	4	+19	23	16.14
	8			(19.49)
April	13			15.48
	18			15.57

ι Ursæ Majoris, $8^h 48^m 55^s$.

April	13	+48	37	34.32
	18			34.34
	21			35.23

B. A. C. 3074, $8^h 53^m 18^s$.

March	4	+17	39	56.52
April	18			56.30

B. A. C. 3091, $8^h 55^m 54^s$.

March	4	+50	12	18.30
April	13			17.74
	21			17.78

B. A. C. 3138, $9^h 5^m 3^s$.

February	24	+21	53	52.05
March	4			52.39
April	18			51.99

B. A. C. 3218, $9^h 18^m 49^s$.

February	24	+46	15	20.27
March	4			20.38
April	18			19.21

α Hydræ, $9^h 20^m 13^s$.

April	21	− 8	0	40.42

B. A. C. 3252, $9^h 24^m 17^s$.

February	24	+37	8	54.43
March	4			54.58
April	13			53.81

B. A. C. 3294, $9^h 30^m 35^s$.

April	21	+26	2	23.70

B. A. C. 3314, $9^h 33^m 56^s$.

February	24	+30	47	31.97
March	4			31.73
April	13			30.83

B. A. C. 3333, $9^h 37^m 50^s$.

April	18	+21	10	37.16
	21			37.98
	24			37.84

B. A. C. 3341, $9^h 38^m 53^s$.

April	13	+46	42	57.70
	25		43	0.59

B. A. C. 3358, $9^h 41^m 52^s$.

April	24	+54	45	44.29
	25			43.97
May	5			43.57

B. A. C. 3406, $9^h 50^m 9^s$.

1854.		°	′	″
April	13	+13	9	28.38
	18			28.92
	21			28.02

Weisse IX, 887, $9^h 40^m 18^s$.

February	24	+11	15	9.28
March	4			8.51

B. A. C. 3420, $9^h 53^m 21^s$.

April	24	+32	15	8.01
	25			7.95

B. A. C. 3439, $9^h 56^m 57^s$.

April	13	+35	43	45.87
	18			45.88
	21			45.70

B. A. C. 3468, $10^h 2^m 19^s$.

April	24	+38	8	17.79
	25			18.01
May	5			17.47

Weisse X, 70, $10^h 5^m 0^s$.

May	1	−10	23	55.37

B. A. C. 3500, $10^h 7^m 42^s$.

April	13	+30	3	20.32
	18			20.78
	21			11.15

B. A. C. 3553, $10^h 15^m 57^s$.

April	18	− 2	59	9.11
May	1			10.96

B. A. C. 3607, $10^h 24^m 28^s$.

May	1	+41	11	43.56
	5			43.97

B. A. C. 3637, $10^h 30^m 8^s$.

April	13	−12	36	22.81
	18			(20.22)
	25			23.01

B. A. C. 3667, $10^h 34^m 53^s$.

May	8	+ 4	21	54.40

B. A. C. 3674, $10^h 35^m 42^s$.

April	25	−22	45	55.75
May	1			55.27

B. A. C. 3709, $10^h 41^m 27^s$.

April	13	− 8	19	29.17
	18			28.11
	24			29.66

B. A. C. 3720, $10^h 43^m 12^s$.

April	25	+ 4	23	2.35
May	5			2.84
	8			2.34

B. A. C. 3732, $10^h 46^m 6^s$.

1854.		°	′	″
April	13	− 1	20	0.54
	18		19	59.67
	21		20	0.17
	24			0.72

α Ursæ Majoris, $10^h 54^m 26^s$

April	13	+62	33	32.63
	18			34.48
	24			34.08
	25			33.63
May	5			33.28
	8			32.96
	13			33.30

δ Leonis, $11^h 6^m 7^s$.

April	13	+21	20	40.92
	18			42.07
May	8			40.35
	13			41.19

δ Crateris, $11^h 11^m 51^s$.

April	13	−13	58	2.97
May	5			3.19
	8			3.50
	13			3.92

B. A. C. 3869, $11^h 14^m 38^s$.

May	1	+18	15	33.04
	5			33.53

B. A. C. 3902, $11^h 20^m 14^s$.

April	24	+12	47	56.65
May	5			56.51
	13			56.10

B. A. C. 3940, $11^h 28^m 52^s$.

April	13	+ 6	56	24.46
	18			25.70
May	1			25.20

B. A. C. 3956, $11^h 31^m 3^s$.

April	24	−12	22	36.26
May	5			35.10
	13			36.31

Weisse (1) XI, 548, $11^h 31^m 22^s$.

April	13	+ 6	53	34.56
	18			35.10
May	1			34.51

B. A. C. 3964, $11^h 32^m 59^s$.

May	22	+22	11	5.46

β Leonis, $11^h 41^m 24^s$.

April	13	+15	24	36.08
	18			37.38
	24			37.35
May	1			36.15
	5			36.96
	8			36.61

Weisse (2) XI, 889, $11^h 45^m 27^s$.

1854.		°	′	″
May	19 . .	+17	41	2.66
	20 . .			1.44
	22 . .			2.03

γ Ursæ Majoris, $11^h 45^m 55^s$.

April	13 . .	+54	31	42.93
	24 . .			43.37
May	1 . .			43.13

B. A. C. 4037, $11^h 49^m 27^s$.

May	8 . .	−32	28	41.03
	19 . .			43.93
	20 . .			43.75
	22 . .			42.18

B. A. C. 4063, $11^h 55^m 56^s$.

April	24 . .	− 4	38	37.12
May	1 . .			37.31
	5 . .			36.75

B. A. C. 4080, $11^h 59^m 35^s$.

May	8 . .	− 5	55	51.29
	16 . .			51.43
	22 . .			51.60

B. A. C. 4081, $11^h 59^m 56^s$.

May	13 . .	+14	21	8.04
	19 . .			7.73
	20 . .			7.05

B. A. C. 4122, $12^h 7^m 57^s$.

April	24 . .	+71	2	8.20
May	1 . .			7.26
	5 . .			7.71

B. A. C. 4141, $12^h 11^m 44^s$.

May	13 . .	+23	52	5.82
	22 . .			4.82
June	1 . .			5.64

(*), $12^h 11^m 51^s$.

May	20 . .	+23	57	14.19

B. A. C. 4153, $12^h 12^m 47^s$.

May	8 . .	+27	27	23.59
	16 . .			24.64
	19 . .			24.94

Weisse (2) XII, 320, $12^h 15^m 3^s$.

May	16 . .	+27	27	17.25
	19 . .			17.48

B. A. C. 4171, $12^h 15^m 27^s$.

April	24 . .	− 6	28	1.31
May	1 . .			1.47
	5 . .			1.15

β Corvi, $12^h 26^m 31^s$.

1854.		°	′	″
April	24 . .	−22	34	0.05
May	1 . .		34	0.98
	4 . .		33	58.91
	5 . .		34	0.28
	8 . .			0.30
	13 . .			0.02
	19 . .			0.66
	20 . .			0.68

B. A. C. 4257, $12^h 31^m 31^s$.

May	8 . .	− 7	10	9.85
	22 . .			10.13

B. A. C. 4277, $12^h 35^m 55^s$.

April	24 . .	− 0	45	3.86
May	1 . .			4.23
	5 . .			4.59

B. A. C. 4285, $12^h 37^m 53^s$.

May	4 . .	+40	5	41.38
	13 . .			40.91
	16 . .			40.79
	19 . .			40.46

(*), $12^h 41^m 16^s$.

May	22 . .	+14	23	35.83

B. A. C. 4299, $12^h 40^m 43^s$.

June	1 . .	+14	22	25.18
	5 . .			25.56

α Canum Venaticorum, $12^h 49^m 0^s$.

April	24 . .	+39	7	47.19
May	1 . .			45.85
	4 . .			44.97
	5 . .			46.11
	8 . .			46.14
	13 . .			45.82
	16 . .			46.42
	19 . .			46.57
	20 . .			(44.56)
	22 . .			45.58
June	1 . .			46.22
	5 . .			45.67

B. A. C. 4367, $12^h 54^m 43^s$.

May	4 . .	+11	45	59.87
	5 . .			60.47
	8 . .			60.47
	16 . .			59.45

B. A. C. 4373, $12^h 56^m 11^s$.

June	1 . .	− 2	51	17.54
	5 . .			17.64

B. A. C. 4382, $12^h 58^m 32^s$.

May	19 . .	−14	6	43.83
	20 . .			44.10
	22 . .			43.71

B. A. C. 4433, $13^h 6^m 54^s$.

May	13 . .	+40	56	55.62
	16 . .			55.44
	19 . .			55.91

B. A. C. 4468, $13^h 13^m 58^s$.

1854.		°	′	″
May	13 . .	+14	56	15.68
	16 . .			15.33
	19 . .			15.86

B. A. C. 4479, $13^h 17^m 5^s$.

May	13 . .	+37	49	6.05
	16 . .			5.72
	19 . .			5.86

α Virginis, $13^h 17^m 18^s$.

April	24 . .	−10	22	36.25
May	20 . .			36.92
	22 . .			35.39
June	1 . .			35.69
	3 . .			35.87

B. A. C. 4519, $13^h 24^m 45^s$.

May	22 . .	+42	52	45.43
June	1 . .			45.80

B. A. C. 4536, $13^h 28^m 6^s$.

May	16 . .	+37	57	8.58
	19 . .			8.72
	20 . .			8.61

B. A. C. 4553, $13^h 30^m 56^s$.

May	5 . .	+23	17	46.29
	8 . .			45.73
	16 . .			46.15
June	5 . .			46.35

B. A. C. 4566, $13^h 33^m 56^s$.

May	4 . .	+23	15	26.82
	5 . .			27.16
	19 . .			26.92
	20 . .			26.66
	22 . .			27.02

η Ursæ Majoris, $13^h 41^m 37^s$.

May	22 . .	+50	3	48.17
June	1 . .			47.98
	5 . .			48.02
	15 . .			47.55

B. A. C. 4640, $13^h 46^m 22^s$.

May	4 . .	+29	23	17.52
	5 . .			17.36
	8 . .			17.27
	19 . .			17.64

η Bootis, $13^h 47^m 33^s$.

June	3 . .	+19	9	6.19
	5 . .			6.66
	15 . .			6.11

B. A. C. 4652, $13^h 49^m 2^s$.

May	20 . .	+32	45	59.01
	22 . .			59.19
June	1 . .			58.86

Weisse (2) XIII, 1083, $13^h 49^m 11^s$.

May	4 . .	+29	24	30.22
	8 . .			29.54
	19 . .			29.93

B. A. C. 4682, $13^h 57^m 3^s$.

1854.		°	′	″
May	4 . .	−15	36	52.39
	8 . .			52.70
	20 . .			54.00

B. A. C. 4694, $13^h 59^m 47^s$.

June	1 . .	+31	34	9.55
	3 . .			9.59
	5 . .			10.15

B. A. C. 4721, $14^h 6^m 52^s$.

May	8 . .	+13	39	55.24
	19 . .			54.61
June	4 . .			55.41

α Bootis, $14^h 8^m 49^s$.

May	16 . .	+19	57	55.44
	20 . .			55.00
	26 . .			55.77
	27 . .			(54.72)
June	1 . .			54.59
	3 . .			55.15
	5 . .			55.67

B. A. C. 4751, $14^h 12^m 1^s$.

May	19 . .	+13	41	55.37
	20 . .			54.54
	22 . .			54.68

B. A. C. 4776, $14^h 17^m 10^s$.

June	3 . .	−26	10	8.06
	5 . .			8.61
	15 . .			8.64

B. A. C. 4783, $14^h 19^m 22^s$.

May	4 . .	+39	4	23.00
	8 . .			22.19
	16 . .			21.71

B. A. C. 4805, $14^h 23^m 41^s$.

May	22 . .	+42	28	28.56
June	15 . .			28.60

B. A. C. 4812, $14^h 26^m 2^s$.

May	4 . .	+38	57	59.01
	8 . .			58.41
	16 . .			59.41

B. A. C. 4830, $14^h 29^m 25^s$.

June	1 . .	+50	1	27.50
	3 . .			28.26
	5 . .			27.26

B. A. C. 4864, $14^h 36^m 50^s$.

May	4 . .	+27	10	4.69
	8 . .			4.36
	16 . .			4.89

ε Bootis, 14^{h} 38^{m} 26^{s},

1854.		°	′	″
May	19	+27	42	32.76
	22			32.99
	26			32.63
	27			32.98
June	1			32.63
	5			32.98
	15			33.29
	20			32.14

α^2 Libræ, 14^{h} 42^{m} 35^{s}.

May	8	−15	24	54.55
	22			54.36
	26			53.99
	27			54.61
June	1			54.79
	5			54.25
	15			54.79
	20			53.88

β Ursæ Minoris, 14^{h} 51^{m} 12^{s}.

May	22	+74	46	5.14
	27			5.61
June	1			5.78
	3			6.16
	5			6.29
	15			4.88
	20			5.69

B. A. C. 4953, 14^{h} 55^{m} 32^{s}.

May	4	+25	36	13.22
	16			13.30
	19			12.93

B. A. C. 4993, 15^{h} 2^{m} 3^{s}.

May	4	+25	41	6.76
	16			6.99
	19			7.00
	22			6.56

β Libræ, 15^{h} 8^{m} 56^{s}.

May	16	− 8	49	34.07
	19			32.84
	22			33.17
	27			33.98
June	1			34.07
	3			33.54
	5			33.44
	15			33.18
	20			33.27
	27			34.98
July	1			33.41

B. A. C. 5047, 15^{h} 11^{m} 39^{s}.

June	1	+ 2	20	10.48
	3			10.92
	5			10.73

B. A. C. 5060, 15^{h} 13^{m} 35^{s}.

June	15	−36	18	59.44
July	1			58.48

B. A. C. 5085, 15^{h} 18^{m} 50^{s}.

May	19	+15	57	31.05
July	11			30.18

B. A. C. 5091, 15^{h} 20^{m} 10^{s}.

1854.		°	′	″
June	1	+63	52	40.95
	3			41.08
	5			41.00

α Coronæ Borealis, 15^{h} 28^{m} 20^{s}.

May	22	+27	13	21.15
	27			20.49
June	1			20.76
	3			21.13
	5			20.50
	15			21.06
	20			20.56
July	1			19.99
	15			21.26

B. A. C. 5155, 15^{h} 29^{m} 45^{s}.

May	4	+39	30	39.82
	16			38.92
	19			39.16

B. A. C. 5185, 15^{h} 34^{m} 44^{s}.

May	4	+13	19	55.29
	16			54.96
	19			55.54

α Serpentis, 15^{h} 36^{m} 53^{s}.

May	22	+ 6	54	4.09
	27			3.99
June	1			4.20
	3			4.15
	5			3.82
	15			4.00
	20			3.53
	27			3.24
July	1			4.03
	15			3.71
	18			3.81

B. A. C. 5252, 15^{h} 44^{m} 41^{s}.

May	4	+21	25	55.30
	16			55.17
	19			55.87

ζ Ursæ Minoris, 15^{h} 49^{m} 32^{s}.

May	22	+78	15	11.05
	27			11.20
June	1			11.83
	3			11.23
	5			10.70
	15			10.28
	20			11.05
	27			10.23
July	11			10.37
	15			11.15
	18			(9.82)

β^1 Scorpii, 15^{h} 56^{m} 43^{s}.

June	3	−19	23	25.70
	5			25.47
	15			26.04
	20			25.98
	27			25.86
	30			24.86
July	11			25.83
	17			26.11

B. A. C. 5367, 16^{h} 1^{m} 18^{s}.

1854.		°	′	″
May	22	+17	26	59.34
	27			59.39
June	1			59.88

B. A. C. 5376, 16^{h} 2^{m} 1^{s}.

June	16	+17	36	24.88
July	11			25.88
	15			26.03

B. A. C. 5382, 16^{h} 3^{m} 17^{s}.

July	18	−19	3	59.76
	20			59.28

δ Ophiuchi, 16^{h} 6^{m} 29^{s}.

June	5	− 3	18	15.65
	15			15.74
	20			15.63
	27			15.68
	30			13.95
July	1			14.82

B. A. C. 5432, 16^{h} 9^{m} 4^{s}.

May	22	+34	14	27.80
	27			27.28
June	1			28.22

B. A. C. 5452, 16^{h} 13^{m} 34^{s}.

June	3	+21	29	53.48
	5			52.91
	15			52.94
	16			53.25

B. A. C. 5460, 16^{h} 14^{m} 47^{s}.

July	1	+40	4	13.04
	11			12.70
	15			11.94

Weisse (2) XVI, 457, 16^{h} 15^{m} 10^{s}.

June	27	+40	37	11.64
July	18			12.40

B. A. C. 5473, 16^{h} 16^{m} 15^{s}.

May	22	+31	14	34.39
	27			35.07
June	1			35.50

B. A. C. 5479, 16^{h} 16^{m} 43^{s}.

June	3	+34	9	18.57
	5			18.26
	15			18.44

B. A. C. 5480, 16^{h} 16^{m} 50^{s}.

June	16	+34	3	19.03
	20			19.13
	30			19.46

B. A. C. 5495, 16^{h} 19^{m} 42^{s}.

July	18	− 8	1	54.18
	20			54.07

B. A. C. 5523, 16^{h} 23^{m} 43^{s}.

1854.		°	′	″
May	22	+42	12	50.89
	27			50.32
June	1			51.19

B. A. C. 5529, 16^{h} 24^{m} 44^{s}.

July	11	+11	44	59.95
	20		45	0.48

B. A. C. 5532, 16^{h} 25^{m} 35^{s}.

June	15	+11	48	49.73
	16			49.63
	19			50.60
	20			51.07

B. A. C. 5588, 16^{h} 34^{m} 1^{s}.

July	11	−31	48	54.30
	15			55.33

B. A. C. 5596, 16^{h} 34^{m} 41^{s}.

May	22	+49	13	26.20
	27			26.07
June	1			26.88
	19			25.06

B. A. C. 5605, 16^{h} 35^{m} 47^{s}.

June	20	−30	31	24.79
	27			26.17
July	1			25.31

B. A. C. 5625, 16^{h} 39^{m} 20^{s}.

June	3	+ 2	30	57.69
	5			57.97
	15			58.09

B. A. C. 5686, 16^{h} 46^{m} 33^{s}.

June	30	+15	39	32.62
July	1			32.58
	11			32.64
August	5			32.63

B. A. C. 5692, 16^{h} 46^{m} 55^{s}.

June	16	+10	24	58.45
	20			58.26
	27			57.95

B. A. C. 5702, 16^{h} 48^{m} 47^{s}.

June	3	+18	40	35.30
	5			35.00
	15			35.38

Weisse (2) XVI, 1533, 16^{h} 49^{m} 24^{s}.

July	11	+15	37	30.32
	15			30.27
	18			29.35

B. A. C. 5716, 16^{h} 51^{m} 51^{s}.

June	15	+15	40	53.26
	16			53.45
	30			54.18
July	1			53.34

B. A. C. 5767, $16^{h}\ 58^{m}\ 43^{s}$.

1854.		°	′	″
June	27	−24	47	38.92
	30			38.05
July	18			37.37

ε Ursæ Minoris, $17^{h}\ 1^{m}\ 30^{s}$.

June	19	+82	16	31.97
	20			31.00
July	15			31.11
	17			30.14
	20			31.01
August	1			31.15
	5			31.06
	8			30.53

B. A. C. 5788, $17^{h}\ 2^{m}\ 43^{s}$.

June	5	+36	7	58.33
	15			58.81
	16			58.52

α Herculis, $17^{h}\ 7^{m}\ 49^{s}$.

June	5	+14	33	54.32
	15			53.73
	16			53.63
	19			54.65
July	15			54.02
	17			54.73
	20			54.13
August	1			53.68
	5			53.91
	10			54.36

B. A. C. 5834, $17^{h}\ 9^{m}\ 50^{s}$.

June	27	+36	58	51.59
	30			52.34
July	1			52.32
	18			51.44

B. A. C. 5845, $17^{h}\ 12^{m}\ 24^{s}$.

August	8	−12	41	21.48

B. A. C. 5886, $17^{h}\ 18^{m}\ 31^{s}$.

June	16	+37	17	11.36
	19			12.02
	27			11.63
August	1			12.56

Lalande 31762, $17^{h}\ 18^{m}\ 59^{s}$.

June	30	+37	3	41.42
July	1			40.99

B. A. C. 5894, $17^{h}\ 19^{m}\ 4^{s}$.

August	10	+ 7	43	52.45
	14			52.45

B. A. C. 5895, $17^{h}\ 19^{m}\ 15^{s}$.

July	11	+37	5	17.30
	14			17.52
	15			17.94

B. A. C. 5901, $17^{h}\ 20^{m}\ 34^{s}$.

July	18	−37	10	14.38
	20			13.07
August	8			11.72

B. A. C. 5929, $17^{h}\ 25^{m}\ 40^{s}$.

1854.		°	′	″
June	16	+38	59	49.34
	20			49.54
	27			50.15

α Ophiuchi, $17^{h}\ 27^{m}\ 58^{s}$.

June	30	+12	40	24.64
July	1			24.13
	11			23.65
	14			24.11
	15			24.24
August	1			23.73
	5			23.79

(*), $17^{h}\ 30^{m}$.

August	14	−28	19	53.94

β Draconis, $17^{h}\ 27^{m}\ 3^{s}$.

August	10	+52	24	49.98

B. A. C. 5956, $17^{h}\ 29^{m}\ 50^{s}$.

July	18	−29	52	3.43
	20			3.70
August	8			3.14

B. A. C. 6005, $17^{h}\ 37^{m}\ 12^{s}$.

June	30	+24	23	47.29
July	1			46.67
	11			46.73

B. A. C. 6018, $17^{h}\ 39^{m}\ 39^{s}$.

July	15	−36	59	22.64
	18			21.91
	20			23.13

B. A. C. 6020, $17^{h}\ 40^{m}\ 22^{s}$.

August	5	+ 2	46	5.77
	10			4.91
	14			5.27

B. A. C. 6032, $17^{h}\ 42^{m}\ 41^{s}$.

August	17	−31	16	55.36

B. A. C. 6033, $17^{h}\ 42^{m}\ 44^{s}$.

June	15	+25	40	32.73
	16			33.19
	20			32.70

B. A. C. 6059, $17^{h}\ 47^{m}\ 4^{s}$.

August	24	−26	44	25.92

B. A. C. 6062, $17^{h}\ 47^{m}\ 12^{s}$.

June	30	+40	1	3.60
July	1			3.48
	11			3.38

B. A. C. 6068, $17^{h}\ 48^{m}\ 24^{s}$.

July	15	+40	2	20.65
	18			20.72
	20			20.57

B. A. C. 6073, $17^{h}\ 49^{m}\ 23^{s}$.

1854.		°	′	″
June	15	+26	4	38.99
	16			37.84
	27			38.98
August	5			38.56

B. A. C. 6087, $17^{h}\ 52^{m}\ 46^{s}$.

June	30	+30	12	17.82
July	1			18.33
	11			17.63

γ Draconis, $17^{h}\ 53^{m}\ 8^{s}$.

August	14	+51	30	29.19

B. A. C. 6094, $17^{h}\ 53^{m}\ 23^{s}$.

July	12	+16	45	47.07
	14			46.62
	15			47.36

B. A. C. 6106, $17^{h}\ 55^{m}\ 8^{s}$.

June	15	+21	36	0.26
	16		35	59.00
	27		36	0.10

B. A. C. 6113, $17^{h}\ 56^{m}\ 7^{s}$.

August	17	−29	16	45.08
	23			46.23
	26			45.17

B. A. C. 6130, $17^{h}\ 59^{m}\ 18^{s}$.

August	30	−30	0	28.10

B. A. C. 6132, $17^{h}\ 59^{m}\ 39^{s}$.

July	18	−25	29	18.61
August	5			18.92
	8			19.03

B. A. C. 6150, $18^{h}\ 1^{m}\ 42^{s}$.

June	30	+28	44	42.86
July	11			41.73
	12			43.11
	14			42.01

μ^{1} Sagittarii, $18^{h}\ 4^{m}\ 48^{s}$.

June	27	−21	5	33.68
July	15			33.45
August	10			34.10
	17			34.01
	26			32.59

B. A. C. 6186, $18^{h}\ 7^{m}\ 29^{s}$.

July	18	−36	48	1.71
August	5			2.46

B. A. C. 6202, $18^{h}\ 10^{m}\ 46^{s}$.

August	10	−31	22	27.44
	24			28.31

B. A. C. 6210, $18^{h}\ 11^{m}\ 31^{s}$.

July	11	−15	53	16.16
August	8			16.97

B. A. C. 6212, $18^{h}\ 11^{m}\ 41^{s}$.

1854.		°	′	″
August	26	−32	14	29.63

B. A. C. 6233, $18^{h}\ 14^{m}\ 13^{s}$.

July	18	−34	26	59.02
August	5			59.08

B. A. C. 6235, $18^{h}\ 14^{m}\ 36^{s}$.

June	30	+35	59	59.67
July	14		59	59.78
	15	36	0	0.15

B. A. C. 6241, $18^{h}\ 15^{m}\ 53^{s}$.

June	16	+23	12	44.42
August	30			46.33
September	2			44.69

B. A. C. 6258, $18^{h}\ 17^{m}\ 57^{s}$.

August	8	+51	13	47.32
	14			47.80
	30			48.78

B. A. C. 6261, $18^{h}\ 18^{m}\ 23^{s}$.

September	2	−26	43	3.91

B. A. C. 6264, $18^{h}\ 18^{m}\ 45^{s}$.

August	10	−26	50	27.68
	24			29.18

B. A. C. 6271, $18^{h}\ 19^{m}\ 38^{s}$.

August	26	−29	20	47.89

δ Ursæ Minoris, $18^{h}\ 20^{m}\ 44^{s}$.

July	1	+86	35	48.26
	11			48.55

B. A. C. 6295, $18^{h}\ 22^{m}\ 40^{s}$.

August	14	−29	17	25.54
	16			25.96

(*), $18^{h}\ 25^{m}$.

June	30	+61	8	34.88
July	14			32.83
	15			32.89

α Lyræ, $18^{h}\ 31^{m}\ 51^{s}$.

June	16	+38	38	47.32
July	18			49.13
August	5			49.24
	10			49.41
	17			48.78
	26			49.83
	31			49.20
September	2			49.71

B. A. C. 6358, $18^{h}\ 33^{m}\ 10^{s}$.

August	14	−14	41	59.51
	16			59.99

B. A. C. 6365, $18^h\ 35^m\ 7^s$.

1854.		°	′	″
June	30	+38	13	49.23
July	14			48.77
	15			49.41
August	5			49.75

B. A. C. 6403, $18^h\ 41^m\ 20^s$.

September	12	−31	7	43.45

B. A. C. 6428, $18^h\ 44^m\ 18^s$.

July	11	+48	35	51.14
	12			51.32
	14			52.18

β Lyræ, $18^h\ 44^m\ 33^s$.

July	15	+33	11	29.15
	18			29.26
August	10			28.52
	16			28.90
	17			28.51
	31			29.36

B. A. C. 6452, $18^h\ 48^m\ 13^s$.

August	14	+52	46	59.53
	24			59.64

B. A. C. 6453, $18^h\ 48^m\ 25^s$.

September	12	+22	27	30.47

B. A. C. 6460, $18^h\ 48^m\ 46^s$.

August	17	+ 4	0	44.88
	30			45.66
	31			44.79

B. A. C. 6465, $18^h\ 49^m\ 9^s$.

September	16	−25	4	15.67

B. A. C. 6476, $18^h\ 50^m\ 50^s$.

July	11	+48	40	25.74
	12			25.80
	14			25.41

B. A. C. 6482, $18^h\ 51^m\ 54^s$.

July	15	+13	42	33.07
	18			33.47
August	7			32.21

B. A. C. 6495, $18^h\ 54^m\ 9^s$.

August	8	+39	0	46.05
	10			45.60
	14			45.46

B. A. C. 6512, $18^h\ 56^m\ 17^s$.

September	12	−29	18	4.61

ζ Aquilæ, $18^h\ 58^m\ 31^s$.

1854.		°	′	″
July	15	+13	38	39.75
	18			40.37
August	7			39.78
	17			38.95
	24			39.10
	26			39.62
	30			39.36
	31			39.62
September	2			38.90

B. A. C. 6548, $19^h\ 0^m\ 50^s$.

September	16	−21	15	24.41
	18			25.44

B. A. C. 6552, $19^h\ 1^m\ 39^s$.

July	11	+ 5	50	29.15
	12			29.18
	14			28.86

B. A. C. 6578, $19^h\ 7^m\ 0^s$.

September	18	−25	55	20.81

B. A. C. 6582, $19^h\ 8^m\ 49^s$.

August	8	+20	58	24.76
	10			24.15
	14			23.87

LALANDE 36311, $19^h\ 10^m\ 16^s$.

July	11	+30	58	45.43
	12			45.20
	14			45.73
August	5			45.96
	7			45.51

B. A. C. 6606, $19^h\ 11^m\ 36^s$.

July	15	+46	47	52.67
	18			53.09
	31			52.63

B. A. C. 6609, $19^h\ 12^m\ 8^s$.

August	26	−29	52	49.09
	30			48.48

GR. C. 1710, $19^h\ 12^m\ (37)^s$.

August	23	+46	43	11.75
	24			10.35
September	2			10.71

B. A. C. 6627, $19^h\ 15^m\ 1^s$.

September	12	−31	4	59.77
	21			58.58

B. A. C. 6631, $19^h\ 15^m\ 37^s$.

September	16	−29	35	38.21
	18			38.71

B. A. C. 6642, $19^h\ 17^m\ 38^s$.

July	15	+16	38	57.37
	18			56.97
August	5			56.57
	8			56.42
	14			57.17

B. A. C. 6647, $19^h\ 18^m\ 1^s$.

1854.		°	′	″
August	10	+16	40	0.50
	17			1.35
	24			0.44

B. A. C. 6654, $19^h\ 18^m\ 54^s$.

July	11	+19	30	29.44
	12			28.54
	14			28.13

B. A. C. 6665, $19^h\ 20^m\ 8^s$.

August	26	−31	5	24.06
	30			23.03

B. A. C. 6666, $19^h\ 20^m\ 35^s$.

September	16	−27	17	13.31
	18			14.96

B. A. C. 6667, $19^h\ 20^m\ 45^s$.

August	23	+36	1	10.62
September	2			10.30
	12			9.67

B. A. C. 6701, $19^h\ 26^m\ 46^s$.

August	8	+ 7	3	50.77
September	12			50.21

B. A. C. 6709, $19^h\ 28^m\ 0^s$.

August	24	+19	26	55.85
	26			56.63
	30			57.35

B. A. C. 6710, $19^h\ 28^m\ 21^s$.

September	16	−18	33	33.96
	21			32.54

B. A. C. 6716, $19^h\ 29^m\ 33^s$.

August	10	−28	56	27.39
	14			28.08

B. A. C. 6718, $19^h\ 29^m\ 48^s$.

August	17	+42	5	10.87
September	2			11.26

LALANDE 37221, $19^h\ 31^m\ 0^s$.

September	25	−22	24	0.62

B. A. C. 6729, $19^h\ 31^m\ 48^s$.

July	11	+ 5	3	35.82
	12			36.17
	14			35.87

B. A. C. 6760, $19^h\ 37^m\ 37^s$.

September	21	−20	7	0.99

B. A. C. 6768, $19^h\ 38^m\ 30^s$.

August	10	−29	31	26.39
	14			25.69

γ Aquilæ, $19^h\ 39^m\ 8^s$.

1854.		°	′	″
July	12	+10	15	4.95
	14			5.37
August	7			4.90
	8			5.50
	17			4.46
	24			4.74

B. A. C. 6777, $19^h\ 40^m\ 16^s$.

August	26	+34	39	0.19
	30			0.36

(*), $19^h\ 40^m\ 40^s$.

September	30	−22	38	59.76

B. A. C. 6786, $19^h\ 41^m\ 10^s$.

August	31	−27	5	16.10
September	25			17.37

α Aquilæ, $19^h\ 43^m\ 28$.

September	2	+ 8	28	33.54
	23			33.71

B. A. C. 6829, $19^h\ 47^m\ 23^s$.

August	26	−30	57	44.60
	30			45.45

B. A. C. 6831, $19^h\ 47^m\ 44^s$.

August	10	−23	27	26.22
	14			26.00

β Aquilæ, $19^h\ 47^m\ 57^s$.

July	12	+ 6	2	8.99
August	5			9.51
	7			8.22
	8			9.15
	17			9.28
	24			8.96
September	23			8.79
	29			9.60

B. A. C. 6850, $19^h\ 50^m\ 41^s$.

September	18	−22	36	48.55

B. A. C. 6854, $19^h\ 51^m\ 17^s$.

August	31	−28	59	30.17
September	2			29.90

B. A. C. 6868, $19^h\ 53^m\ 17^s$.

August	24	+17	6	35.20
	26			34.89

B. A. C. 6888, $19^h\ 56^m\ 3^s$.

September	12	−27	13	59.43
	25			57.49

LALANDE 38290, $19^h\ 56^m\ 22^s$.

September	30	−19	11	28.39

Madras 1483, 19^{h} 57^{m}.

1854.		°	′	″
September	23	−16	47	38.70
	29			37.03

B. A. C. 6893, 19^{h} 56^{m} 49^{s}.

August	7	+ 6	51	29.41
	8			29.75
	17			29.17
	30			29.24

B. A. C. 6899, 19^{h} 58^{m} 4^{s}.

August	10	−30	8	53.63
	14			53.67

B. A. C. 6903, 19^{h} 59^{m} 33^{s}.

September	16	−19	14	0.13
	18		13	59.65

B. A. C. 6906, 19^{h} 59^{m} 58^{s}.

August	31	−26	39	12.31
September	2			13.33

B. A. C. 6908, 20^{h} 0^{m} 3^{s}.

August	24	−28	52	16.10
	26			16.08

B. A. C. 6923, 20^{h} 1^{m} 43^{s}.

September	21	−19	48	54.18
	25			54.86

B. A. C. 6941, 20^{h} 4^{m} 27^{s}.

August	10	+20	41	28.49
	14			28.44
	29			29.46

Weisse (2) XX, 206, 20^{h} 6^{m} 31^{s}.

September	29	+20	41	54.22

α^1 Capricorni, 20^{h} 9^{m} 20^{s}.

August	17	−12	58	3.92
September	12			4.99
October	5			2.93
	6			4.84
November	2			5.05

α^2 Capricorni, 20^{h} 9^{m} 44^{s}.

August	7	−13	0	20.35
	8			20.34
September	23			20.90
	30			20.71
October	5			18.98
	6			20.91
November	2			21.62

B. A. C. 6981, 20^{h} 10^{m} 44^{s}.

September	16	−19	34	57.19
	18			56.92

B. A. C. 6977, 20^{h} 10^{m} 7^{s}.

August	26	−30	5	13.99
	30			14.98

B. A. C. 6982, 20^{h} 10^{m} 48^{s}.

1854.		°	′	″
August	31	−25	41	16.68
September	2			17.23

O. Arg. S. 20429, 20^{h} 12^{m} 36^{s}.

September	21	−23	56	50.26
	23			51.52

O. Arg. S. 20465, 20^{h} 15^{m} 26^{s}.

September	21	−23	57	14.43
	23			15.86

B. A. C. 7011, 20^{h} 15^{m} 29^{s}.

August	8	−29	33	18.96
	10			19.09

B. A. C. 7018, 20^{h} 16^{m} 15^{s}.

August	14	−29	8	43.08
	17			42.28
	24			43.91

Lalande 39247, 20^{h} 17^{m} 40^{s}.

September	29	−15	27	53.19
	30			53.89

B. A. C. 7030, 20^{h} 18^{m} 17^{s}.

September	2	−29	18	7.17
	16			6.44

B. A. C. 7032, 20^{h} 18^{m} 45^{s}.

August	31	−28	45	4.76
September	12			4.75

B. A. C. 7033, 20^{h} 18^{m} 52^{s}.

September	18	−29	51	47.02
October	6			47.00

O. Arg. S. 20521, 20^{h} 18^{m} 21^{s}.

October	7	−23	30	16.72

B. A. C. 7040, 20^{h} 19^{m} 51^{s}.

August	26	−24	28	24.13
	30			24.24

B. A. C. 7054, 20^{h} 21^{m} 18^{s}.

October	5	−19	4	31.11

B. A. C. 7057, 20^{h} 21^{m} 44^{s}.

August	14	−29	36	38.56
	25			38.74

B. A. C. 7063, 20^{h} 22^{m} 42^{s}.

August	7	−15	33	12.80
	8			13.01

O. Arg. S. 20570, 20^{h} 22^{m} 51^{s}.

1854.		°	′	″
September	21	−23	0	15.72
	30			16.74

B. A. C. 7093, 20^{h} 26^{m} 51^{s}.

August	10	−27	17	12.25
	24			13.73

B. A. C. 7108, 20^{h} 28^{m} 55^{s}.

August	17	−25	37	36.69
	26			38.17

B. A. C. 7111, 20^{h} 28^{m} 57^{s}.

August	31	−22	57	42.16
September	2			42.39

B. A. C. 7113, 20^{h} 29^{m} 11^{s}.

September	12	−24	44	50.19
	15			49.80

O. Arg. S. 20675, 20^{h} 29^{m} 37^{s}.

October	5	−21	56	36.75
	6			38.21

B. A. C. 7123, 20^{h} 30^{m} 36^{s}.

August	14	−17	4	51.44
	30			51.19

B. A. C. 7134, 20^{h} 31^{m} 30^{s}.

September	18	−18	39	46.90
	21			45.49
November	2			46.79

B. A. C. 7135, 20^{h} 31^{m} 32^{s}.

September	16	−28	6	45.78
October	17			44.78

Weisse XX, 860, 20^{h} 33^{m} 29^{s}.

October	7	−14	26	2.95
	11			2.59

B. A. C. 7159, 20^{h} 34^{m} 8^{s}.

September	25	−18	38	32.68
October	6			32.33

α Cygni, 20^{h} 36^{m} 19^{s}.

August	7	+44	44	47.03
	8			(45.47)
	10			46.33
	17			47.04
	24			46.64
	25			47.73
	26			46.58
October	19			47.62

B. A. C. 7202, 20^{h} 39^{m} 53^{s}.

August	31	−18	45	0.00
September	2			0.24

Weisse XX, 1031, 20^{h} 40^{m} 16^{s}.

1854.		°	′	″
September	29	−14	5	26.26
October	5			24.69

B. A. C. 7209, 20^{h} 40^{m} 50^{s}.

September	18	−18	35	8.11
	21			6.66
October	17			6.85

B. A. C. 7210, 20^{h} 41^{m} 5^{s}.

August	14	−27	55	8.80
	30			9.08
September	12			9.72

B. A. C. 7216, 20^{h} 41^{m} 40^{s}.

August	24	−25	31	56.08
	25			56.17

B. A. C. 7224, 20^{h} 42^{m} 33^{s}.

August	26	−28	33	7.19
September	16			8.30

O. Arg. S. 20903, 20^{h} 42^{m} 40^{s}.

November	2	−16	58	13.82

B. A. C. 7229, 20^{h} 43^{m} 28^{s}.

October	11	− 6	11	2.70
	19			1.89

B. A. C. 7244, 20^{h} 45^{m} 13^{s}.

September	2	−24	50	35.40
	18			35.03

B. A. C. 7249, 20^{h} 46^{m} 19^{s}.

September	23	−18	29	17.99
	25			17.28
October	7			17.72

B. A. C. 7262, 20^{h} 49^{m} 2 .

August	31	+53	56	36.41
September	16			36.20

O. Arg. S. 20996, 20^{h} 49^{m} 16^{s}.

November	2	−16	36	19.89

B. A. C. 7268, 20^{h} 50^{m} 4^{s}.

August	25	+46	50	40.17
	30			41.13
September	12			39.11

B. A. C. 7274, 20^{h} 51^{m} 31^{s}.

September	29	+48	37	14.52
	30			13.22

B. A. C, 7282, 20^{h} 52^{m} 25^{s}.

September	18	−18	6	44.66
	21			42.40
October	7			44.67

B. A. C. 7297, $20^h\ 54^m\ 11^s$.

1854.		°	′	″
September	2	+39	40	1.96
October	17			4.04

Weisse XX, 1394, $20^h\ 54^m\ 2^s$.

September	23	−13	1	56.53
	25			56.78

B. A. C. 7322, $20^h\ 57^m\ 31^s$.

October	11	−17	49	31.79
	19			31.19

61¹ Cygni, $21^h\ 0^m\ 11^s$.

August	7	+38	0	51.59
	8			51.81
	10			52.44
	14			52.65
	17			(53.37)
	24			52.61
	25			52.21
	26			52.31
	30			(50.78)
	31			51.75
September	2			51.76
	12			51.74
	16			52.19
	18			51.84
	21			52.93
	25			52.07
October	6			52.04
	7			52.60
	10			52.02
	11			52.35
	17			52.62
	19			52.64
	21			52.68
November	2			51.53

61² Cygni, $21^h\ 0^m\ 11^s$.

October	7	+38	0	48.40
	10			48.77
	11			48.60
	17			48.85
	19			48.92
	21			48.32

ν Aquarii, $21^h\ 1^m\ 25^s$.

September	29	−11	58	31.65
	30			32.53

B. A. C. 7366, $21^h\ 5^m\ 57^s$.

September	30	−26	31	40.77

ζ Cygni, $21^h\ 6^m\ 33^s$.

September	16	+29	36	50.37
	18			50.46
	21			50.16
October	5			51.26
	6			50.72
	7			50.99
	10			50.73
	11			50.90
	17			51.19
	19			50.63
	21			50.79

Weisse (1) XXI, 156, $21^h\ 7^m\ 45^s$.

August	31	−9	44	27.76
September	23			27.87

B. A. C. 7379, $21^h\ 8^m\ 15^s$.

1854.		°	′	″
August	24	−9	50	11.71
September	12			11.23

B. A. C. 7401, $21^h\ 12^m\ 45^s$.

September	2	+55	10	8.85
	23			10.98

α Cephei, $21^h\ 15^m\ 0^s$.

September	18	+61	57	4.60
October	5			4.72
November	2			3.78

Weisse XXI, 346, $21^h\ 15^m\ 3^s$.

September	29	−11	13	33.53
	30			33.30
October	6			34.12

B. A. C. 7417, $21^h\ 15^m\ 5^s$.

September	16	+57	59	25.01
	25			26.22

B. A. C. 7431, $21^h\ 16^m\ 48^s$.

August	31	+48	44	52.45
September	2			50.90

β Aquarii, $21^h\ 23^m\ 39^s$.

August	30	−6	13	42.07
September	12			42.07
	16			42.50
	18			42.32
October	6			41.93
	24			41.05

(* 39) W., $21^h\ 22^m\ 41^s$.

September	29	−16	30	38.81
	30			39.79

B. A. C. 7485, $21^h\ 25^m\ 23^s$.

September	23	−16	51	28.90
	25			29.11
November	2			28.38

β Cephei, $21^h\ 26^m\ 42^s$.

October	25	+69	54	9.87

O. Arg. S. 21515, $21^h\ 28^m\ 58^s$.

September	25	−25	7	16.36

O. Arg. S. 21534, $21^h\ 30^m\ 23^s$.

September	12	−25	7	16.27
	18			16.93

B. A. C. 7528, $21^h\ 32^m\ 1^s$.

August	30	+19	35	26.17
	31			25.94
September	16			24.92

Rumker 9349, $21^h\ 33^m\ 15^s$

1854.		°	′	″
September	21	−15	31	14.93
	23			15.21
	29			14.47

B. A. C. 7549, $21^h\ 34^m\ 48^s$

August	31	−24	49	23.86
September	2			24.75

B. A. C. 7556, $21^h\ 35^m\ 49^s$.

September	30	−15	25	59.43
October	5		26	0.95
	6			0.64

ε Pegasi, $21^h\ 36^m\ 49^s$.

October	7	+9	11	22.46
	10			24.26
	11			23.70
	17			23.33
	19			22.90
	21			23.39
	23			23.51
	24			23.45
	25			23.20
November	2			23.03

B. A. C. 7617, $21^h\ 44^m\ 59^s$.

August	30	−11	15	48.63
	31			49.10

Weisse XXI, 1071, $21^h\ 45^m\ 13^s$.

September	23	−14	53	34.73
	29			33.60
October	11			34.58

B. A. C. 7630, $21^h\ 46^m\ 49^s$.

October	25	−15	57	46.69
November	2			47.10
	9			47.29

B. A. C. 7631, $21^h\ 47^m\ 6^s$.

September	12	+55	5	35.77
	16			35.49
October	10			37.10

Lalande 42700, $21^h\ 47^m\ 16^s$.

September	30	−21	50	46.60
October	5			46.11
	21			47.12

(*), $21^h\ 48^m\ 12^s$.

October	6	−21	28	27.42
	7			27.89
	17			26.08

B. A. C. 7641, $21^h\ 49^m\ 38^s$.

September	18	+11	21	57.74
	21			58.25

(*), $21^h\ 49^m\ 57^s$.

1854.		°	′	″
October	17	−21	26	54.97
	19			56.06
	24			55.76

B. A. C. 7649, $21^h\ 50^m\ 21^s$.

September	25	−21	53	46.44
October	11			46.65

Lalande 42813, $21^h\ 50^m\ 32^s$.

October	21	−20	19	14.79
	23			13.74

(*), $21^h\ 50^m\ 59^s$.

September	29	−20	43	7.32
	30			6.37
October	5			7.13

O. Arg. S. 21832, $21^h\ 55^m\ 6^s$.

October	7	−22	25	26.26
	19			25.61

Lalande 42984, $21^h\ 55^m\ 48^s$.

September	23	−22	30	14.33
October	6			13.99

B. A. C. 7677, $21^h\ 56^m\ 23^s$.

September	16	+74	16	43.76
	21			44.24

(*), $21^h\ 56^m\ 37^s$.

October	23	−19	48	1.19
	24			0.57

Lalande 43040, $21^h\ 57^m\ 35^s$.

October	25	−19	23	42.58
November	2			43.06
	9			43.36

Weisse XXI, 1333, $21^h\ 57^m\ 35^s$.

October	17	−10	37	21.87
November	8			21.78

Weisse XXI, 1375, $21^h\ 59^m\ 21^s$.

September	29	−9	54	41.67
	30			41.95

Lalande 43106, $21^h\ 59^m\ 30^s$.

October	5	−22	19	19.06
	11			19.33

α Aquarii, $21^h\ 58^m\ 4^s$.

September	18	−1	2	47.24
October	10			48.55

Weisse XXI, 1384, $21^h\ 59^m\ 48^s$.

October	21	−10	48	28.12

B. A. C. 7711, $22^h\ 0^m\ 45^s$.

1854.		°	′	″
September	25	−19	15	5.42

Weisse XXII, 13, $22^h\ 1^m\ 34^s$.

November	2	− 9	32	1.37
	7			1.58

B. A. C. 7724, $22^h\ 2^m\ 43^s$.

November	9	−21	58	1.15
December	1			1.25

O. Arg. S. 21966, $22^h\ 4^m\ 2^s$.

October	6	−18	51	57.58
	7			59.54
November	8			58.02

Lalande 43288, $22^h\ 4^m\ 21^s$.

October	17	−18	45	58.25
	19			56.76
	23			56.42

B. A. C. 7752, $22^h\ 6^m\ 3^s$.

September	16	− 5	11	31.13
	21			29.47

B. A. C. 7765, $22^h\ 7^m\ 27^s$.

August	31	+38	58	21.54
September	12			20.80
	18			21.70

B. A. C. 7771, $22^h\ 8^m\ 46^s$.

September	23	−13	34	38.18
	25			38.98
	29			37.99
October	5			38.08

B. A. C. 7776, $22^h\ 9^m\ 16^s$.

September	30	− 6	8	2.18
October	11			3.15
	21			2.66

B. A. C. 7793, $22^h\ 13^m\ 33^s$.

November	9	− 6	59	45.60
December	1			46.03

B. A. C. 7796, $22^h\ 14^m\ 8^s$.

September	16	+11	27	3.31
	21			4.66

B. A. C. 7802, $22^h\ 15^m\ 9^s$.

October	17	−25	31	7.62
	19			6.96
November	7			7.48

B. A. C. 7814, $22^h\ 17^m\ 37^s$.

October	11	+ 0	37	5.55
	21			5.07
November	8			5.39

(*), $22^h\ 20^m\ 37^s$.

1854.		°	′	″
September	29	−16	25	49.26
October	6			46.52
	7			47.68

Weisse XXII, 467, $22^h\ 22^m\ 2^s$.

September	23	− 9	11	2.29
	25			3.25
November	9			3.09

B. A. C. 7836, $22^h\ 22^m\ 15^s$.

September	16	−15	21	1.96
	21			1.56
December	1			3.70

O. Arg. S. 22196, $22^h\ 22^m\ 55^s$.

September	30	−15	20	0.13
October	5		19	59.06
	25		20	0.11

B. A. C. 7879, $22^h\ 29^m\ 11^s$.

September	16	+38	51	12.70
	21			12.74
October	17			12.60

B. A. C. 7880, $22^h\ 29^m\ 12^s$.

September	26	+38	51	33.62
October	17			34.04

Weisse XXII, 641, $22^h\ 30^m\ 29^s$.

September	29	− 8	40	31.36
	30			31.13
October	11			31.08

Weisse XXII, 640, $22^h\ 30^m\ 29^s$.

October	5	−14	50	6.78
	6			9.04
	7			9.00

Weisse XXII, 644, $22^h\ 30^m\ 34^s$.

October	19	−14	50	42.98
	21			43.14
November	8			42.87

Weisse XXII, 675, $22^h\ 31^m\ 40^s$.

October	23	− 8	22	59.45
	24			59.46
	25			59.82

ζ Pegasi, $22^h\ 33^m\ 58^s$.

September	12	+10	2	58.89
	25			59.16
October	19			59.07
	24			59.48
November	8			58.85
	9			58.91

Weisse XXII, 761, $22^h\ 35^m\ 23^s$.

September	21	− 7	59	57.32
	23			57.71
October	11			57.11

(*), $22^h\ 37^m\ 23^s$.

1854.		°	′	″
October	6	−14	21	27.39
December	12			29.53

Weisse XXII, 815, $22^h\ 38^m\ 14^s$.

September	29	−14	18	48.22
October	5			49.68
	7			49.07
December	1			50.61

B. A. C. 7954, $22^h\ 41^m\ 39^s$.

September	25	−14	22	57.52
	28			57.83
October	25			58.09

Weisse XXII, 900, $22^h\ 42^m\ 42^s$.

October	17	− 7	42	8.43
	19			8.44
	23			8.85

B. A. C. 7966, $22^h\ 44^m\ 11^s$.

September	21	−33	40	9.07
	23			10.41

B. A. C. 7976, $22^h\ 44^m\ 11^s$.

September	29	−12	59	7.98
	30			6.48
November	23			8.58

Weisse XXII, 962, $22^h\ 45^m\ 50^s$.

October	7	− 6	54	18.35
	11			18.16
	21			18.49

Lalande 44823, $22^h\ 47^m\ 29^s$.

October	5	−20	56	14.62
	6			14.48

Lalande 44877, $22^h\ 49^m\ 37^s$.

September	28	−21	4	32.79
October	17			32.46
December	12			32.17

α Piscis Australis, $22^h\ 49^m\ 21^s$.

September	16	−30	24	57.07
	25			58.23
October	24			58.12
November	7			58.24

Weisse XXII, 1049, $22^h\ 50^m\ 22^s$.

October	21	− 6	29	14.23
	25			12.88

Weisse XXII, 1057, $22^h\ 50^m\ 59^s$.

October	19	− 6	28	31.24
	25			30.94

(*), $22^h\ 54^m\ 25^s$.

October	11	−21	0	53.59

Weisse XXII, 1149, $22^h\ 54^m\ 31^s$.

1854.		°	′	″
October	7	−12	6	59.80
November	9		7	0.65

Weisse XXII, 1156, $22^h\ 54^m\ 40^s$.

September	21	−12	4	13.56
	30			13.23
November	23			14.35

Lalande 45049, $22^h\ 54^m\ 43^s$.

October	5	−21	40	16.15
	6			17.50
November	7			16.41

α Pegasi, $22^h\ 57^m\ 18^s$.

September	25	+14	23	57.57
October	23			57.84
	24			56.73

Weisse XXII, 1232, $22^h\ 58^m\ 3^s$.

September	28	−11	14	44.91
	29			45.03
December	12			46.36

Weisse XXII, 1272, $23^h\ 0^m\ 10^s$.

October	17	− 5	35	12.95
	19			12.65
	25			13.16

Weisse XXII, 1283, $23^h\ 0^m\ 54^s$.

October	21	− 5	35	24.71
	25			25.01

Weisse XXIII, 9, $23^h\ 1^m\ 35^s$.

November	8	−13	25	51.27
December	1			52.04

Weisse XXIII, 14, $23^h\ 1^m\ 53^s$.

October	11	−12	53	55.76
November	9			57.00

Weisse XXIII, 48, $23^h\ 3^m\ 37^s$.

October	6	+ 4	11	27.26
	7			27.34

B. A. C. 8078, $23^h\ 4^m\ 10^s$.

September	30	+ 7	54	23.88
October	5			24.11

Weisse XXIII, 85, $23^h\ 6^m\ 22^s$.

October	23	−10	44	44.32
November	7			44.94

Weisse XXIII, 111, $23^h\ 6^m\ 24^s$.

November	23	+ 4	10	54.51
	27			55.27

B. A. C. 8084, $23^h\ 6^m\ 24^s$.

1854.		°	′	″
September	21	− 3	26	58.11
	25			58.91
	29			58.69

LALANDE 45473, $23^h\ 6^m\ 36^s$.

November	28	−19	41	21.99
December	12			21.90

WEISSE XXIII, 143, $23^h\ 7^m\ 57^s$.

October	19	−11	51	38.16
November	8			38.28

B. A. C. 8097, $23^h\ 8^m\ 27^s$.

September	28	+27	25	51.46
December	1			50.90

WEISSE XXIII, 185, $23^h\ 9^m\ 50^s$.

October	11	−12	31	53.24
	17			52.30

B. A. C. 8109, $23^h\ 10^m\ 7^s$.

October	21	−10	0	1.75
	24			1.74

B. A. C. 8127, $23^h\ 12^m\ 42^s$.

October	6	+ 4	33	48.62
	7			47.73

LALANDE 45704, $23^h\ 12^m\ 4^s$.

October	23	−19	21	49.08
	25			48.66

B. A. C. 8129, $23^h\ 12^m\ 57^s$.

September	30	− 6	43	34.26
October	5			34.05

WEISSE XXIII, 309, $23^h\ 15^m\ 12^s$.

November	7	−11	35	48.89
	9			49.12

LALANDE 45804, $23^h\ 16^m\ 0^s$,

November	8	−18	36	43.81
	27			42.21

LALANDE 45838, $23^h\ 17^m\ 20^s$.

October	19	−18	55	7.83
November	28			8.38

B. A. C. 8159, $23^h\ 17^m\ 31^s$.

September	21	+31	33	41.22
	25			41.44
	29			41.76

WEISSE XXIII, 359, $23^h\ 17^m\ 46^s$.

December	1	+ 5	13	2.83
	12			3.15

WEISSE XXIII, 377, $23^h\ 18^m\ 50^s$.

1854.		°	′	″
October	11	−10	51	30.06
	17			30.04

B. A. C. 8175, $23^h\ 20^m\ 17^s$.

September	30	−12	16	26.69
October	9			28.67

SANTINI, 1633, $23^h\ 20^m\ 37^s$.

October	6	+ 5	15	0.85
	7			1.05
November	9			0.57

WEISSE XXIII, 423, $23^h\ 21^m\ 6^s$.

October	23	−10	55	35.30
	25			34.69

SANTINI, 1635, $23^h\ 21^m\ 54^s$.

October	24	+ 5	16	38.70
November	9			38.38

WEISSE XXIII, 449, $23^h\ 22^m\ 16^s$.

November	28	+ 0	20	15.70

B. A. C. 8194, $23^h\ 23^m\ 50^s$.

September	21	−22	11	48.00
	25			48.30

B. A. C. 8196, $23^h\ 23^m\ 57^s$.

September	29	−22	4	32.32

SANTINI, 1636, $23^h\ 24^m\ 35^s$.

November	27	+ 6	15	34.48
December	1			33.80

WEISSE XXIII, 534, $23^h\ 26^m\ 14^s$.

October	5	+ 5	8	11.13
	19			10.90

WEISSE XXIII, 602, $23^h\ 29^m\ 11^s$.

October	9	+ 5	5	13.46
	11			14.93
	19			15.72

WEISSE O, 245, $0^h\ 14^m\ 40^s$.

1855.				
December	6	+ 5	6	46.36

WEISSE O, 450, $0^h\ 26^m\ 56^s$.

October	15	+ 5	11	3.91
November	22			5.47

WEISSE O, 476, $0^h\ 28^m\ 16^s$.

November	27	+ 7	22	32.03

β CETI, $0^h\ 36^m\ 34^s$.

November	22	−18	45	17.67

WEISSE O, 638, $0^h\ 37^m\ 12^s$.

1855.		°	′	″
November	27	+ 7	3	34.20
	29			34.35

WEISSE O, 680, $0^h\ 39^m\ 39^s$.

November	30	+ 7	32	30.04

B. A. C. 221, $0^h\ 41^m\ 3^s$.

January	10	+ 4	33	36.51
November	19			38.30

WEISSE O, 732, $0^h\ 42^m\ 46^s$.

November	27	− 0	59	14.60

WEISSE O, 806, $0^h\ 46^m\ 28^s$.

November	22	+ 1	8	59.11
	30			57.79

WEISSE O, 808, $0^h\ 46^m\ 35^s$.

January	10	+ 6	30	54.96
November	24			54.96

WEISSE O, 815, $0^h\ 47^m\ 4^s$.

November	29	− 2	15	44.48

(*), $0^h\ 47^m\ 41^s$.

November	29	− 2	19	2.01

WEISSE O, 893, $0^h\ 51^m\ 50^s$.

December	5	+ 1	54	9.68

WEISSE O, 925, $0^h\ 53^m\ 27^s$.

November	22	+ 7	56	49.21

WEISSE O, 931, $0^h\ 58^m\ 48^s$.

November	30	+ 8	1	4.63

WEISSE O, 950, $0^h\ 54^m\ 39^s$.

November	24	+ 9	20	8.56
	27			9.03

WEISSE O, 965, $0^h\ 55^m\ 25^s$.

November	19	+ 8	22	50.77
	29			49.32

WEISSE O, 972, $0^h\ 55^m\ 46^s$.

December	5	+ 9	30	9.48
	6			9.67

WEISSE O, 980, $0^h\ 56^m\ 15^s$.

November	24	+ 9	21	25.07
	27			25.65
December	5			25.46
	6			26.10

WEISSE O, 1076, $1^h\ 1^m\ 3^s$.

1855.		°	′	″
November	30	+10	6	35.66

B. A. C. 328, $1^h\ 1^m\ 10^s$.

November	19	+ 4	54	31.75
	22			30.57

WEISSE O, 1079, $1^h\ 1^m\ 11^s$.

November	30	+10	8	40.18

POLARIS, $1^h\ 8^m\ 2^s$.

January	10	+88	33	46.55
	17			47.43

POLARIS, S. P., $1^h\ 8^m\ 2^s$.

April	7	+88	33	48.27
	12			47.55
	16			47.65
	17			49.54
	27			48.24
May	4			47.81
	8			48.31
	10			48.71
	11			47.85
	17			49.49
June	12			49.50

B. A. C. 368, $1^h\ 6^m\ 25^s$.

November	24	+ 6	50	3.22
	27			3.54

B. A. C. 369, $1^h\ 6^m\ 26^s$.

November	24	+ 6	50	13.51
	27			13.70

B. A. C. 373, $1^h\ 7^m\ 25^s$.

December	5	+ 6	15	14.18
	6			14.51

B. A. C. 374, $1^h\ 7^m\ 41^s$.

November	22	− 1	43	24.41
	29			24.95

WEISSE I, 144, $1^h\ 10^m\ 19^s$.

November	30	+12	49	7.00

B. A. C. 400, $1^h\ 12^m\ 39^s$.

December	5	− 1	14	41.87

WEISSE I, 206, $1^h\ 13^m\ 44^s$.

November	24	− 2	2	45.90
	27			47.47
December	6			46.30

θ^1 CETI, $1^h\ 17^m\ 2^s$.

January	17	− 8	54	24.21
November	19			22.06

WEISSE I, 336, $1^h\ 20^m\ 25^s$.

1855.		° ′ ″
January	10	+8 3 7.63

(* 61) W., $1^h\ 20^m\ 35^s$.

November	22	+8 18 14.39
	30	14.34

(*), $1^h\ 21^m\ 9^s$.

November	27	+13 55 56.00
	29	56.91

WEISSE I, 375, $1^h\ 22^m\ 44^s$.

November	24	−0 21 1.39
December	5	1.76

RUMKER 331, $1^h\ 25^m\ 0^s$.

November	30	−3 51 4.56
December	6	4.43

WEISSE (2) I, 575, $1^h\ 26^m\ 30^s$.

November	27	+15 3 2.90
	29	3.03

WEISSE I, 504, $1^h\ 30^m\ 47^s$.

November	30	+3 22 18.77
December	5	19.28
	6	19.16

SANTINI 91, $1^h\ 31^m\ 6^s$.

January	17	+1 52 19.93
November	22	20.96

WEISSE I, 540, $1^h\ 31^m\ 43^s$.

December	5	+3 24 37.90
	6	37.20

B. A. C. 495, $1^h\ 31^m\ 43^s$.

November	19	+15 54 50.35
	24	48.96

WEISSE I, 598, $1^h\ 33^m\ 53^s$.

November	29	+9 24 24.02

WEISSE I, 600, $1^h\ 33^m\ 54^s$.

November	29	+9 24 10.07

WEISSE I, 628, $1^h\ 34^m\ 56^s$.

November	27	+3 43 21.16

(*), $1^h\ 39^m\ 50^s$.

November	30	+0 17 8.89
December	6	9.33

WEISSE I, 725, $1^h\ 40^m\ 25^s$.

January	17	−3 36 37.90
November	24	37.30

WEISSE I, 740, $1^h\ 41^m\ 42^s$.

1855.		° ′ ″
January	10	+11 41 32.20

WEISSE I, 755, $1^h\ 42^m\ 50^s$.

November	30	+0 17 24.90
December	6	24.61

WEISSE I, 775, $1^h\ 43^m\ 43^s$.

November	29	+14 3 36.85

WEISSE I, 778, $1^h\ 43^m\ 44^s$.

November	22	+3 31 38.43
December	5	37.88

WEISSE I, 847, $1^h\ 47^m\ 33^s$.

January	17	+2 42 13.79

WEISSE I, 860, $1^h\ 48^m\ 21^s$.

November	24	+2 53 26.64

WEISSE I, 942, $1^h\ 53^m\ 15^s$.

January	10	−4 2 53.29
November	29	52.01

WEISSE I, 943, $1^h\ 53^m\ 10^s$.

January	3	+12 42 17.24
	22	17.71

WEISSE I, 963, $1^h\ 54^m\ 23^s$.

November	30	+3 22 27.82
December	5	28.69

(*), $1^h\ 55^m\ 38^s$.

December	5	+3 25 15.85

WEISSE I, 1042, $1^h\ 58^m\ 56^s$.

January	10	+12 47 32.21
November	30	31.92

α ARIETIS, $1^h\ 59^m\ 17^s$.

November	24	+22 47 55.71
	27	55.61
December	6	55.29

B. A. C, 663, $2^h\ 2^m\ 23^s$.

January	22	+3 34 5.53

O. ARG. N. 2443, $2^h\ 2^m\ 51^s$.

January	3	+48 56 9.59

O. ARG. N. 2462, $2^h\ 3^m\ 38^s$.

November	29	+49 7 18.60
December	6	19.30

WEISSE II, 64, $2^h\ 5^m\ 27^s$.

1855.		° ′ ″
January	10	+13 35 2.40
December	5	1.89

O. ARG. N. 2546, $2^h\ 6^m\ 36^s$.

November	29	+49 2 45.96
December	6	46.02

WEISSE II, 81, $2^h\ 6^m\ 47^s$.

November	24	+7 22 50.23

RUMKER 568, $2^h\ 7^m\ 41^s$.

November	30	+17 15 50.18

WEISSE II, 112, $2^h\ 8^m\ 29^s$.

November	27	+4 59 51.97

WEISSE II, 143, $2^h\ 10^m\ 27^s$.

January	17	+13 49 5.19

WEISSE II, 144, $2^h\ 10^m\ 32^s$.

January	22	+12 46 52.83

WEISSE II, 182, $2^h\ 12^m\ 37^s$.

January	3	+13 39 10.68
	10	11.40

WEISSE II, 209, $2^h\ 13^m\ 53^s$.

November	24	+13 17 34.36
December	5	34.59

B. A. C. 741, $2^h\ 17^m\ 2^s$.

January	22	+9 4 43.87

B. A. C. 744, $2^h\ 17^m\ 35^s$.

November	29	+66 46 10.88
December	6	12.52

WEISSE (2) II, 444, $2^h\ 19^m\ 3^s$.

November	30	+22 14 47.48

WEISSE (2) II, 449, $2^h\ 19^m\ 16^s$.

November	30	+22 16 18.36

WEISSE II, 305, $2^h\ 19^m\ 15^s$.

January	10	+9 56 0.52
	17	0.21

WEISSE II, 333, $2^h\ 20^m\ 49^s$.

December	5	+5 25 40.46

RUMKER 654, $2^h\ 25^m\ 37^s$.

January	22	+19 49 11.24

B. A. C. 789, $2^h\ 27^m\ 39^s$.

1855.		° ′ ″
January	30	+6 51 36.89

WEISSE II, 470, $2^h\ 28^m\ 32^s$.

November	24	+14 32 13.88
December	5	12.85
	6	14.36

WEISSE (2) II, 691, $2^h\ 28^m\ 49^s$.

January	10	+20 5 20.58
	17	19.85

WEISSE II, 479, $2^h\ 29^m\ 1^s$.

November	24	+14 34 7.78
December	5	5.28
	6	5.56

B. A. C. 800, $2^h\ 29^m\ 10^s$.

December	18	+7 7 6.68

WEISSE (2) II, 860, $2^h\ 35^m\ 44^s$.

January	10	+20 33 1.66
	30	2.29

γ CETI, $2^h\ 36^m\ 3^s$.

January	22	+2 38 38.62
November	24	38.17
	29	38.97
	30	38.49
December	5	39.47

RUMKER 695, $2^h\ 36^m\ 50^s$.

January	17	+21 1 10.61
December	6	11.79

WEISSE II, 790, $2^h\ 46^m\ 15^s$.

January	30	+8 45 44.56

RUMKER 742, $2^h\ 47^m\ 26^s$.

January	10	+22 21 47.78
	17	47.74

WEISSE (2) II, 1148, $2^h\ 47^m\ 50^s$.

December	5	+25 31 19.01

WEISSE II, 855, $2^h\ 49^m\ 27^s$.

December	6	+14 34 4.33

WEISSE II, 866, $2^h\ 49^m\ 40^s$.

January	19	−6 49 13.38
	30	13.43

WEISSE II, 881, $2^h\ 50^m\ 55^s$.

December	6	+14 35 29.61

α CETI, 2^{h} 54^{m} 58^{s}.

1855.	°	′	″
January 10 . .	+ 3	32	17.89
November 29 . .			17.64
30 . .			17.95
December 5 . .			19.30

WEISSE II, 967, 2^{h} 55^{m} 20^{s}.

January 17 . .	+ 7	55	10.48
30 . .			12.06

WEISSE II, 970, 2^{h} 55^{m} 13^{s}.

December 18 . .	− 7	2	35.44

WEISSE II, 1037, 2^{h} 58^{m} 54^{s}.

December 6 . .	+14	13	49.46

WEISSE III, 1, 3^{h} 1^{m} 56^{s}.

January 17 . .	+ 8	8	36.36
19 . .			37.27

WEISSE (2) III, 45, 3^{h} 3^{m} 13^{s}.

December 20 . .	+16	46	10.83

WEISSE III, 35, 3^{h} 3^{m} 34^{s}.

January 10 . .	+ 8	11	25.82
30 . .			26.83

WEISSE (2) III, 75, 3^{h} 4^{m} 25^{s}.

November 24 . .	+16	46	14.32
December 20 . .			14.74

WEISSE III, 62, 3^{h} 5^{m} 5^{s}.

November 29 . .	+ 8	3	52.93
30 . .			52.48

WEISSE III, 98, 3^{h} 6^{m} 22^{s}.

December 6 . .	+ 9	55	49.12
18 . .			49.24

WEISSE III, 114, 3^{h} 7^{m} 17^{s}.

November 30 . .	+11	54	32.72

WEISSE (2) III, 196, 3^{h} 9^{m} 18^{s}.

January 17 . .	+17	3	18.42
19 . .			19.00

WEISSE III, 172, 3^{h} 10^{m} 34^{s}.

November 24 . .	+12	18	33.53
29 . .			32.62

WEISSE III, 205, 3^{h} 12^{m} 10^{s}.

December 18 . .	+12	51	59.20

(*), 3^{h} 13^{m} 59^{s}.

November 30 . .	+ 8	51	19.69

WEISSE III, 251, 3^{h} 14^{m} 17^{s}.

1855.	°	′	″
January 10 . .	+ 8	43	42.11
22 . .			42.30
30 . .			42.04

WEISSE (2) III, 351, 3^{h} 16^{m} 43^{s}.

December 20 . .	+24	54	21.52

WEISSE III, 299, 3^{h} 17^{m} 39^{s}.

January 17 . .	+ 9	11	38.56
19 . .			40.02

WEISSE III, 306, 3^{h} 17^{m} 58^{s}.

December 18 . .	+13	7	30.72

ξ TAURI, 3^{h} 19^{m} 35^{s}.

January 17 . .	+ 9	14	31.22
19 . .			32.29

(*), 3^{h} 21^{m} 50^{s}.

January 10 . .	+ 9	28	17.74

WEISSE III, 447, 3^{h} 25^{m} 35^{s}.

December 18 . .	+13	18	27.04
20 . .			27.75

WEISSE III, 474, 3^{h} 26^{m} 48^{s}.

January 17 . .	+13	42	8.73
December 6 . .			9.93

(*), 3^{h} 29^{m} 45^{s}.

January 22 . .	+27	40	43.75

WEISSE (2) III, 639, 3^{h} 30^{m} 7^{s}.

January 10 . .	+18	53	53.09

RUMKER 940, 3^{h} 34^{m} 24^{s}.

January 17 . .	+14	20	23.56
30 . .			24.63

η TAURI, 3^{h} 39^{m} 10^{s}.

January 10 . .	+23	40	9.07
19 . .			8.99
December 6 . .			8.74
20 . .			9.29

WEISSE III, 752, 3^{h} 39^{m} 41^{s}.

December 18 . .	+12	4	19.42

WEISSE (2) III, 881, 3^{h} 39^{m} 48^{s}.

December 7 . .	+26	9	15.57

WEISSE III, 774, 3^{h} 41^{m} 0^{s}.

January 17 . .	+15	9	9.42
29 . .			10.10

WEISSE (2) III, 931, 3^{h} 42^{m} 15^{s}.

1855.	°	′	″
January 30 . .	+26	38	56.40

RUMKER 1023, 3^{h} 46^{m} 28^{s}.

January 10 . .	+16	12	21.94

WEISSE (2) III, 1013, 3^{h} 46^{m} 34^{s}.

December 6 . .	+19	41	10.56
7 . .			11.36

WEISSE (2) III, 1019, 3^{h} 46^{m} 51^{s}.

December 6 . .	+19	41	2.50
7 . .			2.01

WEISSE III, 924, 3^{h} 47^{m} 52^{s}.

December 18 . .	− 9	56	5.82

WEISSE (2) III, 1030, 3^{h} 47^{m} 40^{s}.

January 22 . .	+35	35	30.34
29 . .			30.28

WEISSE (2) III, 1041, 3^{h} 48^{m} 27^{s}.

January 17 . .	+36	5	7.63

γ^{1} ERIDANI, 3^{h} 51^{m} 30^{s}.

January 10 . .	−13	54	32.56

WEISSE (2) III, 1210, 3^{h} 56^{m} 40^{s}.

January 19 . .	+16	14	24.86
29 . .			24.60

WEISSE (2) III, 1212, 3^{h} 56^{m} 45^{s}.

January 17 . .	+20	28	15.79

RUMKER 1079, 3^{h} 57^{m} 46^{s}.

December 7 . .	+15	21	16.45
18 . .			16.52

RUMKER 1084, 3^{h} 58^{m} 19^{s}.

December 7 . .	+15	18	58.40
18 . .			57.10

WEISSE IV, 21, 4^{h} 2^{m} 34^{s}.

January 30 . .	+ 7	19	41.86
December 11 . .			41.88

RUMKER 1104, 4^{h} 3^{m} 42^{s}.

January 17 . .	+28	4	10.21
19 . .			9.77

46 TAURI, 4^{h} 6^{m} 2^{s}.

January 29 . .	+ 7	21	20.19
December 11 . .			20.07
20 . .			18.78

WEISSE (2) IV, 152, 4^{h} 8^{m} 50^{s}.

1855.	°	′	″
December 18 . .	+15	51	51.57

B. A. C. 1316, 4^{h} 10^{m} 6^{s}.

January 17 . .	+ 21	14	1.47
19 . .			1.93

B. A. C. 1350, 4^{h} 15^{m} 23^{s}.

December 11 . .	+16	26	52.08

WEISSE (2) IV, 326, 4^{h} 15^{m} 44^{s}.

January 10 . .	+21	12	40.47
29 . .			41.23

WEISSE (2) IV, 330, 4^{h} 15^{m} 56^{s}.

December 20 . .	+21	24	33.03

WEISSE (2) IV, 351, 4^{h} 16^{m} 52^{s}.

January 30 . .	+29	12	6.17
December 3 . .			7.08
18 . .			6.42

B. A. C. 1366, 4^{h} 17^{m} 38^{s}.

January 17 . .	+15	37	3.04
19 . .			3.74

θ^{1} TAURI, 4^{h} 20^{m} 34^{s}.

January 17 . .	+15	38	53.49
19 . .			53.59

LALANDE 8431, 4^{h} 21^{m} 5^{s}.

December 20 . .	−11	26	24.04

LALANDE 8479, 4^{h} 21^{m} 12^{s}

January 10 . .	−11	22	2.76

RUMKER 1235, 4^{h} 24^{m} 50^{s}.

December 18 . .	+15	42	19.23

WEISSE (2) IV, 538, 4^{h} 25^{m} 18^{s}.

December 3 . .	+21	56	33.55

α TAURI, 4^{h} 27^{m} 53^{s}.

January 30 . .	+16	13	29.18
December 7 . .			29.28
11 . .			29.09

WEISSE (2) IV, 606, 4^{h} 28^{m} 26^{s}.

January 17 . .	+27	38	12.11
December 20 . .			11.32

WEISSE (2) IV, 634, 4^{h} 29^{m} 38^{s}.

January 19 . .	+29	6	7.02

B. A. C. 1437, $4^{h}\,31^{m}\,16^{s}$.

1855.		°	′	″
December	7	+15	38	15.39
	11			16.33

WEISSE (2) IV, 719, $4^{h}\,33^{m}\,1^{s}$.

December	18	+22	21	12.99

WEISSE IV, 806, $4^{h}\,37^{m}\,24^{s}$.

January	10	+ 2	56	43.05
	17			42.09

WEISSE (2) IV, 886, $4^{h}\,40^{m}\,3^{s}$.

December	18	+24	29	30.39
	20			30.94

WEISSE IV, 888, $4^{h}\,41^{m}\,37^{s}$.

January	29	− 1	36	23.96

WEISSE (2) IV, 1079, $4^{h}\,48^{m}\,33^{s}$.

January	29	+29	57	1.67

WEISSE (2) IV, 1098, $4^{h}\,49^{m}\,6^{s}$.

January	10	+29	54	12.93
	19			14.27
December	20			13.64

WEISSE (2) IV, 1165, $4^{h}\,51^{m}\,45^{s}$.

December	3	+22	22	41.84

WEISSE (2) IV, 1172, $4^{h}\,52^{m}\,8^{s}$.

December	3	+22	24	9.45

WEISSE (2) IV, 1257, $4^{h}\,55^{m}\,37^{s}$.

January	19	+30	12	13.37

WEISSE (2) IV, 1299, $4^{h}\,57^{m}\,11^{s}$.

January	10	+22	51	51.42
	29			51.21

(*), $5^{h}\,3^{m}\,20^{s}$.

January	19	+30	11	35.13

WEISSE (2) V, 54, $5^{h}\,3^{m}\,40^{s}$.

December	3	+26	17	8.99
	18			8.28
	20			8.97
	30			9.52

WEISSE (2) V, 111, $5^{h}\,5^{m}\,17^{s}$.

January	19	+30	13	49.77
	29			49.31

α AURIGÆ, $5^{h}\,6^{m}\,21^{s}$.

January	17	+45	51	3.42

WEISSE (2) V, 296, $5^{h}\,11^{m}\,6^{s}$.

1855.		°	′	″
December	3	+26	6	32.24
	30			31.60

β TAURI, $5^{h}\,17^{m}\,27^{s}$.

January	19	+28	29	7.03
	29			6.70

WEISSE (2) V, 513, $5^{h}\,18^{m}\,24^{s}$.

December	3	+26	27	30.11
	18			29.89
	30			29.74

WEISSE (2) V, 630, $5^{h}\,22^{m}\,20^{s}$.

December	3	+26	28	20.94
	18			19.83
	30			20.30

WEISSE (2) V, 660, $5^{h}\,23^{m}\,10^{s}$.

December	20	+26	34	32.56
	30			32.54

δ ORIONIS, $5^{h}\,24^{m}\,51^{s}$.

January	19	− 0	24	19.96

B. A. C. 1742, $5^{h}\,26^{m}\,54^{s}$.

January	29	+23	56	32.56
February	21			33.22

(*), $5^{h}\,28^{m}\,47^{s}$.

December	3	+26	33	44.05
	18			43.43
	30			45.00

WEISSE (2) V, 912, $5^{h}\,30^{m}\,13^{s}$.

December	3	+26	31	57.08
	18			56.08
	20			56.44
	30			57.91

(*), $5^{h}\,32^{m}\,52^{s}$.

December	3	+26	32	18.30
	18			18.15
	20			18.26
	30			19.79

WEISSE (2) V, 1180, $5^{h}\,36^{m}\,26^{s}$.

January	29	+31	15	39.93
February	21			39.16

(*), $5^{h}\,45^{m}\,25^{s}$.

December	30	+26	28	58.80

WEISSE (2) V, 1534, $5^{h}\,46^{m}\,56^{s}$.

December	3	+26	26	60.71
	18			59.57
	30			59.63

α ORIONIS, $5^{h}\,47^{m}\,36^{s}$.

1855.		°	′	″
December	20	+ 7	22	39.77

WEISSE V, 1204, $5^{h}\,47^{m}\,36^{s}$.

January	29	−14	9	33.65
February	21			33.62

B. A. C. 1901, $5^{h}\,50^{m}\,2^{s}$.

March	1	−14	11	47.63

RUMKER 1673, $5^{h}\,54^{m}\,45^{s}$.

December	3	+26	16	36.00
	18			35.98
	30			36.26

RUMKER 1680, $5^{h}\,55^{m}\,9^{s}$.

December	3	+26	21	5.68
	18			5.77
	30			5.43

WEISSE V, 1487, $5^{h}\,58^{m}\,11^{s}$.

March	1	−14	1	38.19

WEISSE (2) VI, 12, $6^{h}\,2^{m}\,39^{s}$.

January	29	+31	11	51.90

WEISSE VI, 264, $6^{h}\,9^{m}\,21^{s}$.

March	1	−14	23	5.88

μ GEMINORUM, $6^{h}\,14^{m}\,29^{s}$.

January	29	+22	34	53.87
February	21			53.54
	28			53.73

WEISSE VI, 544, $6^{h}\,18^{m}\,39^{s}$.

March	1	−14	25	43.04
	10			42.37

WEISSE VI, 809, $6^{h}\,26^{m}\,57^{s}$.

March	1	−14	42	40.16
	10			39.80

51 CEPHEI, $6^{h}\,33^{m}\,38^{s}$.

February	21	+87	14	53.93

51 CEPHEI, S. P., $6^{h}\,33^{m}\,39^{s}$.

September	10	+87	14	55.17

B. A. C. 2221, $6^{h}\,40^{m}\,28^{s}$.

February	21	−14	16	42.13
	28			42.18

WEISSE VI, 1351, $6^{h}\,44^{m}\,24^{s}$.

February	21	−14	34	49.95
March	10			49.89

WEISSE VI, 1589, $6^{h}\,51^{m}\,41^{s}$.

1855.		°	′	″
March	10	−14	38	5.10

WEISSE VI, 1618, $6^{h}\,52^{m}\,42^{s}$.

March	1	−14	46	23.88

ε CANIS MAJORIS, $6^{h}\,53^{m}\,8^{s}$.

February	28	−28	47	2.02

PIAZZI VI, 328, $6^{h}\,59^{m}\,10^{s}$.

February	21	−14	39	42.10
March	22			45.25

WEISSE VII, 93, $7^{h}\,4^{m}\,0^{s}$.

March	1	−14	32	27.37
	22			28.45

WEISSE VII, 300, $7^{h}\,10^{m}\,6^{s}$.

March	22	−14	37	45.00

WEISSE VII, 316, $7^{h}\,10^{m}\,41^{s}$.

March	1	−14	36	5.25
	19			4.69

δ GEMINORUM, $7^{h}\,11^{m}\,46^{s}$.

February	21	+22	14	12.72

(*), $7^{h}\,18^{m}\,43^{s}$.

March	1	−14	36	37.81
	10			37.02
	19			37.29
	22			37.92

B. A. C. 2463, $7^{h}\,19^{m}\,58^{s}$.

February	21	+27	49	57.16

WEISSE VII, 835, $7^{h}\,27^{m}\,22^{s}$.

March	1	−14	13	24.75

WEISSE VII, 871, $7^{h}\,28^{m}\,30^{s}$.

March	19	−14	38	40.83
	22			42.96

WEISSE VII, 924, $7^{h}\,29^{m}\,38^{s}$.

March	1	−14	11	8.02

WEISSE (2) VII, 874, $7^{h}\,30^{m}\,0^{s}$.

February	21	+21	46	32.73

(*), $7^{h}\,31^{m}\,57^{s}$.

February	21	+21	46	9.23

β GEMINORUM, $7^{h}\,36^{m}\,45^{s}$.

March	22	+28	21	39.87

WEISSE VII, 1182, $7^{h}\ 39^{m}\ 7^{s}$.

1855.		°	′	″
March	1 . .	−14	21	12.11
	10 . .			10.78
	19 . .			11.09

(*), $7^{h}\ 45^{m}\ 55^{s}$.

March	1 . .	+20	32	31.49

(*), $7^{h}\ 50^{m}\ 20^{s}$.

February	28 . .	+60	47	47.19
March	22 . .			49.92
April	3 . .			48.87

RUMKER 2390, $7^{h}\ 56^{m}\ 50^{s}$.

March	1 . .	+36	40	6.06

O. ARG. N. 8586, $7^{h}\ 58^{m}\ 13^{s}$.

February	28 . .	+60	43	35.53
March	22 . .			35.83
April	3 . .			37.81

(*), $7^{h}\ 59^{m}\ 44^{s}$.

March	22 . .	+60	44	17.28
April	3 . .			17.30

LALANDE 16130, $8^{h}\ 7^{m}\ 56^{s}$.

March	1 . .	+19	7	8.10
April	2 . .			9.08

WEISSE (2) VIII, 309, $8^{h}\ 14^{m}\ 6^{s}$.

March	1 . .	+15	12	35.95
	19 . .			37.84
April	3 . .			37.03

RUMKER 2533, $8^{h}\ 21^{m}\ 21^{s}$.

March	19 . .	+20	53	29.32
April	2 . .			28.77

O. ARG. N. 9050, $8^{h}\ 22^{m}\ 16^{s}$.

April	3 . .	+55	49	32.87

WEISSE VIII, 618, $8^{h}\ 24^{m}\ 28^{s}$.

February	28 . .	+13	16	22.60
March	1 . .			22.16

WEISSE VIII, 736, $8^{h}\ 28^{m}\ 46^{s}$.

March	19 . .	+12	20	15.34
	22 . .			15.82

WEISSE VIII, 828, $8^{h}\ 32^{m}\ 13^{s}$.

March	1 . .	+12	2	1.53
April	2 . .			0.97

WEISSE VIII, 999, $8^{h}\ 39^{m}\ 7^{s}$.

February	28 . .	+11	27	38.84
March	1 . .			37.93

ε HYDRÆ, $8^{h}\ 39^{m}\ 22^{s}$.

1855.		°	′	″
April	16 . .	+ 6	55	48.16

WEISSE VIII, 1012, (1st *,) $8^{h}\ 39^{m}\ 33^{s}$.

March	19 . .	+11	40	24.63

WEISSE VIII, 1012, (2d *,) $8^{h}\ 39^{m}\ 33^{s}$.

March	19 . .	+11	40	10.64
	22 . .			10.97

LALANDE 17647, $8^{h}\ 49^{m}\ 11^{s}$.

March	1 . .	−13	30	27.02
	19 . .			26.91
	22 . .			27.22
April	3 . .			27.51

ι URSÆ MAJORIS, $8^{h}\ 49^{m}\ 36^{s}$.

April	16 . .	+48	35	16.96

WEISSE VIII, 1367, $8^{h}\ 53^{m}\ 25^{s}$.

April	2 . .	+ 9	5	37.12

WEISSE VIII, 1529, $9^{h}\ 0^{m}\ 35^{s}$.

March	1 . .	−12	44	49.63
	19 . .			49.00
April	3 . .			49.02
	16 . .			50.08

WEISSE (2) IX, 160, $9^{h}\ 8^{m}\ 38^{s}$.

March	c . .	+25	13	9.36
	19 . .			9.89
April	16 . .			8.89

WEISSE (2) IX, 172, $9^{h}\ 9^{m}\ 15^{s}$,

March	29 . .	+24	14	14.63
April	2 . .			15.54
	3 . .			15.42

WEISSE (2) IX, 377, $9^{h}\ 18^{m}\ 8^{s}$.

March	1 . .	+23	14	49.04
	19 . .			48.85

WEISSE (2) IX, 383, $9^{h}\ 18^{m}\ 20^{s}$.

April	2 . .	+23	14	47.82

WEISSE (2) IX, 478, $9^{h}\ 23^{m}\ 5^{s}$.

March	29 . .	+21	54	13.36
April	3 . .			14.10

WEISSE (2) IX, 486, $9^{h}\ 23^{m}\ 28^{s}$.

April	16 . .	+25	1	41.81

WEISSE (2) IX, 650, $9^{h}\ 30^{m}\ 46^{s}$.

March	29 . .	+21	46	54.52

(*), $9^{h}\ 31^{m}\ 4^{s}$.

1855.		°	′	″
March	1 . .	+10	15	19.62
April	3 . .			19.77

WEISSE (2) IX, 662, $9^{h}\ 31^{m}\ 21^{s}$.

March	29 . .	+21	49	40.35

LALANDE 19134, $9^{h}\ 37^{m}\ 49^{s}$.

April	2 . .	+ 9	31	30.46
	3 . .			30.76

ε LEONIS, $9^{h}\ 37^{m}\ 54^{s}$.

February	28 . .	+24	25	0.18
March	19 . .		25	0.78
April	27 . .		24	59.54

WEISSE IX, 887, $9^{h}\ 40^{m}\ 50^{s}$.

March	29 . .	+11	12	24.76

WEISSE IX, 1011, $9^{h}\ 47^{m}\ 17^{s}$.

April	2 . .	+ 7	44	43.09
	3 . .			41.72

WEISSE IX, 1035, $9^{h}\ 48^{m}\ 32^{s}$.

April	7 . .	+ 8	20	24.11
	16 . .			24.01

WEISSE (2) IX, 1086, $9^{h}\ 51^{m}\ 24^{s}$.

April	27 . .	+42	59	10.24

WEISSE IX, 1259, $9^{h}\ 59^{m}\ 6^{s}$.

April	27 . .	+13	27	46.08

RUMKER 3069, $10^{h}\ 0^{m}\ 45^{s}$.

April	16 . .	+12	40	45.41

α LEONIS, $10^{h}\ 0^{m}\ 55^{s}$.

March	1 . .	+12	39	0.52
April	2 . .			1.13
	7 . .			1.31

WEISSE X, 74, $10^{h}\ 5^{m}\ 51^{s}$.

April	3 . .	+ 6	11	12.96

RUMKER 3106, $10^{h}\ 7^{m}\ 41^{s}$.

March	29 . .	+12	22	5.11
April	2 . .			6.05

WEISSE X, 224, $10^{h}\ 13^{m}\ 41^{s}$.

April	7 . .	− 4	40	45.11
	16 . .			45.14

WEISSE X, 229, $10^{h}\ 14^{m}\ 3^{s}$.

April	7 . .	− 4	42	47.19
	16 . .			45.80

RUMKER 3172, $10^{h}\ 17^{m}\ 32^{s}$.

1853.		°	′	″
March	29 . .	+11	34	45.71
April	2 . .			46.34

WEISSE X, 315, $10^{h}\ 18^{m}\ 52^{s}$.

April	3 . .	+ 4	38	34.92

WEISSE (2) X, 374, $10^{h}\ 19^{m}\ 19^{s}$.

April	16 . .	+17	55	59.12

WEISSE (2) X, 412, $10^{h}\ 21^{m}\ 9^{s}$.

May	4 . .	+17	50	47.65
	5 . .			47.11

RUMKER 3209, $10^{h}\ 22^{m}\ 11^{s}$.

April	12 . .	+17	41	41.99

(*), $10^{h}\ 27^{m}\ 21^{s}$.

March	29 . .	− 9	10	37.69
April	2 . .			38.39

WEISSE X, 538, $10^{h}\ 30^{m}\ 30^{s}$.

April	3 . .	−10	19	5.48
	12 . .			5.05
	16 . .			6.16

WEISSE X, 548, $10^{h}\ 30^{m}\ 48^{s}$.

April	3 . .	−10	19	24.09
	12 . .			23.91
	16 . .			24.41

WEISSE (2) X, 660, $10^{h}\ 32^{m}\ 34^{s}$.

April	27 . .	+28	15	13.38
May	4 . .			13.42
	5 . .			13.13

WEISSE (2) X, 693, $10^{h}\ 34^{m}\ 26^{s}$.

March	29 . .	+37	15	0.89
April	2 . .			0.78

WEISSE (2) X, 830, $10^{h}\ 41^{m}\ 21^{s}$.

April	16 . .	+36	38	49.67
May	4 . .			48.32
	5 . .			49.72

WEISSE X, 860, $10^{h}\ 47^{m}\ 29^{s}$.

April	27 . .	+ 6	35	32.08
May	4 . .			32.08
	5 . .			31.85

WEISSE X, 879, $10^{h}\ 48^{m}\ 33^{s}$.

March	29 . .	−14	31	29.99
April	3 . .			30.46
	7 . .			29.45

α URSÆ MAJORIS, 10^{h} 55^{m} 3^{s}.

1855.		°	′	″
May	8 . .	+62	30	20.01

α URSÆ MAJORIS, S. P., 10^{h} 55^{m} 3^{s}.

September	1 . .	+62	30	19.21
	8 . .			17.52
	11 . .			20.96
	17 . .			19.26
	27 . .			20.32
October	4 . .			20.61
	6 . .			22.55
	9 . .			18.21
	10 . .			20.42
	15 . .			19.93
	16 . .			21.18

WEISSE (2) X, 1123, 10^{h} 56^{m} 19^{s}.

March	29 . .	+34	58	37.55
April	2 . .			39.32
	16 . .			37.87

(*), 10^{h} 57^{m} 40^{s}.

April	27 . .	+34	33	5.42
May	4 . .			4.86
	5 . .			5.01

WEISSE (2) XI, 6, 11^{h} 2^{m} 18^{s}.

April	7 . .	+33	17	22.39
	12 . .			21.98
	16 . .			22.20

WEISSE (2) XI, 58, 11^{h} 4^{m} 32^{s}.

April	27 . .	+33	22	31.25
May	8 . .			31.27

WEISSE (2) XI, 90, 11^{h} 5^{m} 43^{s}.

April	17 . .	+34	12	25.12
May	10 . .			25.11

δ LEONIS, 11^{h} 6^{m} 39^{s}.

March	29 . .	+21	17	25.48
April	2 . .			25.86
	3 . .			24.07

(*), 11^{h} 8^{m} 40^{s}.

April	16 . .	+12	22	14.41
May	8 . .			15.49

B. A. C. 3851, 11^{h} 10^{m} 43^{s}.

April	7 . .	+32	18	59.73
May	10 . .			58.79

δ CRATERIS, 11^{h} 12^{m} 21^{s}.

March	29 . .	−14	1	16.42
April	2 . .			16.01
	3 . .			16.26

WEISSE XI, 217, 11^{h} 13^{m} 30^{s}.

April	27 . .	−11	54	29.90
May	8 . .			29.71

LALANDE 21645, 11^{h} 14^{m} 30^{s}.

April	16 . .	−11	56	2.21
May	1 . .			2.53
	8 . .			1.33

WEISSE (2) XI, 312, 11^{h} 17^{m} 13^{s}.

1855.		°	′	″
April	17 . .	+31	46	37.14

B. A. C. 3888, 11^{h} 18^{m} 38^{s}.

April	7 . .	+ 4	37	50.58
	12 . .			50.30

B. A. C. 3915, 11^{h} 23^{m} 10^{s}.

May	10 . .	+19	10	49.45

RUMKER 3615, 11^{h} 24^{m} 13^{s}.

May	11 . .	+18	31	22.80

RUMKER 3636, 11^{h} 26^{m} 51^{s}.

April	27 . .	+15	39	59.76
May	1 . .		40	0.20

WEISSE (2) XI, 490, 11^{h} 26^{m} 52^{s}.

April	16 . .	+22	47	47.74
	17 . .			48.05

WEISSE XI, 466, 11^{h} 27^{m} 33^{s}.

May	4 . .	− 4	49	0.99
	10 . .			1.02

WEISSE XI, 468, 11^{h} 27^{m} 37^{s}.

April	7 . .	− 4	10	51.08
	12 . .			50.55

WEISSE (2) XI, 592, 11^{h} 31^{m} 9^{s}.

May	5 . .	+20	52	31.07

RUMKER 3697, 11^{h} 34^{m} 48^{s}.

April	16 . .	+22	59	22.47
	27 . .			21.34

WEISSE XI, 618, 11^{h} 35^{m} 40^{s}.

May	1 . .	− 5	38	22.95
	4 . .			22.73

RUMKER 3715, 11^{h} 36^{m} 33^{s}.

April	7 . .	+17	5	54.68
	12 . .			55.24

WEISSE XI, 641, 11^{h} 36^{m} 58^{s}.

May	11 . .	−14	40	45.36
	17 . .			45.13

WEISSE (2) XI, 746, 11^{h} 38^{m} 4^{s}.

April	3 . .	+20	40	5.43
May	10 . .			5.58

WEISSE (2) XI, 788, 11^{h} 40^{m} 23^{s}.

May	5 . .	+20	48	37.24
	8 . .			37.80

WEISSE (2) XI, 838, 11^{h} 42^{m} 52^{s}.

1855.		°	′	″
May	4 . .	+18	39	47.24

CARRINGTON 1762, 11^{h} 44^{m} 40^{s}.

April	16 . .	+86	59	59.45
	27 . .			57.08

WEISSE (2) XI, 889, 11^{h} 45^{m} 58^{s}.

April	3 . .	+17	37	43.84
	7 . .			43.59
	12 . .			43.41

γ URSÆ MAJORIS, 11^{h} 46^{m} 27^{s}.

May	11 . .	+54	28	22.49
	25 . .			21.62

WEISSE (2) XI, 1011, 11^{h} 51^{m} 54^{s}.

April	17 . .	+24	41	10.63
	20 . .			11.72
May	4 . .			10.85
	17 . .			11.36

WEISSE XI, 947, 11^{h} 55^{m} 36^{s}.

April	7 . .	+ 8	36	12.74
	16 . .			13.31
	27 . .			11.94

WEISSE (2) XI, 1110, 11^{h} 56^{m} 51^{s}.

April	12 . .	+19	35	52.20
	18 . .			51.46
	20 . .			51.32

WEISSE XI, 1023, 12^{h} 0^{m} 34^{s}.

May	5 . .	+ 7	32	52.07
	8 . .			51.34

WEISSE (2) XI, 1206, 12^{h} 0^{m} 54^{s}.

April	17 . .	+24	28	53.01
May	1 . .			54.60
	4 . .			52.61

B. A. C. 4096, 12^{h} 2^{m} 56^{s}.

May	17 . .	+ 6	35	8.37
	25 . .			8.23

WEISSE XII, 53, 12^{h} 4^{m} 50^{s}.

April	16 . .	+ 6	7	18.11
	20 . .			16.46

WEISSE XII, 63, 12^{h} 5^{m} 9^{s}.

May	5 . .	+ 6	39	12.51
	17 . .			12.55

WEISSE XII, 91, 12^{h} 6^{m} 57^{s}.

April	27 . .	+ 5	46	42.57
May	1 . .			43.04

WEISSE XII, 119, 12^{h} 8^{m} 51^{s}.

May	11 . .	+ 8	13	29.83

WEISSE XII, 130, 12^{h} 9^{m} 19^{s}.

1855.		°	′	″
May	10 . .	+ 8	7	59.34
	17 . .			59.44

WEISSE XII, 149, 12^{h} 10^{m} 35^{s}.

April	17 . .	+ 8	26	34.97
May	4 . .			35.28
	8 . .			34.89

(*), 12^{h} 12^{m} 17^{s}.

April	7 . .	+ 7	46	11.81
	16 . .			11.33

RUMKER 3911, 12^{h} 12^{m} 48^{s}.

May	5 . .	+ 6	26	55.10
	25 . .			55.41

WEISSE (2) XII, 356, 12^{h} 17^{m} 29^{s}.

April	27 . .	+22	56	43.71
May	1 . .			44.14
	10 . .			43.50

RUMKER 3966, 12^{h} 18^{m} 47^{s}.

April	12 . .	+ 4	58	33.20
	17 . .			32.26
May	11 . .			32.63

CARRINGTON 1849, 12^{h} 19^{m} 26^{s}.

May	4 . .	+86	4	58.81
	8 . .			58.26

WEISSE (2) XII, 424, 12^{h} 20^{m} 35^{s}.

April	16 . .	+25	0	10.47
May	5 . .			10.34

WEISSE (2) XII, 478, 12^{h} 22^{m} 57^{s}.

May	25 . .	+25	6	51.16

WEISSE (2) XII, 526, 12^{h} 25^{m} 8^{s}.

April	27 . .	+21	41	34.50
May	1 . .			35.87

WEISSE XII, 433, 12^{h} 26^{m} 28^{s}.

May	10 . .	+ 3	41	5.83
	11 . .			4.42

WEISSE (2) XII, 556, 12^{h} 26^{m} 35^{s}.

May	26 . .	+25	3	21.96

WEISSE (2) XII, 581, 12^{h} 27^{m} 32^{s}.

April	27 . .	+21	40	23.23
May	1 . .			24.71

WEISSE XII, 463, 12^{h} 28^{m} 8^{s}.

May	5 . .	+ 3	1	52.08
	8 . .			51.92

WEISSE XII, 513, 12^h 31^m 14^s.

1855.		°	′	″
April	17	+ 2	37	33.54
	20			33.39

WEISSE XII, 519, 12^h 31^m 32^s.

May	4	+14	34	38.49

WEISSE XII, 564, 12^h 34^m 23^s.

May	17	+ 2	45	58.06

WEISSE XII, 580, 12^h 35^m 0^s.

April	17	+14	55	39.95
May	11			40.09

WEISSE XII, 638, 12^h 38^m 10^s.

May	1	+ 1	49	28.33
	5			28.47

WEISSE XII, 661, 12^h 39^m 23^s.

April	20	− 0	3	20.51
May	4			20.52

WEISSE XII, 668, 12^h 39^m 51^s.

May	8	− 8	26	53.18
	10			53.06

RUMKER 4137, 12^h 41^m 45^s.

May	8	− 8	27	16.08
	10			16.42

(*), 12^h 41^m 46^s.

April	16	+18	29	59.43

WEISSE XII, 706, 12^h 41^m 48^s.

May	17	+14	48	3.67

WEISSE (2) XII, 877, 12^h 43^m 18^s.

April	7	+18	25	0.74
	16		24	59.98

WEISSE XII, 757, 12^h 44^m 42^s.

May	11	+ 0	50	56.53

WEISSE XII, 764, 12^h 45^m 17^s.

May	5	+ 0	59	30.14

WEISSE XII, 803, 12^h 47^m 34^s.

May	1	− 9	40	26.09

WEISSE XII, 818, 12^h 48^m 29^s.

May	4	+ 0	48	54.61
	8			54.46
	10			54.14

a CANUM VENATICORUM, 12^h 49^m 28^s.

1855.		°	′	″
April	7	+39	4	30.68
	12			31.13
	17			30.61
	27			30.29
May	4			31.09
	12			30.12

LALANDE 24193, 12^h 52^m 44^s.

April	16	+ 0	31	34.05
	20			33.74

WEISSE XII, 918, 12^h 54^m 5^s.

May	11	−10	24	1.81

WEISSE XII, 929, 12^h 54^m 26^s.

May	4	+13	55	22.52
	5			22.97
	25			23.58

WEISSE XII, 933, 12^h 54^m 44^s.

May	17	+13	55	43.48

RADCLIFFE 2959, 12^h 58^m 50^s.

April	20	+83	41	18.22
May	1			19.00
	5			18.95

WEISSE XII, 1047, 13^h 1^m 7^s.

May	8	+12	56	37.11
	10			37.50

WEISSE XIII, 69, 13^h 5^m 35^s.

May	25	+12	18	6.19
June	4			7.68

WEISSE XIII, 104, 13^h 7^m 32^s.

April	20	+12	4	34.66
May	1			35.26

WEISSE XIII, 181, 13^h 11^m 43^s.

May	11	− 1	47	32.43

WEISSE XIII, 208, 13^h 13^m 7^s.

May	4	+10	44	15.07
	5			15.47

WEISSE XIII, 268, 13^h 17^m 11^s.

May	17	+ 0	25	0.22

a VIRGINIS, 13^h 17^m 49^s.

April	12	−10	25	44.75
	16			45.18
	17			45.94
	27			45.80
May	8			45.54
	10			45.62
	25			44.65
June	12			46.20

WEISSE XIII, 294, 13^h 18^m 55^s.

1855.		°	′	″
May	1	− 2	55	52.19
	5			52.16

WEISSE XIII, 331, 13^h 21^m 10^s.

May	11	+ 9	5	4.19
June	4			4.92

WEISSE XIII, 365, 13^h 22^m 59^s.

April	17	+ 7	54	11.52
	25			12.61

WEISSE XIII, 413, 13^h 25^m 16^s.

May	5	+ 7	4	19.94
	17			19.87

WEISSE XIII, 458, 13^h 27^m 41^s.

April	20	+ 5	37	52.15
May	1			52.74

WEISSE XIII, 461, 13^h 27^m 55^s.

May	10	+ 7	10	16.74
June	12			16.49

WEISSE XIII, 501, 13^h 30^m 7^s.

May	11	− 4	5	15.71
June	4			15.43

WEISSE XIII, 512, 13^h 30^m 34^s.

May	25	− 2	31	12.81
June	15			13.47

WEISSE XIII, 563, 13^h 33^m 9^s.

May	10	− 4	32	6.80
	17			7.19

O. ARG. N. 13913, 13^h 36^m 40^s.

April	20	+80	3	51.38
May	1			51.88
June	12			51.32

η URSÆ MAJORIS, 13^h 42^m 1^s.

May	5	+50	0	49.00
	11			47.33
	17			46.58
	25			46.64
June	15			47.24

WEISSE XIII, 737, 13^h 43^m 16^s.

May	10	+14	11	0.15
June	12		10	59.43

(*), 13^h 46^m 28^s.

April	20	+77	50	55.18
	27			53.29

η BOOTIS, 13^h 48^m 1^s.

1855.		°	′	″
May	1	+19	6	4.05
	5			4.37
	17			3.11
	25			4.09
June	15			3.49

WEISSE XIII, 813, 13^h 48^m 3^s.

May	11	−11	32	2.69

WEISSE XIII, 866, 13^h 50^m 57^s.

May	4	−13	26	16.80
	10			16.86

WEISSE XIII, 974, 13^h 56^m 32^s.

April	27	−14	48	37.82
May	5			37.32

WEISSE XIII, 979, 13^h 56^m 43^s.

April	20	−11	27	17.00
May	1			17.68
	25			17.36

WEISSE XIII, 1037, 13^h 59^m 10^s.

May	11	−13	25	34.01
	17			34.74

WEISSE XIII, 1071, 14^h 0^m 59^s.

June	15	−11	9	44.11

O. ARG. S. 13471, 14^h 5^m 17^s.

June	4	−15	23	27.71
	15			28.75

WEISSE XIV, 88, 14^h 6^m 13^s.

April	27	− 8	28	47.27
May	11			46.22

LALANDE 26054, 14^h 6^m 30^s.

May	17	−16	48	25.19
	25			23.80

O. ARG. S. 13501, 14^h 8^m 8^s.

June	4	−15	25	39.95
	15			41.08

WEISSE XIV, 130, 14^h 8^m 32^s.

June	12	− 8	43	25.41

a BOOTIS, 14^h 9^m 17^s.

May	4	+19	54	46.59
June	14			46.42
	21			47.40

WEISSE XIV, 179, 14^h 11^m 6^s.

June	12	− 8	45	38.80

LALANDE 26210, 14^h 13^m 20^s.

May	10	−18	41	19.56

Lalande 26293, $14^{h}\,16^{m}\,34^{s}$.

1855.		°	′	″
April	27	−19	2	46.28
May	4			47.90
	25			46.42

Radcliffe 3200, $14^{h}\,18^{m}\,57^{s}$.

June	4	+47	24	17.61
	21			17.81

Weisse XIV, 362, $14^{h}\,20^{m}\,8^{s}$.

May	11	− 1	6	29.31
	17			29.06

Weisse XIV, 371, $14^{h}\,20^{m}\,46^{s}$.

May	10	− 1	8	15.00
	11			15.65
	17			15.37

B. A. C. 4798, $14^{h}\,22^{m}\,43^{s}$.

June	26	+ 1	27	16.65

Weisse XIV, 445, $14^{h}\,24^{m}\,50^{s}$.

May	11	− 1	10	5.31
	17			4.88

Rumker 4739, $14^{h}\,26^{m}\,47^{s}$.

May	4	+ 1	28	6.00
June	12			7.75
	21			6.20

B. A. C. 4814, $14^{h}\,26^{m}\,58^{s}$.

May	25	−19	49	21.47
June	14			22.10

B. A. C. 4869, $14^{h}\,38^{m}\,22^{s}$.

May	17	+ 1	18	38.34
	25			38.47

ε Bootis, $14^{h}\,38^{m}\,52^{s}$.

May	4	+27	39	58.77
	10		39	58.17
	11		40	0.21
June	4		39	59.51
	12		39	59.00
	14		40	0.22
	15		40	0.47
	21		39	59.74
	26		39	58.68

B. A. C. 4894, $14^{h}\,42^{m}\,57^{s}$.

June	21	−15	24	44.94

α² Libræ, $14^{h}\,43^{m}\,8^{s}$.

May	25	−15	27	26.49
June	26			27.56

Rumker 4840, $14^{h}\,45^{m}\,50^{s}$.

June	12	+ 1	18	31.08
	14			32.65
	15			32.97

Weisse XIV, 872, $14^{h}\,46^{m}\,36^{s}$.

1855.		°	′	″
May	11	+ 0	8	57.68
	17			57.25
June	4			57.20

Weisse XIV, 874, $14^{h}\,46^{m}\,39^{s}$.

May	11	+ 0	10	16.36
	17			15.89
June	4			15.79

Weisse XIV, 906, $14^{h}\,48^{m}\,24^{s}$.

June	14	+ 1	18	8.22
	15			7.86

Weisse (2) XIV, 1154, $14^{h}\,52^{m}\,58^{s}$.

May	25	+43	58	29.82
June	26			30.01

Weisse (2) XIV, 1183, $14^{h}\,54^{m}\,2^{s}$.

June	12	+43	53	48.75

Weisse XIV, 1016, $14^{h}\,54^{m}\,42^{s}$.

June	4	−11	11	12.92

Weisse XIV, 1118, $14^{h}\,59^{m}\,46^{s}$.

May	17	− 1	45	18.01
July	7			17.41

Weisse XIV, 1121, $14^{h}\,59^{m}\,55^{s}$.

May	17	− 1	44	18.80
July	7			18.53

Weisse XIV, 1142, $15^{h}\,0^{m}\,51^{s}$.

May	25	+ 0	29	3.28
June	26			2.48

Weisse XIV, 1150, $15^{h}\,1^{m}\,20^{s}$.

June	12	−13	27	41.50

Weisse XV, 79, $15^{h}\,6^{m}\,3^{s}$.

June	29	−13	29	47.51

Weisse XV, 91, $15^{h}\,6^{m}\,35^{s}$.

June	15	−13	40	58.06
	21			59.35

β Libræ, $15^{h}\,9^{m}\,29^{s}$.

May	11	− 8	51	48.23

Weisse XV, 210, $15^{h}\,12^{m}\,37^{s}$.

June	4	−13	27	25.66
	12			26.99

Weisse XV, 221, $15^{h}\,13^{m}\,21^{s}$.

June	21	−13	18	39.49
July	7			38.47

(*), $15^{h}\,15^{m}\,4^{s}$.

1855.		°	′	″
June	21	−13	17	47.57
July	7			46.32

Weisse XV, 265, $15^{h}\,13^{m}\,20^{s}$.

June	14	−13	50	46.16
	15			45.75

Weisse XV, 281, $15^{h}\,16^{m}\,18^{s}$.

June	14	−13	48	30.46
	15			29.39

Weisse XV, 287, $15^{h}\,16^{m}\,35^{s}$.

June	29	− 9	49	1.78

Weisse XV, 400, $15^{h}\,22^{m}\,9^{s}$.

June	12	−14	19	43.28
	21			43.95

α Coronæ Borealis, $15^{h}\,28^{m}\,46^{s}$.

June	4	+27	11	18.52
	26			16.90
	29			16.86
July	7			17.54
	16			17.28

Lalande 28453, $15^{h}\,30^{m}\,44^{s}$.

June	12	−17	12	6.19
	14			6.84

Weisse XV, 585, $15^{h}\,31^{m}\,28^{s}$.

June	15	− 1	19	28.29
	21			28.40

Lalande 28607, $15^{h}\,35^{m}\,38^{s}$.

June	15	−10	28	19.82

Lalande 28617, $15^{h}\,36^{m}\,1^{s}$.

June	26	−16	25	21.97

α Serpentis, $15^{h}\,37^{m}\,22^{s}$.

July	16	+ 6	52	7.62

Lalande 28726, $15^{h}\,39^{m}\,19^{s}$.

June	21	−17	39	8.26

Lalande 28766, $15^{h}\,41^{m}\,4^{s}$.

June	12	−18	16	15.33
	14			15.59

Lalande 28835, $15^{h}\,43^{m}\,17^{s}$.

June	15	−10	33	48.12
	26			49.45

B, A. C. 5264, $15^{h}\,46^{m}\,56^{s}$.

June	14	−18	57	57.72

ζ Ursæ Minoris, $15^{h}\,49^{m}\,9^{s}$.

1855.		°	′	″
July	16	+78	13	23.27

Weisse XV, 939, $15^{h}\,49^{m}\,45^{s}$.

June	21	− 2	34	46.16

Lalande 29043, $15^{h}\,50^{m}\,58^{s}$.

June	12	−19	31	46.30
	15			46.90

Lalande 29044, $15^{h}\,51^{m}\,9^{s}$.

June	12	−19	31	59.92
	15			59.84

Weisse XV, 1011, $15^{h}\,53^{m}\,54^{s}$.

June	29	−10	52	52.55

Gr. C. 1315, $15^{h}\,54^{m}\,56^{s}$.

June	26	−19	26	53.58
July	7			51.74

Lalande 29208, $15^{h}\,56^{m}\,40^{s}$.

June	14	−11	28	6.78
	21			7.06

(*), $15^{h}\,58^{m}\,49^{s}$.

June	21	−11	31	23.78

β¹ Scorpii, $15^{h}\,57^{m}\,18^{s}$.

July	7	−19	25	8.35

Lalande 29306, $15^{h}\,59^{m}\,12^{s}$.

June	15	−17	33	16.96
July	17			18.64

Weisse XVI, 11, $16^{h}\,2^{m}\,17^{s}$.

June	26	− 3	10	25.87
	29			26.63

B. A. C. 5395, $16^{h}\,5^{m}\,27^{s}$.

June	14	−21	2	20.77
July	10			21.34

δ Ophiuchi, $16^{h}\,7^{m}\,1^{s}$.

June	15	− 3	19	49.86
July	7			48.54

Weisse XVI, 121, $16^{h}\,7^{m}\,18^{s}$.

July	17	−12	52	8.76

O. Arg. S. 15490, $16^{h}\,10^{m}\,23^{s}$.

June	29	−21	14	45.48

Weisse XVI, 173, $16^{h}\,10^{m}\,0^{s}$.

June	21	−13	1	22.86
	26			24.38

LALANDE 29696, $16^h\ 11^m\ 27^s$.

1855.		°	′	″
June	12 . .	−18	29	5.31

WEISSE XVI, 19, $16^h\ 2^m\ 31^s$.

July	16 . .	− 3	5	41.83

B. A. C. 5467, $16^h\ 15^m\ 55^s$.

June	14 . .	−19	42	21.19
	15 . .			19.78

O. ARG. N. 16117, $16^h\ 15^m\ 41^s$.

July	7 . .	+71	10	48.20
	10 . .			49.71

η DRACONIS, $16^h\ 2^m\ 6^s$.

June	26 . .	+61	49	52.64

O. ARG. N. 16121, $16^h\ 15^m\ 45^s$.

July	14 . .	+71	17	6.09
	17 . .			5.16

α SCORPII, $16^h\ 20^m\ 50^s$.

June	12 . .	−26	7	2.86

LALANDE 30099, $16^h\ 26^m\ 2^s$.

June	14 . .	− 3	57	39.62
	29 . .			38.98
July	7 . .			38.26

GROOMBRIDGE 2356, $16^h\ 26^m\ 53^s$.

July	10 . .	+71	41	46.93
	14 . .			46.26
	16 . .			46.82

(*), $16^h\ 27^m\ 48^s$.

July	17 . .	− 4	7	25.66

LALANDE 30207, $16^h\ 29^m\ 56^s$.

June	26 . .	−22	36	19.98
	29 . .			20.34

B. A. C. 5580, $16^h\ 33^m\ 40^s$.

June	12 . .	−19	39	8.55
	14 . .			8.46
July	14 . .			8.97

B. A. C. 5598, $16^h\ 35^m\ 25^s$.

June	21 . .	−22	51	40.04
	29 . .			41.48
July	7 . .			40.10

B. A. C. 5606, $16^h\ 36^m\ 44^s$.

June	21 . .	−22	55	9.18
	29 . .			11.48
July	7 . .			10.30

LALANDE 30479, $16^h\ 38^m\ 42^s$.

1855.		°	′	″
June	15 . .	−19	50	25.16
	26 . .			24.91

LALANDE 30506, $16^h\ 39^m\ 33^s$.

July	16 . .	−19	37	9.84

WEISSE XVI, 792, $16^h\ 41^m\ 44^s$.

June	12 . .	− 4	53	52.24
	14 . .			52.68

(*), $16^h\ 41^m\ 45^s$.

June	12 . .	− 4	53	35.01
	14 . .			34.93

LALANDE 30600, $16^h\ 42^m\ 40^s$.

June	21 . .	−19	35	32.78
July	14 . .			33.61
	16 . .			32.79

LALANDE 30671, $16^h\ 45^m\ 5^s$.

June	29 . .	− 4	54	42.96

B. A. C. 5680, $16^h\ 46^m\ 23^s$.

June	15 . .	−23	16	42.60
	26 . .			44.15

WEISSE XVI, 912, $16^h\ 48^m\ 13^s$.

June	29 . .	− 4	56	21.37
July	7 . .			19.73
	14 . .			21.03

B. A. C. 5730, $16^h\ 54^m\ 59^s$.

June	15 . .	−24	2	11.93
	21 . .			11.59
	26 . .			11.80

B. A. C. 5742, $16^h\ 55^m\ 56^s$.

June	15 . .	−24	2	22.61
	21 . .			20.51
	26 . .			20.41

(*), $16^h\ 56^m\ 25^s$.

July	10 . .	+73	8	11.41
	16 . .			11.45
	17 . .			10.63

GROOMBRIDGE 2411, $16^h\ 59^m\ 5^s$.

June	29 . .	+73	20	16.58
July	7 . .			16.62

GROOMBRIDGE 2418, $17^h\ 3^m\ 21^s$.

June	29 . .	+73	23	23.42
July	7 . .			22.46
	17 . .			21.21

GROOMBRIDGE 2420, $17^h\ 4^m\ 16^s$.

July	10 . .	+73	30	17.63
	16 . .			17.38

α HERCULIS, $17^h\ 8^m\ 16^s$.

1855.		°	′	″
June	14 . .	+14	33	9.68
	15 . .			10.95
July	7 . .			10.80

B. A. C. 5827, $17^h\ 9^m\ 29^s$.

June	21 . .	−24	7	48.70
	26 . .			49.31

B. A. C. 5829, $17^h\ 9^m\ 29^s$.

June	21 . .	−24	7	38.38
	26 . .			38.74

LALANDE 31492, $17^h\ 12^m\ 56^s$.

July	14 . .	− 5	21	42.66

θ OPHIUCHI, $17^h\ 13^m\ 25^s$.

July	16 . .	−24	51	20.03
	17 . .			21.50

WEISSE XVII, 254, $17^h\ 15^m\ 12^s$.

June	14 . .	− 6	11	9.46
	26 . .			10.62

WEISSE XVII, 409, $17^h\ 22^m\ 18^s$.

June	14 . .	− 5	58	17.84
July	7 . .			17.10
	10 . .			17.56

MADRAS 1165, $17^h\ 26^m\ 56^s$.

June	29 . .	−24	31	40.98
July	7 . .			38.83
	14 . .			40.02

α OPHIUCHI, $17^h\ 28^m\ 26^s$.

July	10 . .	+12	39	54.89

LALANDE 32045, $17^h\ 29^m\ 18^s$.

July	16 . .	−24	52	34.17
	17 . .			34.19

LALANDE 32418, $17^h\ 39^m\ 0^s$.

June	29 . .	−25	7	58.23
July	7 . .			55.86
	14 . .			57.32

WEISSE XVII, 787, $17^h\ 40^m\ 11^s$.

July	16 . .	−13	33	7.57
	17 . .			7.59

WEISSE XVII, 846, $17^h\ 43^m\ 16^s$.

June	29 . .	−13	55	3.58
July	7 . .			1.68
	10 . .			4.43
	14 . .			3.15

WEISSE XVII, 856, $17^h\ 43^m\ 43^s$.

July	14 . .	−13	55	30.02

B. A. C. 6049, $17^h\ 45^m\ 20^s$.

1855.		°	′	″
July	17 . .	−10	51	42.16

WEISSE XVII, 966, $17^h\ 48^m\ 22^s$.

July	16 . .	−15	9	20.67

MADRAS 1209, $17^h\ 48^m\ 45^s$.

September	1 . .	−15	39	34.70

γ DRACONIS, $17^h\ 53^m\ 21^s$.

September	10 . .	+51	30	23.22

LALANDE 32986, $17^h\ 54^m\ 4^s$.

July	10 . .	−16	13	8.69
	14 . .			9.17
	17 . .			9.60

LALANDE 33178, $17^h\ 59^m\ 6^s$.

July	16 . .	−16	40	2.14
September	1 . .			2.89

(*), $17^h\ 59^m\ 37^s$.

July	15 . .	−27	39	28.47

(*), $18^h\ 2^m\ 5^s$.

July	14 . .	−17	13	34.61
	17 . .			33.79

B. A. C. 6161, $18^h\ 3^m\ 11^s$.

July	10 . .	−23	43	32.71
September	10 . .			32.46

(*), $18^h\ 6^m\ 28^s$.

July	7 . .	−17	23	54.51
September	1 . .			55.74

(*), $18^h\ 9^m\ 1^s$.

September	1 . .	−17	25	5.26
	8 . .			6.55

O. ARG. S. 17975, $18^h\ 9^m\ 4^s$.

July	14 . .	−23	38	7.62
	17 . .			7.74

LALANDE 33684, $18^h\ 11^m\ 24^s$.

September	10 . .	−23	22	5.68

LALANDE 33694, $18^h\ 11^m\ 40^s$.

July	10 . .	−17	48	15.05

LALANDE 33966, $18^h\ 18^m\ 15^s$.

July	7 . .	−18	9	43.23
	14 . .			43.69

(*), 18^h 19^m 57^s.

1855.		°	′	″
July	17	−22	54	7.25
September	8			9.29
	10			7.42

LALANDE 34222, 18^h 24^m 2^s.

July	7	−22	23	19.90
	16			20.98

LALANDE 34229, 18^h 24^m 19^s.

September	8	−22	13	55.74

O. ARG. S. 18413, 18^h 26^m 52^s.

September	8	−22	11	47.97

α LYRÆ, 18^h 32^m 12^s.

July	7	+38	39	19.81
	10			20.30
	14			19.20
	16			20.84
	17			20.86
August	29			20.49

(* 36) W., 18^h 36^m 2^s.

July	17	−18	53	52.86
September	8			54.13

O. ARG. S. 18683, 18^h 40^m 1^s.

September	21	−22	13	47.32

(*), 18^h 41^m 4^s.

September	12	−44	37	44.94
	17			45.30

O. ARG. S. 18749, 18^h 42^m 53^s.

September	21	−22	10	40.02

O. ARG. S. 18765, 18^h 43^m 42^s.

August	29	−22	4	52.92
September	8			55.00
	17			54.36

MADRAS 1304, 18^h 44^m 42^s.

July	16	−19	17	1.82
	17			1.56

β LYRÆ, 18^h 44^m 55^s.

July	14	+33	12	7.58

B. A. C. 6454, 18^h 49^m 12^s.

September	22	−20	50	7.89
	24			8.01

O. ARG. S. 18916, 18^h 51^m 12^s.

July	16	−22	0	54.50
August	29			(52.23)
September	8			54.71
	12			54.29
	17			54.52

(*), 18^h 52^m 44^s.

1855.		°	′	″
September	12	−22	2	7.20

LALANDE 35497, 18^h 54^m 58^s.

July	14	−19	26	37.32
	17			36.98

B. A. C. 6507, 18^h 56^m 17^s.

August	29	−21	56	33.23
September	8			35.02
	10			34.62

O. ARG. S. 19073, 18^h 58^m 39^s.

July	16	−21	38	12.31
September	21			12.49
	22			12.51

ζ AQUILÆ, 18^h 58^m 58^s.

August	24	+13	39	30.97

O. ARG. S. 19086, 18^h 59^m 2^s.

September	8	−21	49	35.74
	17			35.25

O. ARG. S. 19098, 18^h 59^m 39^s.

September	10	−21	54	35.45

(*), 19^h 1^m 21^s.

September	21	−21	38	29.31
	24			29.59

O. ARG. S. 19155, 19^h 1^m 21^s.

September	21	−21	40	29.29
	22			28.20
	24			28.99

O. ARG. S. 19179, 19^h 2^m 13^s.

September	8	−21	53	42.62
	10			42.54
	17			42.18

B. A. C. 6561, 19^h 4^m 5^s.

September	8	−21	53	12.01
	10			11.44
	17			11.23

LALANDE 36087, 19^h 5^m 9^s.

August	24	−20	1	27.00

(*), 19^h 9^m 13^s.

September	28	−19	18	21.07
	29			21.98

MADRAS 1351, 19^h 9^m 54^s.

September	12	−21	18	59.07

(*), 19^h 10^m 15^s.

1855.		°	′	″
September	24	−19	19	9.85
	29			10.49

(*), 19^h 12^m 17^s.

September	21	−19	15	5.79
	22			4.11
	24			4.33
	28			4.32

(*), 19^h 12^m 40^s.

September	22	−19	19	0.22
	24			0.39
	28			1.33
	29			0.98

B. A. C. 6616, 19^h 13^m 25^s.

September	10	−19	29	34.30
October	4			33.95

GR. C. 1719, 19^h 14^m 23^s.

August	24	−20	54	1.95

LALANDE 36426, 19^h 14^m 24^s.

September	12	−19	17	6.62
	21			6.54
	22			5.24
	28			5.78
	29			6.28

LALANDE 36448, 19^h 14^m 50^s.

September	12	−19	14	43.04
	26			42.21

(*), 19^h 16^m 54^s.

September	12	−19	19	26.52
	21			26.68
	28			25.90
	29			26.93

δ AQUILÆ, 19^h 18^m 26^s.

August	29	+ 2	50	19.98

O. ARG. S. 19660, 19^h 23^m 20^s.

October	4	−28	30	12.93
	9			11.95

O. ARG. S 19662, 19^h 23^m 31^s.

September	21	−28	2	28.03
	22			27.51

O. ARG. S. 19685, 19^h 24^m 22^s.

September	24	−27	24	41.18
	28			40.90

O. ARG. S. 19693, 19^h 24^m 59^s.

September	29	−19	34	6.11

(*), 19^h 25^m 8^s.

September	24	−27	20	32.16
	28			32.81

O. ARG. S. 19695, 19^h 25^m 17^s.

1855.		°	′	″
October	4	−27	27	33.89
	9			34.98
	10			34.21

O. ARG. S. 19709, 19^h 25^m 45^s.

October	4	−27	26	58.48
	9			58.99
	10			58.63

O. ARG. S. 19713, 19^h 25^m 53^s.

October	4	−27	27	31.30
	9			32.38
	10			32.04

O. ARG. S. 19780, 19^h 27^m 54^s.

September	7	−29	7	25.74

(*), 19^h 28^m 6^s.

September	28	−27	24	4.60

B. A. C. 6707, 19^h 28^m 16^s.

September	10	−19	9	30.78

O. ARG. S. 19800, 19^h 29^m 8^s.

September	8	−29	10	25.96
	17			23.89

(*), 19^h 30^m 22^s.

September	28	−27	22	45.14

O. ARG. S. 19811, 19^h 30^m 17^s.

September	29	−20	37	8.60

(*), 19^h 33^m 6^s.

September	7	−29	10	25.24
	8			26.69
	17			25.68

O. ARG. S. 19863, 19^h 33^m 7^s.

October	10	−26	42	22.72

O. ARG. S, 19874, 19^h 33^m 47^s.

October	10	−26	46	5.20

O. ARG. S. 19902, 19^h 35^m 46^s.

October	9	−26	47	10.68
	10			10.59

B. A. C. 6760, 19^h 38^m 11^s.

September	10	−20	5	38.96

LALANDE 37507, $19^{h}\ 38^{m}\ 14^{s}$.

1855.		°	′	″
October	4	−21	51	34.08

O. ARG. S. 19941, $19^{h}\ 38^{m}\ 21^{s}$.

October	9	−26	49	39.02
	10			39.19

O. ARG. S. 19956, $19^{h}\ 39^{m}\ 11^{s}$.

September	28	−22	10	2.46

O. ARG. S. 19957, $19^{h}\ 39^{m}\ 35^{s}$.

October	16	−26	14	17.79

α AQUILÆ, $19^{h}\ 43^{m}\ 57^{s}$.

August	24	+ 8	30	7.72
September	7			5.82
	8			5.57

(*), $19^{h}\ 44^{m}\ 21^{s}$.

September	11	−22	34	9.68
	12			9.75

(*), $19^{h}\ 46^{m}\ 19^{s}$.

September	17	−22	6	8.07
	28			9.91

(*), $19^{h}\ 47^{m}\ 3^{s}$.

October	4	−22	20	2.77
	16			3.20

LALANDE 37873, $19^{h}\ 47^{m}\ 15^{s}$.

September	10	−19	39	23.82
	24			22.69

β AQUILÆ, $19^{h}\ 48^{m}\ 26^{s}$.

September	8	+ 6	3	36.04
October	9			35.73

LALANDE 38140, $19^{h}\ 53^{m}\ 30^{s}$.

August	24	−17	14	53.70
September	10			54.56

LALANDE 38164, $19^{h}\ 53^{m}\ 54^{s}$.

September	12	−19	28	57.97
	24			56.64

O. ARG. S. 20204, $19^{h}\ 56^{m}\ 37^{s}$.

September	11	−29	28	5.26
	21			5.37
	29			5.89

LALANDE 38290, $19^{h}\ 56^{m}\ 56^{s}$.

September	17	−19	9	51.02
October	16			51.08

O. ARG. S. 20222, $19^{h}\ 57^{m}\ 36^{s}$.

1855.		°	′	″
September	11	−29	32	26.04
	29			25.95
October	8			27.73

O. ARG. S. 20257, $20^{h}\ 0^{m}\ 6^{s}$.

September	17	−19	12	19.64

(*), $20^{h}\ 1^{m}\ 8^{s}$.

September	12	−19	49	7.15
October	10			7.61

B. A. C. 6923, $20^{h}\ 2^{m}\ 18^{s}$.

September	10	−19	47	14.45
	12			15.26
	24			(12.26)
October	10			14.55

λ URSÆ MINORIS, $20^{h}\ 3^{m}\ 54^{s}$.

September	1	+88	53	25.49
	8			24.79
	10			24.33
	21			23.63
October	16			23.98

α^{1} CAPRICORNI, $20^{h}\ 9^{m}\ 53^{s}$.

September	17	−12	56	16.55

α^{2} CAPRICORNI, $20^{h}\ 10^{m}\ 17^{s}$.

August	24	−12	58	32.44
September	11			33.68
	12			33.73
	17			34.46
	24			32.72

σ CAPRICORNI, $20^{h}\ 11^{m}\ 19^{s}$.

September	29	−19	33	8.37
October	10			8.93

(*), $20^{h}\ 11^{m}\ 15^{s}$.

October	10	−19	34	5.22

(*), $20^{h}\ 12^{m}\ 46^{s}$.

September	28	−19	32	18.15

(*), $20^{h}\ 13^{m}\ 26^{s}$.

September	28	−19	30	54.33
	29			54.95
October	10			55.59

(*). $20^{h}\ 15^{m}\ 50^{s}$.

October	4	−19	1	35.23
	16			34.44

(*), $20^{h}\ 16^{m}\ 26^{s}$.

October	4	−19	13	11.66
	16			10.70

LALANDE 39247, $20^{h}\ 18^{m}\ 13^{s}$.

1855.		°	′	″
September	17	−15	26	0.23
October	9			0.08

O. ARG. S. 20521, $20^{h}\ 19^{m}\ 53^{s}$.

September	1	−23	28	20.82
	8			21.55

O. ARG. S. 20544, $20^{h}\ 21^{m}\ 23^{s}$.

September	11	−23	18	29.36
	12			29.98

B. A. C. 7053, $20^{h}\ 21^{m}\ 51^{s}$.

August	24	−19	2	46.85
September	10			47.67
October	9			47.81

B. A. C. 7054, $20^{h}\ 21^{m}\ 52^{s}$.

August	24	−19	2	35.83
September	10			35.89
October	9			36.05

O. ARG. S. 20570, $20^{h}\ 23^{m}\ 26^{s}$.

September	24	−22	58	17.64
October	10			18.88

O. ARG. S. 20574, $20^{h}\ 23^{m}\ 42^{s}$.

September	28	−23	1	3.62
	29			4.21

(*), $20^{h}\ 23^{m}\ 43^{s}$.

September	29	−23	3	1.94

(*), $20^{h}\ 24^{m}\ 14^{s}$.

October	4	−19	8	55.15

O. ARG. S. 20621, $20^{h}\ 26^{m}\ 50^{s}$.

September	28	−23	4	8.16
	29			8.96
October	8			9.14

WEISSE XX, 664, $20^{h}\ 26^{m}\ 56^{s}$.

September	12	−14	55	6.71
	17			6.50

(*), $20^{h}\ 29^{m}\ 45^{s}$.

October	4	−19	15	40.68
	9			40.75

(*), $20^{h}\ 30^{m}\ 8^{s}$.

October	4	−19	16	42.72
	9			42.89

O, ARG. S. 20675, $20^{h}\ 30^{m}\ 12^{s}$.

September	7	−21	54	35.83

O. ARG. S. 20728, $20^{h}\ 32^{m}\ 45^{s}$.

1855.		°	′	″
October	4	−19	16	6.23
	9			4.97
	10			6.00

WEISSE XX, 860, $20^{h}\ 34^{m}\ 4^{s}$.

September	17	−14	23	56.93
	24			56.17

α CYGNI, $20^{h}\ 36^{m}\ 39^{s}$.

September	1	−44	46	53.05
	10			52.58
	12			53.25

(*), $20^{h}\ 36^{m}\ 45^{s}$.

September	7	−21	23	41.03
	8			41.94
	29			41.86

WEISSE XX, 1031, $20^{h}\ 40^{m}\ 50^{s}$.

September	17	−14	3	16.99
	11			17.61
	24			17.11
	28			16.23
October	4			17.80

WEISSE XX, 1036, $20^{h}\ 40^{m}\ 59^{s}$.

September	17	−14	3	27.66
October	4			29.38

(*), $20^{h}\ 43^{m}\ 30^{s}$.

October	9	−39	25	48.13
	10			48.39
	16			(43.68)

(*), $20^{h}\ 45^{m}\ 59^{s}$.

September	25	−41	5	54.10
	29			55.46

32 VULPECULÆ, $20^{h}\ 48^{m}\ 36^{s}$.

September	8	+27	31	37.29
	10			34.98
	11			37.22
	12			37.81

(*), $20^{h}\ 49^{m}\ 5^{s}$.

September	28	−39	31	33.42
October	10			35.14
	16			30.30

WEISSE XX, 1291, $20^{h}\ 50^{m}\ 51^{s}$.

September	17	−13	54	4.12
	24			3.48

(*), $20^{h}\ 52^{m}\ 30^{s}$.

October	16	−14	2	27.25

B. A. C. 7282, $20^{h}\ 52^{m}\ 59^{s}$.

September	1	−18	4	28.05
	7			27.00

Weisse XX, 1370, $20^h\,53^m\,59^s$.

1855.		°	′	″
October	4	−14	3	11.52
	16			10.38

61^1 Cygni, $21^h\,0^m\,37^s$.

September	1	+38	3	47.59
	7			46.77
	8			46.33
	11			47.77
	12			47.03
	17			47.88
	21			46.13
	24			46.55
	25			46.94
	28			46.44
	29			47.03
October	4			46.11
	9			47.83
	10			46.95

61^2 Cygni, $21^h\,0^m\,39^s$.

September	1	+38	3	42.23
	8			41.48
	11			42.38
	12			41.84
	17			42.66
	21			40.97
	24			41.39
	25			41.46
	28			41.01
	29			41.67
October	4			40.62
	9			42.52
	10			41.40

ζ Cygni, $21^h\,6^m\,59^s$.

September	7	+29	39	16.53
	8			15:75
	17			17.74
	24			17.31
	28			16.37
	29			17.10
October	4			15.80
	9			17.29
	10			16.97
	16			16.82

α Cephei, $21^h\,15^m\,14^s$.

September	21	+61	59	35.70
	24			35.15
	27			33.70
October	4			34.84
	16			36.04

O. Arg. S. 21374, $21^h\,17^m\,42^s$.

September	29	−24	25	22.44
October	9			22.42

β Aquarii, $21^h\,24^m\,11^s$.

September	21	− 6	11	6.62
	24			5.35
	27			6.47
October	9			6.31
	15			5.64

β Cephei, $21^h\,26^m\,50^s$.

October	4	+69	56	47.04
	16			47.56

Weisse XXI, 691, $21^h\,29^m\,35^s$.

1855.		°	′	″
September	11	− 5	24	42.95
	12			42.96

O. Arg. S. 21519, $21^h\,29^m\,41^s$.

September	7	−24	19	13.48
	8			16.63
	17			15.88
	29			15.10
October	9			15.12

Lalande 42108, $21^h\,30^m\,32^s$.

September	25	−11	32	3.61
	27			3.90

Weisse XXI, 768, $21^h\,32^m\,37^s$.

October	10	−11	25	54.02
	15			53.76
	16			53.09

Weisse XXI, 801, $21^h\,33^m\,34^s$.

October	10	−11	24	49.51
	15			48.52
	16			48.61

(*), $21^h\,36^m\,43^s$.

October	4	−11	24	56.84
	10			57.58

Lalande 42355, $21^h\,37^m\,4^s$.

September	11	− 5	22	14.42
	12			13.97

ε Pegasi, $21^h\,37^m\,19^s$.

September	1	+ 9	14	7.06
	8			6.57
	10			6.14
	24			7.63

(*), $21^h\,38^m\,52^s$.

September	25	−11	27	42.42
October	4			41.96
	10			42.30

O. Arg. S. 21635, $21^h\,39^m\,30^s$.

September	29	−24	18	59.37
October	9		19	0.25

O. Arg. S. 21662, $21^h\,40^m\,55^s$.

September	29	−24	17	10.80
October	9			11.38

(*), $21^h\,43^m\,19^s$.

September	11	− 5	18	2.53
	12			2.78

(*), $21^h\,46^m\,28^s$.

October	4	−11	22	34.57
	10			34.72

16 Pegasi, $21^h\,46^m\,41^s$.

1855.		°	′	″
September	1	+25	16	5.15
	8			4.81
	10			4.73

(*), $21^h\,47^m\,26^s$.

September	29	−24	23	44.92
October	15			43.76

O. Arg. S. 21775, $21^h\,51^m\,24^s$.

September	28	−23	32	23.33
October	9			23.88

O. Arg. S. 21789, $21^h\,52^m\,0^s$.

September	17	−21	18	8.26
	25			8.04

O. Arg. S. 21800, $21^h\,53^m\,8^s$.

October	16	−21	0	46.51

(*), $21^h\,55^m\,9^s$.

October	4	−11	19	51.30
	10			50.88

O. Arg. S. 21829, $21^h\,55^m\,36^s$.

September	29	−20	47	5.14

B. A. C. 7675, $21^h\,56^m\,38^s$.

September	24	−27	29	52.79

(*), $21^h\,56^m$.

October	10	−27	31	36.00

O. Arg. S. 21869, $21^h\,58^m\,17^s$.

September	28	−19	20	49.77
October	9			49.69

O. Arg. S. 21877, $21^h\,58^m\,10^s$.

September	17	−19	36	36.69
	25			36.81

α Aquarii, $21^h\,58^m\,35^s$.

September	1	− 0	59	54.60
October	6			52.44
	15			53.50

Lacaille 9028, $22^h\,0^m\,4^s$.

September	27	−35	14	9.95
October	4			10.84

Weisse XXI, 1384, $22^h\,0^m\,20^s$.

September	8	−10	45	35.02

B. A. C. 7711, $22^h\,1^m\,18^s$.

September	11	−19	12	10.50
	12			10.60

Lacaille 9046, $22^h\,3^m\,24^s$.

1855.		°	′	″
September	27	−35	9	8.07
October	4			8.72

O. Arg. S. 21983, $22^h\,5^m\,9^s$.

September	24	−27	11	7.57
October	9			8.04

Lalande 43447, $22^h\,9^m\,20^s$.

September	11	−13	31	41.17
	17			41.31

O. Arg. S. 22049, $22^h\,9^m\,55^s$.

October	16	−21	10	1.31

O. Arg. S. 22051, $22^h\,10^m\,16^s$.

October	16	−21	11	27.90

O. Arg. S. 22060, $22^h\,10^m\,48^s$.

October	10	−21	11	37.04
	16			36.52

(*), $22^h\,12^m\,36^s$.

October	4	−35	13	3.71
	6			1.39
	9			3.90

(*), $22^h\,13^m\,49^s$.

October	4	−35	13	30.94
	6			29.38
	9			30.89

O. Arg. S. 22089, $22^h\,13^m\,43^s$.

September	27	−29	28	31.90
	28			33.25
	29			32.28

O. Arg. S. 22121, $22^h\,16^m\,19^s$.

September	27	−29	22	50.25

Lalande 43719, $22^h\,17^m\,14^s$.

September	11	−13	39	53.38
	24			52.71

Weisse XXII, 363, $22^h\,17^m\,37^s$.

September	11	−13	42	40.82
	24			38.78

O. Arg. S. 22133, $22^h\,18^m\,0^s$.

September	27	−29	25	46.06
	28			46.01
	29			47.10

(*), $22^h\,20^m\,40^s$.

October	10	−34	29	6.45
	15			5.02

(*), 22^h 21^m 29^s.

1855.		°	′	″
September	12	−34	33	56.72
October	10			57.52
	15			58.61

(*), 22^h 21^m 31^s.

September	27	−29	26	18.73
	29			20.11

(*), 22^h 21^m 33^s.

October	4	−29	22	23.98
	6			22.38

(*), 22^h 23^m 32^s.

October	10	−34	33	54.44

(*), 22^h 25^m 45^s.

October	10	−34	35	44.94
	15			44.01

(*), 22^h 26^m 26^s.

October	9	−35	23	46.98
	16			45.59

O. ARG. S. 22239, 22^h 27^m 6^s.

September	29	−18	51	21.03

O. ARG. S. 22265, 22^h 29^m 0^s.

September	7	−18	51	45.53

(*), 22^h 29^m 36^s.

September	11	−13	37	19.50
	12			19.28

η AQUARII, 22^h 28^m 10^s.

September	1	− 0	50	16.01
	8			15.46

(*), 22^h 30^m 26^s.

October	16	−35	25	58.05

O. ARG. S. 22295, 22^h 30^m 55^s.

October	4	−29	28	27.55
	6			25.85

ζ PEGASI, 22^h 34^m 29^s.

September	1	+10	6	5.96
	8			6.20
	27			7.79
October	16			7.36
November	27			6.98

(*), 22^h 35^m 13^s.

October	6	−29	22	50.34
	10			52.04

(*), 22^h 35^m 29^s.

October	9	−30	23	51.62
	15			51.80

(*), 22^h 37^m 10^s.

1855.		°	′	″
September	12	+ 0	25	36.02
	17			36.08

(*), 22^h 41^m 5^s.

October	6	−29	23	40.55
	10			42.06

LALANDE 44661, 22^h 42^m 56^s.

September	25	−14	47	55.46
	27			55.14

O. ARG. S. 22445, 22^h 43^m 37^s.

September	7	−30	16	35.62
	8			37.36
October	16			36.12

α PISCIS AUSTRALIS, 22^h 49^m 54^s.

September	1	−30	21	49.00
	7			47.82
	8			48.90
	12			47.07
	17			49.36
	24			47.44
October	4			47.88
	6			46.64
	9			48.02
	10			47.83
	15			48.21
	16			47.74
November	27			47.96

(*), 22^h 54^m 23^s.

September	25	−20	57	41.84

α PEGASI, 22^h 57^m 47^s.

September	29	+14	27	9.26

WEISSE XXII, 1220, 22^h 58^m 9^s.

November	27	+ 0	33	13.11

WEISSE XXII, 1228, 22^h 58^m 19^s.

November	27	+ 1	0	42.13

B. A. C. 8060, 23^h 1^m 31^s.

September	11	+ 1	21	59.39
	17			59.19

WEISSE XXIII, 14, 23^h 2^m 25^s.

September	25	−12	50	42.29
November	22			39.94

WEISSE XXIII, 142, 23^h 8^m 25^s.

October	10	− 6	27	32.66
	16			32.07

PIAZZI XXIII, 21, 23^h 8^m 29^s.

September	27	+ 0	32	51.50

(*), 23^h 10^m 30^s.

1855.		°	′	″
September	25	− 6	19	49.53
October	16			50.23

WEISSE XXIII, 222, 23^h 11^m 29^s.

October	16	− 6	23	35.56

κ PISCIUM, 23^h 19^m 45^s.

September	11	+ 0	29	23.28
October	6			23.22

B. A. C. 8170, 23^h 20^m 4^s.

September	29	+ 0	21	15.25
October	4			15.38

B. A. C. 8177, 23^h 20^m 52^s.

October	15	+ 5	36	37.83
November	22			40.00
	27			38.15

WEISSE XXIII, 443, 23^h 22^m 32^s.

September	29	+ 0	19	59.63
October	4		20	0.44

WEISSE XXIII, 452, 23^h 22^m 48^s.

October	10	+ 7	2	54.89

WEISSE XXIII, 458, 23^h 23^m 15$_s$.

October	15	+ 5	39	15.97
November	22			17.10

ι PISCIUM, 23^h 32^m 45$_s$.

September	27	+ 4	52	4.93
	29			4.23
October	4			4.78
	6			4.89
	15			5.22
November	19			5.10
	22			(6.58)
	27			4.96

WEISSE XXIII, 830, 23^h 41^m 1^s.

November	27	− 1	33	7.32

(*), 23^h 42^m 16^s.

October	6	−32	10	50.32
	9			53.35

(*26) W., 23^h 43^m 20^s.

November	30	+ 7	20	12.84

(*), 23^h 43^m 42^s.

October	9	−32	8	5.98

WEISSE XXIII, 916, 23^h 45^m 32^s.

October	10	− 1	35	13.67
November	27			12.22

LACAILLE 9663, 23^h 50^m 24^s.

1855.		°	′	″
September	27	−33	58	8.87
October	6			7.88

WEISSE XXIII, 1032, 23^h 50^m 39^s.

November	19	+ 4	37	32.36

WEISSE XXIII, 1039, 23^h 50^m 54^s.

October	10	− 0	54	24.54
December	5			24.41

WEISSE XXIII, 1045, 23^h 51^m 13^s.

November	29	+ 4	52	14.15
	30			12.59

WEISSE XXIII, 1075, 23^h 52^m 48$_s$.

November	24	+ 0	18	35.42
	27			35.77

WEISSE XXIII, 1090, 23^h 53^m 25^s.

November	24	+ 0	17	10.84
	27			10.86

O. ARG. S. 23182, 23^h 53^m 33^s.

October	9	−28	41	12.66

B. A. C. 8353, 23^h 55^m 14^s.

December	6	+ 8	10	39.39

WEISSE XXIII, 1179, 23^h 57^m 37^s.

December	5	+ 0	45	30.15

WEISSE XXIII, 1218, 23^h 59^m 41^s.

December	6	+ 1	4	53.39

α ANDROMEDÆ, 0^h 1^m 9^s.

September	27	+28	19	3.82

WEISSE XXIII, 1258, 0^h 1^m 37^s.

October	15	+ 4	19	3.04
November	19			5.13

WEISSE XXIII, 1260, 0^h 1^m 38$_s$.

October	15	+ 4	21	40.61
November	19			41.89

WEISSE XXIII, 1267, 0^h 1^m 42$_s$.

November	22	− 0	5	12.16
	27			13.79

O. ARG. S. 19, 0^h 2^m 11^s.

October	9	−28	46	2.91
	10			2.35

(*), $0^h\,3^m\,40^s$.

1855.	° ′ ″
October 15	+ 4 18 38.14
November 19	40.62

(*), $0^h\,4^m\,20^s$.

November 30	+ 6 5 12.57

SANTINI 8, $0^h\,4^m\,36^s$.

December 5	+ 8 21 42.61

WEISSE O, 89, $0^h\,5^m\,51^s$.

November 24	+ 6 7 1.65
29	1.02
30	0.65

γ PEGASI, $0^h\,6^m\,2^s$.

September 27	+14 24 18.96

WEISSE O, 104, $0^h\,6^m\,55^s$.

November 22	+ 6 6 2.84
24	0.80
29	1.79
30	0.18

SANTINI 10, $0^h\,8^m\,26^s$.

December 5	+ 5 3 56.02
6	.55.67

WEISSE O, 192, $0^h\,11^m\,56^s$.

October 9	+ 6 30 16.37

WEISSE O, 202, $0^h\,12^m\,40^s$.

November 27	+12 36 57.06

WEISSE O, 210, $0^h\,12^m\,54^s$.

October 15	+ 5 30 52.48

WEISSE O, 233, $0^h\,13^m\,59^s$.

November 22	+11 56 12.38
24	11.92

α ANDROMEDÆ, $0^h\,1^m\,9^s$.

1856.	
September 17	+28 19 3.63
October 9	1.79
10	1.87
11	2.49

WEISSE O, 112, $0^h\,7^m\,31^s$.

October 28	+ 2 35 8.55

WEISSE O, 210, $0^h\,12^m\,54^s$.

December 8	+ 5 30 53.28

WEISSE O, 229, $0^h\,13^m\,46^s$.

November 12	+11 59 42.06

WEISSE O, 312, $0^h\,19^m\,5^s$.

November 22	+ 3 2 59.79

B. A. C. 147, $0^h\,28^m\,22^s$.

1856.	° ′ ″
October 8	− 1 16 31.04
November 22	33.26

WEISSE O, 496, $0^h\,29^m\,44^s$.

November 12	+ 4 38 29.33
13	27.80

LALANDE 967, $0^h\,30^m\,48^s$.

November 11	+ 1 59 34.44
18	35.06
20	34.09

(*), $0^h\,30^m\,55^s$.

November 22	− 1 16 26.36
December 8	25.28

(*), $0^h\,32^m\,2^s$.

October 29	+26 58 10.50

WEISSE O, 635, $0^h\,37^m\,7^s$.

November 24	+ 7 0 23.15

WEISSE O, 647, $0^h\,37^m\,52^s$.

October 8	+ 4 24 53.93

WEISSE O, 657, $0^h\,38^m\,24^s$.

December 26	+ 7 4 42.26

(*), $0^h\,38^m\,35^s$.

November 13	− 1 57 6.80

WEISSE O, 680, $0^h\,39^m\,39^s$.

November 22	+ 7 32 31.65

WEISSE O, 687, $0^h\,40^m\,2^s$.

November 13	− 1 55 14.94

B. A. C. 216, $0^h\,40^m\,9^s$.

November 18	+ 5 58 34.41
20	32.78

WEISSE O, 712, $0^h\,41^m\,11^s$.

November 12	− 1 15 9.55

WEISSE O, 726, $0^h\,42^m\,20^s$.

November 11	+ 4 9 47.90

WEISSE O, 732, $0^h\,42^m\,47^s$.

November 24	− 0 59 15.67

WEISSE O, 742, $0^h\,43^m\,14^s$.

November 18	+ 6 20 43.57
20	43.19

WEISSE (2) O, 1167, $0^h\,45^m\,35^s$.

1856.	° ′ ″
October 8	+29 35 16.27

B. A. C. 242, $0^h\,45^m\,52^s$.

November 13	+ 1 54 19.72

WEISSE O, 815, $0^h\,47^m\,4^s$.

November 20	− 2 15 46.69
22	44.74

WEISSE O, 893, $0^h\,51^m\,50_s$.

November 11	+ 1 54 8.84

WEISSE O, 918, $0^h\,52^m\,54^s$.

November 11	+ 1 52 38.29

WEISSE O, 925, $0^h\,53^m\,26^s$.

November 18	+ 7 56 46.97

WEISSE O, 944, $0^h\,54^m\,24^s$.

November 13	+ 8 59 23.60
December 12	24.14

WEISSE O, 965, $0^h\,55^m\,25^s$.

December 26	+ 8 22 50.12

WEISSE O, 1013, $0^h\,58^m\,7^s$.

November 11	+ 7 34 54.87
13	54.47

WEISSE O, 1043, $0^h\,59^m\,21^s$.

November 11	+ 7 36 40.79
13	41.17

WEISSE O, 1076, $1^h\,1^m\,3^s$.

November 22	+10 6 35.41

WEISSE O, 1078, $1^h\,1^m\,6^s$.

November 20	+ 8 38 7.24

WEISSE O, 1079, $1^h\,1^m\,10^s$.

November 22	+10 8 41.46

WEISSE O, 1085, $1^h\,1^m\,36^s$.

November 19	+ 8 59 0.81

B. A. C. 368, $1^h\,6^m\,24^s$.

November 12	+ 6 50 4.11
December 26	3.91

WEISSE I, 100, $1^h\,7^m\,31^s$.

November 19	+ 9 0 0.23
December 12	0.77

B. A. C. 374, $1^h\,7^m\,41^s$.

1856.	° ′ ″
November 22	− 1 43 27.16

POLARIS, $1^h\,8^m\,2^s$.

November 15	+88 33 46.62
18	46.31

WEISSE I, 113, $1^h\,8^m\,25^s$.

November 20	+ 9 2 31.01

WEISSE I, 144, $1^h\,10^m\,19^s$.

November 13	+12 49 7.32

WEISSE I, 202, $1^h\,13^m\,28^s$.

October 29	− 3 58 58.48

θ^1 CETI, $1^h\,17^m\,2^s$.

November 15	− 8 54 24.73
18	24.52
December 26	22.83

WEISSE I, 280, $1^h\,17^m\,42^s$.

November 12	− 3 34 41.57
December 12	42.09

WEISSE I, 313, Ih $19^m\,16^s$.

November 11	+10 10 10.12
December 8	11.10

WEISSE I, 375, $1^h\,22^m\,43^s$.

November 19	− 0 21 1.27

η PISCIUM, $1^h\,24^m\,0^s$.

December 4	+14 37 23.48

WEISSE I, 414, $1^h\,24^m\,48^s$.

November 11	+10 58 26.10
13	27.46

B. A. C. 460, $1^h\,25^m\,17^s$.

November 15	−31 0 12.89
18	9.91

π PISCIUM, $1^h\,29^m\,41^s$.

November 12	+11 25 28.08

WEISSE I, 504, $1^h\,30^m\,48^s$.

November 22	+ 3 22 18.21
December 16	18.84

SANTINI 91, $1^h\,31^m\,6^s$.

November 20	+ 1 52 20.09
December 12	19.99

Star	1856.	°	′	″
WEISSE I, 539, 1^h 31^m 44^s.	November 13	+11	43	36.58
	December 4			36.65
	9			35.87
ν PISCIUM, 1^h 34^m 9^s.	November 11	+ 4	46	39.73
(*), 1^h 35^m 29^s.	November 15	+ 5	1	40.38
(*), 1^h 38^m 30^s.	November 12	+ 2	57	51.48
WEISSE I, 709, 1^h 39^m 43^s.	November 18	+10	8	35.40
WEISSE I, 713, 1^h 39^m 55^s.	November 22	+10	15	9.93
	December 16			9.39
WEISSE I, 725, 1^h 40^m 26^s.	November 19	− 3	36	36.57
	20			39.38
WEISSE I, 732, 1^h 41^m 7^s.	November 13	+13	21	54.19
B. A. C. 551, 1^h 41^m 10^s.	December 12	+ 2	59	7.19
WEISSE I, 740, 1^h 41^m 42^s.	November 11	+11	41	30.98
	December 9			31.18
WEISSE I, 775, 1^h 43^m 43^s.	December 4	+14	3	36.08
WEISSE I, 807, 1^h 45^m 31^s.	November 22	+14	11	14.07
	December 9			14.06
B. A. C. 574, 1^h 46^m 18^s.	November 12	+ 2	29	42.45
	20			40.57
WEISSE I, 855, 1^h 48^m 10^s.	November 13	+11	53	6.77
WEISSE I, 860, 1^h 48^m 22^s.	November 11	+ 2	53	23.95
B. A. C. 598, 1^h 50^m 53^s.	November 19	− 2	44	36.47
	December 12			38.79
WEISSE I, 969, 1^h 54^m 35^s.	November 13	+11	30	14.32
	22			13.45
WEISSE I, 972, 1^h 54^m 54^s.	November 12	+12	0	34.71
	20			33.17
B. A. C. 641, 1^h 57^m 28^s.	November 19	+ 7	3	47.98
α ARIETIS, 1^h 59^m 17^s.	December 29	+22	47	52.89
B. A. C. 663, 2^h 2^m 22^s.	November 20	+ 3	34	3.67
	December 12			4.33
B. A. C. 672, 2^h 2^m 57^s.	October 28	+ 7	54	45.71
	December 18			47.40
WEISSE II, 35, 2^h 4^m 16^s.	November 22	+ 4	6	20.90
WEISSE II, 72, 2^h 5^m 58^s.	November 22	+ 4	5	32.07
WEISSE II, 112, 2^h 8^m 28^s.	December 4	+ 4	59	50.71
WEISSE II, 144, 2^h 10^m 30^s.	November 22	+12	46	51.52
WEISSE II, 158, 2^h 11^m 16^s.	December 12	+ 7	31	56.86
WEISSE II, 185, 2^h 12^m 38^s.	December 16	− 5	38	41.29
(*), 2^h 17^m 4^s.	November 19	− 6	59	20.01
B. A. C. 744, 2^h 17^m 34^s.	November 13	+66	46	11.69
(*), 2^h 17^m.	November 22	+61	10	9.18
WEISSE (2) II, 444, 2^h 19^m 3^s.	November 11	+22	14	47.10
	December 4			47.53
WEISSE (2) II, 449, 2^h 19^m 15^s.	December 4	+22	16	19.03
WEISSE II, 312, 2^h 19^m 41^s.	October 28	+ 5	35	47.24
	November 20			46.73
(*), 2^h 20^m.	November 22	+61	11	6.56
WEISSE II, 372, 2^h 22^m 56^s.	December 9	+13	38	13.87
	16			13.40
B. A. C. 771, 2^h 23^m 7^s.	December 12	+17	4	57.51
	26			58.07
WEISSE II, 386, 2^h 23^m 23^s.	December 6	− 6	57	10.15
	18			10.93
(*), 2^h 27^m 3^s.	December 29	+ 9	4	42.12
Σ CAT. GEN. 250, 2^h 27^m 10^s.	November 13	− 6	15	12.08
	December 4			10.92
WEISSE II, 470, 2^h 28^m 30^s.	November 20	+14	32	12.31
	December 9			13.83
B. A. C. 800, 2^h 29^m 12^s.	December 29	+ 7	7	7.18
WEISSE II, 556, 2^h 32^m 56^s.	November 22	+15	4	59.56
WEISSE II, 566, 2^h 33^m 10^s.	November 13	− 6	16	60.96
	December 4			59.67
WEISSE II, 576, 2^h 33^m 35^s.	November 11	− 5	37	39.26
	20			40.45
WEISSE II, 575, 2^h 33^m 45^s.	November 22	+15	2	24.60
WEISSE (2) II, 815, 2^h 34^m 0^s.	December 6	+23	55	3.51
	18			3.67
WEISSE (2) II, 860, 2^h 35^m 43^s.	December 26	+20	33	2.21
γ CETI, 2^h 36^m 3^s.	October 28	+ 2	38	38.35
	December 16			37.62
WEISSE II, 640, 2^h 37^m 22^s.	November 11	− 5	6	58.43
	13			57.51
	December 4			57.04
WEISSE (2) II, 972, 2^h 40^m 25^s.	December 9	+24	42	20.62
B. A. C. 866, 2^h 40^m 38^s.	December 16	+24	36	5.91
	18			5.51
WEISSE (2) II, 1018, 2^h 42^m 2^s.	December 6	+24	45	3.36
WEISSE II, 742, 2^h 43^m 29^s.	December 29	− 7	23	13.70
WEISSE II, 762, 2^h 44^m 20^s.	December 4	− 1	44	35.53
WEISSE II, 790, 2^h 46^m 15^s.	December 26	+ 8	45	46.20
(*), 2^h 46^m 29^s.	November 11	− 2	12	56.94
	13			55.60
WEISSE II, 820, 2^h 47^m 38^s.	November 20	− 0	37	18.00
WEISSE II, 831, 2^h 48^m 4^s.	December 9	− 0	7	55.85
WEISSE II, 846, 2^h 48^m 47^s.	December 16	− 0	3	10.80
WEISSE II, 853, 2^h 49^m 4^s.	December 16	− 0	2	50.34
WEISSE II, 872, 2^h 50^m 0^s.	December 6	− 0	7	6.58
	9			6.01
B. A. C. 929, 2^h 52^m 11^s.	November 13	+ 8	20	49.82
	20			48.87
WEISSE (2) II, 1293, 2^h 53^m 59^s.	November 22	+15	57	50.62
	December 4			51.74

α Ceti, $2^{h}\ 54^{m}\ 58^{s}$.

1856.		°	′	″
November	13	+ 3	32	16.43

Weisse II, 967, $2^{h}\ 55^{m}\ 20^{s}$.

December	12	+ 8	55	12.86

Weisse II, 970, $2^{h}\ 55^{m}\ 15^{s}$.

November	19	− 7	2	35.24

Weisse (2) II, 1322, $2^{h}\ 55^{m}\ 22^{s}$.

December	29	+22	30	31.93

B. A. C. 959, $2^{h}\ 57^{m}\ 24^{s}$.

December	26	− 8	9	2.13

δ Arietis, $3^{h}\ 3^{m}\ 38^{s}$.

December	16	+19	11	39.91

Weisse III, 62, $3^{h}\ 5^{m}\ 4^{s}$.

December	12	+ 8	3	50.03

Weisse III, 90, $3^{h}\ 5^{m}\ 43^{s}$.

November	22	− 8	10	39.23
December	4			39.37

Weisse (2) III, 161, $3^{h}\ 7^{m}\ 54^{s}$.

December	16	+23	50	38.62
	29			38.57

Weisse III, 205, $3^{h}\ 12^{m}\ 9^{s}$.

January	18	+12	51	58.86
November	22			58.56

(*), $3^{h}\ 14^{m}\ 0^{s}$.

January	18	+ 8	51	19.87

Weisse III, 278, $3^{h}\ 16^{m}\ 30^{s}$.

December	16	− 8	17	12.80
	18			12.92

B. A. C. 1057, $3^{h}\ 17^{m}\ 16^{s}$.

November	20	+ 8	31	59.73
December	4			61.42
	6			61.56
	12			60.66

Weisse III, 306, $3^{h}\ 17^{m}\ 58^{s}$.

January	3	+13	7	30.37

Weisse (2) III, 393, $3^{h}\ 19^{m}\ 4^{s}$.

January	16	+18	15	49.94

B. A. C. 1068, $3^{h}\ 19^{m}\ 34^{s}$.

November	20	+ 9	14	30.58
	22			29.76

Rumker 870, $3^{h}\ 21^{m}\ 48^{s}$.

1856.		°	′	″
January	16	+18	16	16.49

(*), $3^{h}\ 21^{m}\ 51^{s}$.

December	4	+ 9	28	17.50

Rumker 879, $3^{h}\ 22^{m}\ 55^{s}$.

January	18	+18	19	10.89

Weisse (2) III, 493, $3^{h}\ 23^{m}\ 44^{s}$.

January	18	+18	19	13.18
December	29			12.72

Weisse III, 442, $3^{h}\ 25^{m}\ 15^{s}$.

December	6	− 8	19	4.81
	16			3.84

Weisse III, 517, $3^{h}\ 28^{m}\ 42^{s}$.

January	3	+13	59	20.83
	15			21.29

Weisse (2) III, 733, $3^{h}\ 34^{m}\ 3^{s}$.

January	16	+26	7	20.28
	18			20.82

B. A. C. 1164, $3^{h}\ 39^{m}\ 1^{s}$.

December	16	+23	40	47.91

(*), $3^{h}\ 39^{m}\ 9^{s}$.

January	23	+11	14	8.70
December	6			6.97

η Tauri, $3^{h}\ 39^{m}\ 10^{s}$.

January	15	+23	40	9.49
	16			9.12
December	16			8.73
	18			8.50

Weisse III, 752, $3^{h}\ 39^{m}\ 41^{s}$.

January	3	+12	4	19.51

Weisse (2) III, 881, $3^{h}\ 39^{m}\ 53^{s}$.

January	18	+26	9	14.26

Weisse III, 781, $3^{h}\ 41^{m}\ 9^{s}$.

December	4	+11	16	33.52
	6			33.14

Weisse (2) III, 1013, $3^{h}\ 46^{m}\ 35^{s}$.

December	16	+19	41	11.03

Weisse (2) III, 1019, $3^{h}\ 46^{m}\ 32^{s}$.

December	16	+19	41	0.76

Weisse III, 924, $3^{h}\ 47^{m}\ 52^{s}$.

January	3	− 9	56	7.13

Weisse (2) III, 1041, $3^{h}\ 48^{m}\ 26^{s}$.

1856.		°	′	″
January	15	+36	5	7.04

(*), $3^{h}\ 48^{m}\ 44^{s}$.

December	16	+19	40	24.80

Weisse III, 965, $3^{h}\ 49^{m}\ 58^{s}$.

January	23	−10	9	36.77

Weisse (2) III, 1266, $3^{h}\ 58^{m}\ 55^{s}$.

January	23	+20	52	57.51
December	16			57.03

Weisse (2) III, 1275, $3^{h}\ 59^{m}\ 29^{s}$.

January	23	+20	53	8.90
December	16			7.75

Weisse IV, 21, $4^{h}\ 2^{m}\ 36^{s}$.

December	29	+ 7	19	40.65

B. A. C. 1296, $4^{h}\ 6^{m}\ 1^{s}$.

December	26	+ 7	21	20.20

Weisse (2) IV, 127, $4^{h}\ 7^{m}\ 20^{s}$.

January	4	+20	55	30.75
	18			31.32

Weisse (2) IV, 152, $4^{h}\ 8^{m}\ 50^{s}$.

January	3	+15	51	51.54
	16			50.75

Weisse (2) IV, 220, $4^{h}\ 11^{m}\ 19^{s}$.

January	15	+21	25	53.90
	29			56.24

Rumker 1163, $4^{h}\ 13^{m}\ 34^{s}$.

January	18	+16	28	13.06

Rumker 1167, $4^{h}\ 14^{m}\ 43^{s}$.

January	16	+16	27	33.24
	22			32.35

B. A. C. 1350, $4^{h}\ 15^{m}\ 24^{s}$.

January	3	+16	26	50.15
	16			50.23
	22			50.54

Weisse (2) IV, 330, $4^{h}\ 15^{m}\ 56^{s}$.

January	4	+21	24	32.16
	15			33.42

B. A. C. 1366, $4^{h}\ 17^{m}\ 38^{s}$.

December	26	+15	37	4.90

Weisse (2) IV, 391, $4^{h}\ 18^{m}\ 39^{s}$.

1856.		°	′	″
January	3	+16	25	36.64
	18			36.67
	22			37.27

Weisse (2) IV, 420, $4^{h}\ 19^{m}\ 54^{s}$.

February	2	+23	47	4.93

Weisse (2) IV, 458, $4^{h}\ 21^{m}\ 36^{s}$.

January	4	+27	49	9.29
	25			9.78

Lalande 8431, $4^{h}\ 21^{m}\ 15^{s}$.

January	29	−11	26	21.98

B. A. C. 1402, $4^{h}\ 23^{m}\ 52^{s}$.

January	16	+15	32	52.76

(*), $4^{h}\ 24^{m}$.

December	26	+15	45	38.46

Rumker, 1235, $4^{h}\ 24^{m}\ 50^{s}$.

January	15	+15	42	19.47

Weisse (2) IV, 579, $4^{h}\ 27^{m}\ 16^{s}$.

January	29	+21	43	41.14

Weisse (2) IV, 562, $4^{h}\ 26^{m}\ 20^{s}$.

January	18	+22	5	4.92

Weisse (2) IV, 634, $4^{h}\ 29^{m}\ 38^{s}$.

January	3	+29	6	6.22

Weisse IV, 646, $4^{h}\ 30^{m}\ 23^{s}$.

January	28	+ 7	1	58.18

Weisse (2) IV, 669, $4^{h}\ 30^{m}\ 51^{s}$.

January	22	+22	22	13.93
	23			13.65
February	2			13.33

Weisse (2) IV, 713, $4^{h}\ 33^{m}\ 0^{s}$.

January	15	+22	24	7.52

Weisse (2) IV, 719, $4^{h}\ 33^{m}\ 19^{s}$.

January	22	+22	21	11.23
	23			13.56
February	2			11.71

Weisse IV, 754, $4^{h}\ 34^{m}\ 53^{s}$.

January	16	+ 2	43	11.86

(*), $4^{h}\ 36^{m}\ 7^{s}$.

January	18	− 1	43	7.68

Weisse IV, 809, 4^{h} 37^{m} 36^{s}.

1856.		°	′	″
January	3	−1	41	46.64
	18			45.97

Weisse (2) IV, 866, 4^{h} 39^{m} 31^{s}.

December	29	+29	31	12.61

(*), 4^{h} 41^{m} 8^{s}.

January	29	+1	13	2.80

Weisse IV, 925, 4^{h} 43^{m} 14^{s}.

January	16	+1	17	1.58
	23			1.14
	29			1.04

Weisse (2) IV, 986, 4^{h} 44^{m} 17^{s}.

January	15	+26	32	27.73
February	9			28.24

Weisse IV, 972, 4^{h} 44^{m} 57^{s}.

January	16	+1	16	20.10
	23			20.18
	29			18.30

Weisse (2) IV, 1012, 4^{h} 45^{m} 28^{s}.

January	18	+22	32	10.47

(*), 4^{h} 46^{m} 40^{s}.

January	23	+1	20	12.30

(*), 4^{h} 49^{m} 34^{s}.

January	23	+1	17	50.54

Weisse (2) IV, 1165, 4^{h} 51^{m} 45^{s}.

January	4	+22	22	40.49
February	9			42.00

Weisse (2) IV, 1172, 4^{h} 52^{m} 9^{s}.

February	9	+22	24	10.72

Weisse (2) IV, 1257, 4^{h} 55^{m} 37^{s}.

January	18	+30	12	13.11

Weisse (2) IV, 1258, 4^{h} 55^{m} 38^{s}.

January	18	+30	10	43.24

Weisse (2) IV, 1364, 4^{h} 59^{m} 30^{s}.

January	25	+30	15	38.48
	28			37.63

Weisse IV, 1379, 5^{h} 0^{m} 52^{s}.

February	9	−12	40	27.93

Weisse IV, 1394, 5^{h} 1^{m} 22^{s}.

February	2	−12	46	30.91

Weisse (2) V, 49, 5^{h} 3^{m} 38^{s}.

1856.		°	′	″
January	25	+30	15	47.02
	28			45.94

Weisse (2) V, 54, 5^{h} 3^{m} 40^{s}.

January	3	+26	17	7.59
	4			7.95
	10			9.29
	15			9.16
	16			9.97
	18			7.83
	22			9.31
	23			9.13

Weisse (2) V, 111, 5^{h} 5^{m} 17^{s}.

January	25	+30	13	51.93
	28			51.30

α Aurigæ, 5^{h} 6^{m} 21^{s}.

December	26	+45	51	4.63

Weisse (2) V, 296, 5^{h} 11^{m} 6^{s}.

January	3	+26	6	31.08
	4			31.64
	10			31.63
	15			31.34
	18			31.46
	22			32.31
	23			32.47
	28			32.78

(*), 5^{h} 13^{m} 6^{s}.

February	2	−13	19	26.20
	9			26.33

Weisse (2) V, 451, 5^{h} 16^{m} 35^{s}.

December	26	+30	34	4.15

Weisse (2) V, 452, 5^{h} 16^{m} 37^{s}.

December	16	+30	33	20.66

Weisse (2) V, 513, 5^{h} 18^{m} 24^{s}.

January	3	+26	27	29.90
	10			30.80
	15			31.06
	18			30.34
	22			29.73
	23			31.15
	28			30.21

Weisse (2) V, 530, 5^{h} 19^{m} 10^{s}.

December	26	+30	31	24.32

Weisse V, 449, 5^{h} 19^{m} 12^{s}.

February	2	−13	15	23.38
	9			23.33

Weisse (2) V, 630, 5^{h} 22^{m} 20^{s}.

Janaury	3	+26	28	20.36
	4			19.42
	10			19.78
	15			20.67
	18			20.13
	22			19.54
	23			20.97
	28			19.80

δ Orionis, 5^{h} 24^{m} 51^{s}.

1856.		°	′	″
January	16	−0	24	19.81

(*), 5^{h} 25^{m} 55^{s}.

February	2	−13	19	32.76
	9			32.45

Weisse (2) V, 782, 5^{h} 27^{m} 1^{s}.

December	26	+31	3	22.49

(*), 5^{h} 28^{m} 46^{s}.

January	3	+26	33	43.99
	10			44.45
	15			44.75

Weisse (2) V, 912, 5^{h} 30^{m} 13^{s},

January	3	+26	31	56.70
	10			56.69
	15			57.45
	16			57.69
	18			57.30
	22			57.10
	23			57.49
	28			57.09

ε Orionis, 5^{h} 29^{m} 7^{s},

January	4	−1	17	39.49

(*), 5^{h} 32^{m} 29^{s}.

March	7	−13	37	53.11

(*), 5^{h} 32^{m} 53^{s}.

January	3	+26	32	18.59
	10			18.28
	15			18.75
	18			19.59
	22			19.35

Weisse V, 874, 5^{h} 34^{m} 15^{s}.

February	2	−13	45	28.91
	20			29.75

α Columbæ, 5^{h} 34^{m} 35^{s}.

January	28	−34	9	2.61
March	14			3.20
	15			2.86

(*), 5^{h} 41^{m} 30^{s}.

March	7	−13	34	39.12

Weisse V, 1143, 5^{h} 45^{m} 13^{s}.

February	2	−13	50	31.98
	20			32.01

(*), 5^{h} 45^{m} 25^{s}.

January	3	+26	28	58.53
	28			57.74

Weisse (2) V, 1534, 5^{h} 46^{m} 56^{s}.

1856.		°	′	″
January	3	+26	26	59.38
	10			58.90
	15			61.09
	18			60.82
	22			60.14
	23			61.74
	28			60.13

α Orionis, 5^{h} 47^{m} 36^{s}.

January	16	+7	22	(41.72)
March	14			38.98
	17			39.12
December	30			38.45

(*), 5^{h} 50^{m} 58^{s}.

March	7	+20	9	6.15

(*), 5^{h} 51^{m} 12^{s}.

March	10	+19	45	50.59

(*), 5^{h} 51^{m} 23^{s}.

February	2	−14	13	41.81
	20			41.65

(*), 5^{h} 52^{m}.

March	10	+19	48	13.28

Weisse V, 1335, 5^{h} 52^{m} 29^{s}.

February	2	−14	13	15.55
	20			15.41

Weisse V, 1378, 5^{h} 53^{m} 58^{s}.

February	22	−14	1	32.62

Rumker 1673, 5^{h} 54^{m} 44^{s}.

January	3	+26	16	36.18
	10			35.08
	15			35.79
	18			36.02
	22			36.29
	23			36.26
	28			35.99

Rumker 1680, 5^{h} 55^{m} 9^{s}.

January	3	+26	21	5.58
	4			5.24
	10			5.53
	15			6.50
	18			6.27
	22			7.52
	23			6.85
	28			6.62

B. A. C. 1934, 5^{h} 55^{m} 10^{s}.

March	10	+19	41	21.35
	17			20.91

B. A. C. 1939, 5^{h} 55^{m} 40^{s}.

March	7	+20	8	16.43
	14			15.75

Weisse V, 1479, $5^h 57^m 49^s$.

1856.		°	′	″
February	22	−14	4	56.49

Weisse V, 1487, $5^h 58^m 11^s$.

February	22	−14	1	39.41

(*), $5^h 58^m 28^s$.

March	7	+20	6	51.41

Lalande 11684, $6^h 2^m 10^s$.

December	26	+26	2	14.93
	30			15.29

Weisse (2) V, 12, $6^h 2^m 39^s$.

January	22	+31	11	53.13

Weisse VI, 44, $6^h 2^m 45^s$.

February	9	−14	2	41.06
	22			41.42

Lalande 11714, $6^h 3^m 2^s$.

December	26	+26	0	39.96
	30			40.19

B. A. C. 2015, $6^h 8^m 4^s$.

March	15	− 6	14	7.10
	17			5.92

Weisse VI, 264, $6^h 9^m 34^s$.

February	21	−14	23	6.12

Weisse VI, 334, $6^h 11^m 49^s$.

February	2	−14	16	50.69
	9			53.10

Weisse VI, 348, $6^h 12^m 15^s$.

February	2	−14	18	25.76
	21			27.64

μ Geminorum, $6^h 14^m 29^s$.

January	22	+22	34	54.87
February	22			53.90
March	15			54.38
	17			54.58
December	30			53.37

Weisse VI, 446, $6^h 15^m 19^s$.

February	2	−14	20	12.02
	21			13.44

Lalande 12237, $6^h 17^m 27^s$.

December	26	+25	35	7.99

(*), $6^h 18^m 18^s$.

December	30	+24	18	9.58

Weisse (2) VI, 626, $6^h 22^m 8^s$.

1856.		°	′	″
February	9	+23	37	42.61
	20			43.13

Weisse (2) VI, 631, $6^h 22^m 16^s$.

December	26	+25	30	55.89

Lalande 12557, $6^h 26^m 27^s$.

December	30	+24	44	22.77

Weisse (2) VI, 809, $6^h 28^m 0^s$.

December	26	+24	32	23.57

Weisse (2) VI, 826, $6^h 28^m 32^s$.

December	26	+24	30	39.21

Weisse (2) VI, 838, $6^h 28^m 50^s$.

December	30	+24	42	12.03

Weisse (2) VI, 9 9, $6^h 30^m 54^s$.

December	30	+24	42	58.10

Weisse (2) VI, 935, $6^h 31^m 33^s$.

February	9	+23	47	46.57
	20			46.52

Weisse (2) VI, 943, $6^h 31^m 55^s$.

February	9	+23	46	8.09
	20			8.04

Weisse VI, 990, $6^h 32^m 52^s$.

February	21	−14	1	21.86
	22			21.36
	29			22.65

51 Cephei, $6^h 33^m 38^s$.

March	7	+87	14	56.05
	15			55.55
	17			55.01

51 Cephei, S. P., $6^h 33^m 39^s$.

July	17	+87	14	53.29
	22			53.64

(*), $6^h 37^m 35^s$.

February	21	−14	33	27.32
March	3			27.20
	10			28.58

Weisse VI, 1198, $6^h 38^m 18^s$.

March	3	−14	35	11.25

a Canis Majoris, $6^h 38^m 59^s$.

December	26	−16	31	36.65

Weisse VI, 1199, $6^h 39^m 38^s$.

1856.		°	′	″
February	21	−14	33	54.48
March	3			53.64
	10			54.85

B. A. C. 2221, $6^h 40^m 27^s$.

February	9	−14	16	42.44
March	7			43.26

O. Arg. N. 7299, $6^h 42^m 25^s$.

February	20	+51	48	29.25
	29			28.45

(*), $6^h 47^m 7^s$.

February	9	−14	25	58.61
March	3			58.67

Weisse VI, 1579, $6^h 51^m 27^s$.

February	29	−14	45	24.17

Weisse VI, 1589, $6^h 51^m 40^s$.

February	20	−14	38	5.44
March	15			6.95

Weisse VI, 1618, $6^h 52^m 40^s$.

February	22	−14	47	26.86
	29			25.82
March	10			26.62

(*), $6^h 53^m 30^s$.

February	22	−14	49	49.43
	29			48.70

B. A. C. 2312, $6^h 56^m 57^s$.

March	3	+61	0	25.24
December	26			23.26

Rumker 2086, $6^h 57^m 11^s$.

December	26	+60	57	30.74

Piazzi VI, 328, $6^h 59^m 10^s$.

February	9	−14	39	43.40
March	7			43.51
	15			43.90
	17			42.56

(*), $7^h 2^m 2^s$.

March	7	−14	40	0.96
	10			0.39
	15			0.93

Weisse VII, 93, $7^h 3^m 58^s$.

February	22	−14	32	27.12

Weisse VII, 164, $7^h 5^m 42^s$.

February	22	−14	34	11.40

(*), $7^h 6^m 38^s$.

1856.		°	′	″
February	29	−14	38	59.32
March	10			60.19
	15			59.59

Weisse VII, 250, $7^h 8^m 44^s$.

February	9	−14	22	6.55
	20			7.11

Weisse VII, 290, $7^h 9^m 52^s$.

March	7	−14	36	46.90

Weisse VII, 300, $7^h 10^m 7^s$.

February	21	−14	37	44.68
	22			46.72
	29			45.30
March	7			45.75

Weisse VII, 316, $7^h 10^m 42^s$.

February	21	−14	36	4.53
	22			5.62
	29			4.83
March	15			4.57

Rumker 2175, $7^h 10^m 0^s$.

March	17	+60	9	21.58
	26			21.44

(*), $7^h 11^m 23^s$.

February	22	−14	36	17.18
	29			16.02
March	15			15.96

δ Geminorum, $7^h 11^m 46^s$.

February	20	+22	14	12.29
March	10			12.02
	26			11.29

(*), $7^h 14^m 0^s$.

February	21	−14	36	39.52
	22			40.38
	29			39.48
March	7			40.19

(*), $7^h 14^m 13^s$.

February	21	−14	36	48.77
	22			50.44
	29			49.31
March	7			49.76
	15			49.15

Weisse VII, 464, $7^h 15^m 36^s$.

March	19	−14	27	17.51
	26			15.90

Weisse VII, 500, $7^h 16^m 50^s$.

February	22	−14	36	45.59
	29			44.67
March	7			44.81
	15			45.57

WEISSE VII, 529, 7^{h} 17^{m} 42^{s}.

1856.		°	′	″
February	9	−14	28	4.80
March	19			8.68

(*), 7^{h} 18^{m} 42^{s}.

February	22	−14	36	37.38
	29			37.21
March	15			37.73

LALANDE 14637, 7^{h} 24^{m} 16^{s}.

February	20	+21	42	10.62
	21			10.14

a^2 GEMINORUM, 7^{h} 25^{m} 40^{s}.

February	9	+32	11	30.15
	26			29.25

WEISSE VII, 835, 7^{h} 27^{m} 20^{s}.

March	7	−14	13	25.27
	19			25.81

WEISSE VII, 871, 7^{h} 28^{m} 30^{s}.

February	22	−14	38	43.76

WEISSE VII, 924, 7^{h} 29^{m} 36^{s}.

March	19	−14	11	8.50

WEISSE VII, 968, 7^{h} 31^{m} 48^{s}.

March	17	+10	42	39.27

(*), 7^{h} 32^{m} 10^{s}.

February	22	−14	40	18.28
March	3			16.08

(*), 7^{h} 34^{m} 6^{s}.

February	21	−14	19	20.15
March	15			21.21

B. A. C. 2544, 7^{h} 35^{m} 1^{s}.

December	26	+22	43	33.11

β GEMINORUM, 7^{h} 36^{m} 45^{s}.

March	7	+28	21	38.97

WEISSE VII, 1181, 7^{h} 39 4^{s}.

February	20	−14	20	54.30
	21			54.89
March	15			56.91

WEISSE VII, 1182, 7^{h} 39^{m} 7^{s}.

February	20	−14	21	10.30
	21			9.80

RUMKER 2282, 7^{h} 39^{m} 29^{s}.

March	17	+13	9	33.58
	19			33.51

(*), 7^{h} 40^{m} 58^{s}.

1856.		°	′	″
March	15	−14	16	7.42

(*), 7^{h} 41^{m} 0^{s}.

February	22	−14	26	24.48
March	3			22.52

(*), 7^{h} 41^{m} 44^{s}.

March	17	+13	9	43.00
	19			42.74

(*), 7^{h} 42^{m} 33^{s}.

February	21	−14	15	59.42
March	15			54.42

LALANDE 15323, 7^{h} 44^{m} 54^{s}.

February	29	+20	32	11.80
March	10			10.01

(*), 7^{h} 46^{m} 0^{s}.

March	10	+20	32	30.62

(*), 7^{h} 46^{m} 52^{s}.

March	26	+39	39	1.57

(*), 7^{h} 50^{m} 3^{s}.

February	21	+20	31	48.23
	22			47.76

O. ARG. N. 8531, 7^{h} 53^{m} 40^{s}.

February	29	+58	9	55.19
March	3			55.58

RUMKER 2390, 7^{h} 56^{m} 50^{s}.

February	21	+36	40	7.12
	22			7.13

WEISSE (2) VII, 1597, 7^{h} 58^{m} 13^{s}.

March	15	+16	46	53.74

WEISSE (2) VIII, 1659, 8^{h} 0^{m} 12^{s}.

March	15	+16	49	2.36

ρ ARGUS, 8^{h} 1^{m} 35^{s}.

March	3	−23	54	9.21
April	1			10.86

WEISSE (2) VIII, 22, 8^{h} 3^{m} 1^{s}.

March	15	+16	46	8.45

LALANDE 16237, 8^{h} 10^{m} 47^{s}.

April	6	+24	36	28.75
	8			28.53

B. A. C. 2788, 8^{h} 12^{m} 13^{s}.

1856.		°	′	″
February	21	+21	11	11.77
	29			11.23
March	15			11.54

(*), 8^{h} 13^{m} 37^{s}.

April	6	+24	27	56.20
	8			55.25

WEISSE (2) VIII, 319, 8^{h} 14^{m} 49^{s}.

March	3	+21	0	49.67
April	1			50.08

WEISSE (2) VIII, 364, 8^{h} 16^{m} 38^{s}.

April	6	+24	23	36.29
	8			34.91

WEISSE (2) VIII, 370, 8^{h} 16^{m} 48^{s}.

March	19	+19	37	11.87
	29			12.88

LALANDE 16464, 8^{h} 17^{m} 3^{s}.

April	9	+24	0	2.08

WEISSE (2) VIII, 382, 8^{h} 17^{m} 28^{s}.

February	21	+40	20	46.42
	22			45.92

WEISSE (2) VIII, 408, 8^{h} 18^{m} 29^{s}.

February	29	+40	17	52.87
March	15			52.72

WEISSE (2) VIII, 429, 8^{h} 19^{m} 2^{s}.

March	19	+19	42	39.19

WEISSE (2) VIII, 438, 8^{h} 19^{m} 27^{s}.

February	21	+40	23	43.29
	22			44.02

O. ARG. N. 9050, 8^{h} 22^{m} 16^{s}.

March	3	+55	49	33.04

WEISSE (2) VIII, 560, 8^{h} 24^{m} 19^{s}.

February	29	+19	4	29.17
March	15			28.10

(*), 8^{h} 27^{m} 58^{s}.

April	6	+23	56	30.85
	11			30.96

(*), 8^{h} 28^{m} 30^{s}.

April	8	+24	32	42.38

WEISSE (2) VIII, 675, 8^{h} 28^{m} 41^{s}.

April	9	+23	44	0.00

WEISSE VIII, 736, 8^{h} 28^{m} 47^{s}.

1856.		°	′	″
March	19	+12	20	15.19

(*), 8^{h} 29^{m} 53^{s}.

March	3	− 9	13	48.77

(*), 8^{h} 30^{m} 50^{s}.

March	31	+ 6	52	33.83

(*), 8^{h} 31^{m}.

April	6	+23	22	44.75

(*), 8^{h} 34^{m} 31^{s}.

March	29	−14	21	41.75

(*), 8^{h} 35^{m} 13^{s}.

April	9	+23	1	37.21
	11			37.64

WEISSE (2) VIII, 898, 8^{h} 35^{m} 34^{s}.

April	6	+23	12	51.83
	8			51.26

WEISSE (2) VIII, 969, 8^{h} 38^{m} 53^{s}.

February	21	+40	6	28.39
	22			28.70
	29			29.03

ε HYDRÆ, 8^{h} 39^{m} 22^{s}.

March	3	+ 6	55	49.31
	17			48.56
	19			46.89
	24			48.87
	31			48.09

WEISSE (2) VIII, 1018, 8^{h} 40^{m} 50^{s}.

April	6	+22	45	35.09
	8			33.45

WEISSE (2) VIII, 1013, 8^{h} 40^{m} 52^{s}.

February	21	+40	6	19.40
	22			19.03
	29			19.82

(*), 8^{h} 40^{m} 55^{s}.

April	6	+22	42	59.87

B. A. C. 2995, 8^{h} 43^{m} 13^{s}.

March	25	+15	52	3.25
	31			2.40

WEISSE (2) VIII, 1098, 8^{h} 44^{m} 26^{s}.

April	9	+22	54	45.84
	11			45.88

WEISSE (2) VIII, 1145, 8^{h} 46^{m} 26^{s}.

April	8	+22	20	59.44
	18			59.43

Weisse (2) VIII, 1181, $8^{h}\ 47^{m}\ 53^{s}$.

1856.		° ′ ″
April	6	+22 13 29.11

Rumker 2699, $8^{h}\ 48^{m}\ 54^{s}$.

March	3	+18 0 59.29
	15	59.24
	17	58.39

Lalande 17662, $8^{h}\ 49^{m}\ 34^{s}$.

February	29	−13 22 15.35
March	19	15.25

ι Ursæ Majoris, $8^{h}\ 49^{m}\ 36^{s}$.

February	21	+48 35 18.55
March	29	18.93

Rumker 2702, $8^{h}\ 49^{m}\ 40^{s}$.

April	1	+54 19 7.95

Weisse VIII, 1282, $8^{h}\ 49^{m}\ 50^{s}$.

February	29	−13 23 47.69
March	19	48.11

(*), $8^{h}\ 50^{m}\ 13^{s}$.

March	25	−13 9 40.01
	31	41.03

Weisse (2) VIII, 1252, $8^{h}\ 50^{m}\ 46^{s}$.

April	11	+21 42 25.27

Weisse (2) VIII, 1291, $8^{h}\ 52^{m}\ 40^{s}$.

April	18	+22 0 39.67

Weisse VIII, 1367, $8^{h}\ 53^{m}\ 16^{s}$.

March	3	+ 9 5 37.75
	15	39.06
	17	37.27

Weisse (2) VIII, 1322, $8^{h}\ 54^{m}\ 14^{s}$.

April	6	+21 32 19.25
	8	18.01

Weisse VIII, 1439, $8^{h}\ 56^{m}\ 30^{s}$.

March	19	−13 27 8.82
	31	7.95
April	1	9.69

Weisse (2) VIII, 1438, $8^{h}\ 58^{m}\ 43^{s}$.

April	6	+21 4 31.03
	8	30.85

Weisse (2) 1446, VIII, $8^{h}\ 59^{m}\ 5^{s}$.

April	6	+21 9 27.95
	8	27.85

Weisse (2) VIII, 1475, $8^{h}\ 59^{m}\ 53^{s}$.

1856.		° ′ ″
April	11	+21 27 30.39
	18	30.20

Weisse (2) IX, 79, $9^{h}\ 4^{m}\ 53^{s}$.

April	11	+20 35 43.67

Weisse (2) IX, 81, $9^{h}\ 4^{m}\ 54^{s}$.

April	11	+20 37 15.35

(*), $9^{h}\ 8^{m}\ 38^{s}$.

April	8	+20 13 37.41

Weisse (2) IX, 207, $9^{h}\ 10^{m}\ 49^{s}$.

April	6	+20 0 27.81
	11	26,77

83 Cancri, $9^{h}\ 11^{m}\ 10^{s}$.

April	1	+18 17 49.03

B. A. C. 3181, $9^{h}\ 12^{m}\ 45^{s}$.

April	18	+19 40 52.63

(*), $9^{h}\ 13^{m}\ 29^{s}$.

April	6	+20 1 58.15
	11	57.89

O. Arg. N. 9842, $9^{h}\ 15^{m}\ 9^{s}$.

February	29	+50 52 33.18
March	3	34.00

O. Arg. N. 9844, $9^{h}\ 15^{m}\ 12^{s}$.

March	19	+50 46 17.10
	24	17.47

B. A. C. 3194, $9^{h}\ 15^{m}\ 25^{s}$.

March	29	+25 46 45.10

Weisse (2) IX, 377, $9^{h}\ 18^{m}\ 8^{s}$.

April	1	+23 14 49.47

Weisse (2) IX, 383, $9^{h}\ 18^{m}\ 17^{s}$.

April	1	+23 14 47.49

α Hydræ, $9^{h}\ 20^{m}\ 42^{s}$.

February	29	− 8 3 11.25

Weisse (2) IX, 486, $9^{h}\ 23^{m}\ 29^{s}$.

March	3	+25 1 42.81

θ Ursæ Majoris, $9^{h}\ 23^{m}\ 29^{s}$.

April	18	+52 18 46.35

Weisse IX, 563, $9^{h}\ 26^{m}\ 3^{s}$.

1856.		° ′ ″
March	19	+12 42 23.21
	24	23.97

Weisse IX, 579, $9^{h}\ 26^{m}\ 47^{s}$.

March	25	+12 9 2.88
	29	4.49
April	1	4.35

Weisse (2) IX, 650, $9^{h}\ 30^{m}\ 44^{s}$.

April	18	+21 46 55.48

(*), $9^{h}\ 31^{m}\ 15^{s}$.

March	24	+12 40 54.17
	31	52.16

Weisse (2) IX, 660, $9^{h}\ 31^{m}\ 17^{s}$.

March	25	+21 5 29.48
	29	30.45

Weisse (2) IX, 662, $9^{h}\ 31^{m}\ 20^{s}$.

April	18	+21 49 41.00

Weisse (2) IX, 686, $9^{h}\ 32^{m}\ 43^{s}$.

March	3	+39 35 19.72
	19	17.81

B. A. C. 3318, $9^{h}\ 35^{m}\ 32^{s}$.

April	1	+20 49 53.04
	8	52.86

ε Leonis, $9^{h}\ 37^{m}\ 54^{s}$.

March	24	+24 25 0.44

(*), $9^{h}\ 39^{m}\ 6^{s}$.

March	25	+11 1 59.45

Weisse IX, 868, $9^{h}\ 40^{m}\ 0^{s}$.

March	31	−11 17 32.09

Weisse IX, 871, $9^{h}\ 40^{m}\ 14^{s}$.

March	19	+11 1 53.08
	25	53.05
	29	53.92

Weisse IX, 887, $9^{h}\ 40^{m}\ 50^{s}$.

April	1	+11 12 24.54

Weisse IX, 1024, $9^{h}\ 47^{m}\ 20^{s}$.

April	9	+10 46 21.47
	11	22.08

Rumker 3002, $9^{h}\ 47^{m}\ 50^{s}$.

March	31	+19 29 2.44
April	8	2.48

Weisse (2) IX, 1047, $9^{h}\ 49^{m}\ 19^{s}$.

1856.		° ′ ″
March	29	+17 43 16.59
April	1	15.59

Weisse (2) IX, 1096, $9^{h}\ 51^{m}\ 43^{s}$.

March	19	+18 46 32.75
	25	31.74

(*), $9^{h}\ 56^{m}\ 4^{s}$.

March	29	+13 32 16.78

Rumker 3061, $9^{h}\ 57^{m}\ 22^{s}$.

March	29	+13 31 29.21
April	8	30.20

Weisse (2) IX, 1214, $9^{h}\ 57^{m}\ 27^{s}$.

April	1	+18 14 48.17
	9	48.12
	11	48.27

Weisse IX, 1259, $9^{h}\ 59^{m}\ 6^{s}$.

March	25	+13 27 47.33

Weisse (2) IX, 1273, $9^{h}\ 59^{m}\ 55^{s}$.

March	19	+39 26 49.38

Rumker 3069, $10^{h}\ 0^{m}\ 45^{s}$.

April	26	+12 40 46.60

α Leonis, $10^{h}\ 0^{m}\ 55^{s}$.

April	26	+12 38 59.12
May	12	61.41

Weisse (2) X, 1316, $10^{h}\ 1^{m}\ 32^{s}$.

March	24	+21 1 2.01

Weisse X, 45, $10^{h}\ 4^{m}\ 5^{s}$.

April	11	+12 43 30.22
	26	29.70

Weisse (2) X, 106, $10^{h}\ 5^{m}\ 23^{s}$.

March	25	+17 13 31.07
	29	31.67
	31	30.89
April	1	29.75

Rumker 3106, $10^{h}\ 7^{m}\ 42^{s}$.

March	19	+12 22 5.14

Weisse (2) X, 157, $10^{h}\ 8^{m}\ 13^{s}$.

April	8	+41 58 19.36
	9	19.08

Weisse (2) X, 165, $10^{h}\ 8^{m}\ 46^{s}$.

April	8	+43 20 4.98
	9	5.17

Σ Cat. Gen. 1198, 10^{h} 13^{m} 33^{s}.

1856.		°	′	″
March	25	+44	36	34.24
	29			34.43

Weisse X, 224, 10^{h} 13^{m} 40^{s}.

March	24	− 4	40	45.16

Weisse X, 229, 10^{h} 14^{m} 2^{s}.

March	24	− 4	42	46.11

B. A. C. 3559, 10^{h} 17^{m} 41^{s}.

April	8	+36	8	12.82
	9			12.49

B. A. C. 3560, 10^{h} 17^{m} 53^{s}.

March	31	+34	30	27.39
April	1			27.38

Weisse (2) X, 360, 10^{h} 18^{m} 48^{s}.

April	29	+17	56	6.47

Weisse X, 316, 10^{h} 19^{m} 0^{s}.

April	11	+11	12	55.96
	26			55.33

Weisse (2) X, 374, 10^{h} 19^{m} 18^{s}.

April	29	+17	55	58.69

Weisse X, 330, 10^{h} 19^{m} 41^{s}.

April	11	+11	9	27.50

O. Arg. N. 10857, 10^{h} 20^{m} 10^{s}.

March	19	+45	55	31.94
	24			33.95
	25			33.20

Rumker 3209, 10^{h} 22^{m} 2^{s}.

March	29	+17	41	44.13

O. Arg. N. 10911, 10^{h} 24^{m} 7^{s}.

April	22	+44	54	1.83
	26			1.32

(*), 10^{h} 27^{m} 18^{s}.

March	31	− 9	10	38.93
April	1			38.55
	8			39.52

Weisse X, 520, 10^{h} 29^{m} 33^{s}.

April	9	−11	28	44.84

Weisse X, 526, 10^{h} 29^{m} 42^{s}.

March	31	− 9	6	25.73
April	29			25.77

O. Arg. N. 11017 10^{h} 31^{m} 46^{s}.

1856.		°	′	″
March	19	+47	34	11.40
	24			11.90
	25			11.86

(*), 10^{h} 34^{m} 0^{s}.

April	1	−11	28	6.25
	9			7.27
	11			7.10

Weisse (2) X, 693, 10^{h} 34^{m} 26^{s}.

April	29	+37	15	0.33

Weisse (2) X, 754, 10^{h} 37^{m} 22^{s}.

March	24	+39	40	31.54
	25			31.95
April	8			31.20

Weisse (2) X, 776, 10^{h} 38^{m} 22^{s}.

March	19	+36	22	22.10
	29			23.24
	31			24.11

l Leonis, 10^{h} 41^{m} 53^{s}.

April	8	+11	17	6.21
	9			5.53
	11			6.51
	22			7.32

Weisse (2) X, 961, 10^{h} 48^{m} 0^{s}.

March	24	+35	49	1.92
	25			1.57

O. Arg. N. 11258, 10^{h} 48^{m} 53^{s}.

April	11	+47	56	52.49
	22			53.23

(*), 10^{h} 49^{m} 18^{s}.

March	29	+35	56	43.10
	31			43.34
April	1			43.07

(*), 10^{h} 50^{m} 12^{s}.

April	1	+35	54	28.44
	8			28.55

Weisse X, 914, 10^{h} 50^{m} 52^{s}.

April	9	+10	26	56.80
	29			56.79

Weisse (2) X, 1022, 10^{h} 51^{m} 14^{s}.

April	8	+35	52	59.19
	26			59.25

O. Arg. N. 11325, 10^{h} 52^{m} 58^{s}.

March	24	+48	25	58.75
	25			58.57
April	22			59.68

α Ursæ Majoris, 10^{h} 55^{m} 3^{s}.

1856.		°	′	″
March	29	+62	30	22.10
	31			21.33
April	1			21.89
	9			21.79
	11			22.05

δ Leonis, 11^{h} 6^{m} 39^{s}.

April	1	+21	17	25.03
	8			24.90
	9			24.64
	11			25.10
	26			25.30

Weisse (2) XI, 126, 11^{h} 7^{m} 33^{s}.

March	24	+32	55	23.15

δ Crateris, 11^{h} 12^{m} 21^{s}.

April	1	−14	1	16.41
	8			17.17
	9			17.95
	11			16.54

Weisse XI, 217, 11^{h} 13^{m} 28^{s}.

April	26	−11	54	29.65
	29			29.86

Weisse XI, 233, 11^{h} 14^{m} 23^{s}.

March	24	+ 4	58	31.90

Lalande 21645, 11^{h} 14^{m} 28^{s}.

April	29	−11	56	1.31

Weisse XI, 253, 11^{h} 15^{m} 24^{s}.

April	26	−11	53	5.80

Weisse XI, 258, 11^{h} 15^{m} 52^{s}.

March	24	+ 4	54	16.90

B. A. C. 3915, 11^{h} 23^{m} 11^{s}.

April	26	+19	10	50.40

Rumker 3615, 11^{h} 24^{m} 12^{s}.

April	22	+18	31	24.39

Weisse XI, 462, 11^{h} 27^{m} 14^{s}.

March	24	− 4	45	15.67
April	29			15.41

Weisse (2) XI, 633, 11^{h} 32^{m} 54^{s}.

March	24	+26	55	49.91
April	29			49.46

Rumker 3706, 11^{h} 35^{m} 26^{s}.

April	9	+12	38	22.91
	22			24.39

(*), 11^{h} 39^{m} 27^{s}.

1856.		°	′	″
April	26	+24	45	20.76

β Leonis, 11^{h} 41^{m} 55^{s}.

March	24	+15	21	16.34
May	15			15.66

Weisse (2) XI, 822, 11^{h} 42^{m} 1^{s}.

April	9	+17	1	23.88
	29			23.78

Weisse (2) XI, 838, 11^{h} 42^{m} 52^{s}.

April	22	+18	39	48.93

Carrington 1762, 11^{h} 44^{m} 40^{s}.

April	26	+87	0	0.15

O. Arg. S. 11828, 11^{h} 53^{m} 25^{s}.

May	15	−21	3	25.67

(*), 11^{h} 53^{m} 29^{s}.

April	9	−15	4	60.46
	22			59.75

Weisse XI, 1023, 12^{h} 0^{m} 33^{s}.

April	26	+ 7	32	51.61

ε Corvi, 12^{h} 2^{m} 56^{s}.

April	9	−21	50	27.39
	22			26.19
May	15			27.53

Weisse XII, 119, 12^{h} 8^{m} 51^{s}.

April	26	+ 8	13	29.77

Weisse XII, 160, 12^{h} 11^{m} 0^{s}.

May	15	+ 5	52	21.51

Rumker 3907, 12^{h} 12^{m} 31^{s}.

April	22	+ 6	19	34.14
	26			33.28

η Virginis, 12^{h} 12^{m} 45^{s}.

April	29	+ 0	6	41.24

(*), 12^{h} 20^{m} 27^{s}.

May	15	− 6	48	20.59

Weisse (2) XII, 424, 12^{h} 20^{m} 34^{s}.

April	26	+25	0	10.56

Weisse XII, 335, 12^{h} 20^{m} 45^{s}.

April	22	− 6	47	31.66
May	15			31.87

Weisse (2) XII, 478, $12^{h}\ 22^{m}\ 57^{s}$.

1856.		°	′	″
April	26	+25	6	52.92

Weisse (2) XII, 599, $12^{h}\ 28^{m}\ 9^{s}$.

April	22	+22	39	15.38

Weisse XII, 519, $12^{h}\ 31^{m}\ 31^{s}$.

April	26	+14	34	39.36

(*), $12^{h}\ 31^{m}\ 48^{s}$.

April	26	+14	34	26.47

Weisse XII, 661, $12^{h}\ 38^{m}\ 50^{s}$.

May	19	−0	3	19.21

B. A. C. 4301, $12^{h}\ 41^{m}\ 54^{s}$.

April	29	+14	53	16.31

Weisse (2) XII, 877, $12^{h}\ 43^{m}\ 19^{s}$.

April	22	+18	25	0.76
	26			0.89

α Canum Venat., $12^{h}\ 49^{m}\ 28^{s}$.

April	29	+39	4	30.16

Lalande 24193, $12^{h}\ 52^{m}\ 42^{s}$.

April	26	+0	31	35.82

Weisse XII, 929, $12^{h}\ 54^{m}\ 25^{s}$.

April	22	+13	55	23.88
May	10			23.65
	15			22.72

Weisse XII, 933, $12^{h}\ 54^{m}\ 42^{s}$.

May	15	+13	55	43.81

Weisse XII, 1038, $13^{h}\ 0^{m}\ 35^{s}$.

April	26	+13	1	25.32

(*), $13^{h}\ 3^{m}\ 6^{s}$.

April	22	+13	4	3.71
	26			3.83

Weisse XIII, 44, $13^{h}\ 4^{m}\ 18^{s}$.

May	10	+12	57	34.11
	15			32.58

Weisse XIII, 69, $13^{h}\ 5^{m}\ 35^{s}$.

May	19	+12	18	7.17

Weisse XIII, 145, $13^{h}\ 9^{m}\ 46^{s}$.

April	26	+2	55	39.45

Weisse XIII, 181, $13^{h}\ 11^{m}\ 42^{s}$.

1856.		°	′	″
April	22	−1	47	32.58

Weisse XIII, 208, $13^{h}\ 13^{m}\ 6^{s}$.

May	15	+10	44	15.63

(*), $13^{h}\ 13^{m}\ 36^{s}$.

May	10	+12	59	3.77

α Virginis, $13^{h}\ 17^{m}\ 49^{s}$.

April	28	−10	25	45.63
May	10			44.94

Weisse XIII, 334, $13^{h}\ 21^{m}\ 25^{s}$.

April	22	+7	25	46.98
	26			47.72
May	15			47.00

Weisse XIII, 370, $13^{h}\ 23^{m}\ 21^{s}$.

May	19	+8	8	22.83

Weisse XIII, 472, $13^{h}\ 28^{m}\ 55^{s}$.

May	10	+7	13	39.99

(* 48) W., $13^{h}\ 28^{m}\ 40^{s}$.

May	15	+80	48	55.63

(* 50) W., $13^{h}\ 41^{m}\ 55^{s}$.

May	15	+78	21	58.77

η Ursæ Majoris, $13^{h}\ 42^{m}\ 1^{s}$.

April	26	+50	0	48.02
	28			48.45
May	10			48.32
	20			48.60

Weisse XIII, 808, $13^{h}\ 47^{m}\ 39^{s}$.

April	22	−11	45	33.77
	26			32.99

η Bootis, $13^{h}\ 48^{m}\ 1^{s}$.

May	20	+19	6	3.95

Rumker 4529, $13^{h}\ 51^{m}\ 5^{s}$.

May	19	+25	41	6.40

Weisse XIII, 893, $13^{h}\ 52^{m}\ 35^{s}$.

May	15	−12	1	29.85

Lalande 25762, $13^{h}\ 55^{m}\ 51^{s}$.

May	20	−13	40	47.94
	21			47.36

(*), $14^{h}\ 1^{m}\ 44^{s}$.

April	22	−6	8	50.33
	26			48.61

Weisse XIV, 31, $14^{h}\ 3^{m}\ 8^{s}$.

1856.		°	′	″
May	15	−5	53	46.22
	20			45.42

Weisse XIV, 130, $14^{h}\ 8^{m}\ 30^{s}$.

May	15	−8	43	25.07

α Bootis, $14^{h}\ 9^{m}\ 17^{s}$.

April	28	+19	54	46.62
May	10			47.55
	21			46.53

Weisse XIV, 179, $14^{h}\ 11^{m}\ 5^{s}$.

May	15	−8	45	37.93

Weisse XIV, 252, $14^{h}\ 14^{m}\ 48^{s}$.

May	20	−9	15	14.07

Rumker 4697, $14^{h}\ 18^{m}\ 49^{s}$.

May	10	+1	37	44.53
	19			41.32

B. A. C. 4798, $14^{h}\ 22^{m}\ 43^{s}$.

May	21	+1	27	19.13

Rumker 4730, $14^{h}\ 24^{m}\ 15^{s}$.

May	15	+1	32	3.47
	20			5.25

Weisse XIV, 540, $14^{h}\ 29^{m}\ 47^{s}$.

May	10	−3	16	45.64
	15			47.11
	19			46.13

B. A. C. 4869, $14^{h}\ 38^{m}\ 22^{s}$.

May	21	+1	18	38.78

ε Bootis, $14^{h}\ 38^{m}\ 52^{s}$.

May	15	+27	39	58.48

α^{1} Libræ, $14^{h}\ 42^{m}\ 57^{s}$.

May	15	−15	24	44.77

α^{2} Libræ, $14^{h}\ 43^{m}\ 8^{s}$.

May	22	−15	27	26.03

11 Libræ, $14^{h}\ 43^{m}\ 42^{s}$.

May	19	−1	42	47.71

Groombridge 2168, $14^{h}\ 50^{m}\ 49^{s}$.

May	20	+43	25	32.45
	22			31.59

Groombridge 2169, $14^{h}\ 50^{m}\ 51^{s}$.

May	22	+43	21	32.69

β Ursæ Minoris, $14^{h}\ 51^{m}\ 9^{s}$.

1856,		°	′	″
May	15	+74	43	40.01

O. Arg. N. 15053, $14^{h}\ 58^{m}\ 8^{s}$.

May	20	+45	11	37.15

Weisse XIV, 1131, $15^{h}\ 0^{m}\ 20^{s}$.

May	22	+0	27	22.98

Weisse XIV, 1142, $15^{h}\ 0^{m}\ 51^{s}$.

May	22	+0	29	3.69

Weisse XIV, 1150, $15^{h}\ 1^{m}\ 20^{s}$.

June	4	−13	27	40.09

Weisse XV, 2, $15^{h}\ 1^{m}\ 53^{s}$.

May	15	−2	2	18.50

Weisse XV, 79, $15^{h}\ 6^{m}\ 3^{s}$.

May	23	−13	29	45.31

Weisse (2) XV, 140, $15^{h}\ 6^{m}\ 32^{s}$.

May	20	+46	0	38.19

β Libræ, $15^{h}\ 9^{m}\ 29^{s}$.

June	4	−8	51	48.63

Weisse XV, 249, $15^{h}\ 14^{m}\ 49^{s}$.

May	20	−14	22	26.05
	22			26.33

Weisse XV, 281, $15^{h}\ 16^{m}\ 20^{s}$.

May	23	−13	48	29.24

Weisse XV, 287, $15^{h}\ 16^{m}\ 36^{s}$.

May	28	−9	48	57.57
July	21			58.35

Weisse XV, 400, $15^{h}\ 22^{m}\ 9^{s}$.

June	4	−14	19	43.35

α Coronæ Borealis, $15^{h}\ 28^{m}\ 46^{s}$.

May	20	+27	11	16.18
	28			16.78
June	20			16.65
July	5			18.05
	21			16.57

Lalande 28453, $15^{h}\ 30^{m}\ 44^{s}$.

May	21	−17	12	7.56

Weisse XV, 585, $15^{h}\ 31^{m}\ 28^{s}$.

May	19	−1	19	27.77

(*), $15^{h}\ 32^{m}\ 56^{s}$.

1856.		°	′	″
May	23	−15	32	14.64

Weisse XV, 620, $15^{h}\ 32^{m}\ 58^{s}$.

May	20	− 1	52	13.04
	28			11.77

B. A. C. 5184, $15^{h}\ 34^{m}\ 55^{s}$.

June	4	−15	33	40.94
	21			41.96

Lalande 28607, $15^{h}\ 35^{m}\ 35^{s}$.

June	18	−10	28	22.23

Lalande 28617, $15^{h}\ 36^{m}\ 1^{s}$.

July	1	−16	25	21.03

Lalande 28697, $15^{h}\ 37^{m}\ 54^{s}$.

May	21	−16	30	29.84
June	3			29.89

Weisse XV, 744, $15^{h}\ 39^{m}\ 16^{s}$.

June	20	−14	47	51.30

Weisse XV, 792, $15^{h}\ 41^{m}\ 56^{s}$.

May	22	−14	23	35.59
	23			37.18

Weisse XV, 828, $15^{h}\ 43^{m}\ 18^{s}$.

May	19	−10	33	47.87

Lalande 28838, $15^{h}\ 43^{m}\ 34^{s}$.

June	18	−18	30	42.86
July	1			42.35

(*), $15^{h}\ 43^{m}\ 44^{s}$.

May	22	−14	20	48.06

Weisse XV, 844, $15^{h}\ 44^{m}\ 0^{s}$.

July	21	− 2	39	49.34

Weisse XV, 845, $15^{h}\ 44^{m}\ 7^{s}$.

May	20	−14	12	41.61
	28			41.28

Weisse XV, 864, $15^{h}\ 45^{m}\ 26^{s}$.

June	3	−14	17	34.03
July	5			33.70

(*), $15^{h}\ 45^{m}\ 54^{s}$.

July	1	−18	31	53.43

Weisse XV, 939, $15^{h}\ 49^{m}\ 49^{s}$.

May	21	− 2	34	44.79

Weisse XV, 976, $15^{h}\ 51^{m}\ 55^{s}$.

1856.		°	′	″
May	20	−10	51	34.20
	22			34.38

Weisse XV, 1011, $15^{h}\ 53^{m}\ 53^{s}$.

May	20	−10	52	51.72
	22			51.72

Weisse XV, 1019, $15^{h}\ 54^{m}\ 19^{s}$.

May	20	−10	53	49.27
	22			49.25

B. A. C. 5324, $15^{h}\ 56^{m}\ 40^{s}$.

May	23	−10	59	1.04
	28			1.14

β^{1} Scorpii, $15^{h}\ 57^{m}\ 18^{s}$.

June	3	−19	25	7.52
	18			7.36
	19			8.13
July	1			8.23
	25			7.89

Weisse XV, 1093, $15^{h}\ 58^{m}\ 4^{s}$.

July	5	− 2	57	43.31
	10			43.52
	15			43.77

B. A. C. 5345, $15^{h}\ 59^{m}\ 28^{s}$.

May	21	−24	4	57.68

B. A. C. 5351, $15^{h}\ 59^{m}\ 50^{s}$.

June	20	−12	21	55.70

(*), $16^{h}\ 3^{m}\ 14^{s}$.

May	22	−21	13	8.24

(*), $16^{h}\ 5^{m}\ 49^{s}$.

May	20	−12	40	25.62
June	3			26.83
	16			24.68

Groombridge 2319, $16^{h}\ 5^{m}\ 20^{s}$.

June	18	+70	38	8.30
	19			8.82

B. A. C. 5408, $16^{h}\ 6^{m}\ 35^{s}$.

May	23	−18	10	19.73
July	15			20.31

δ Ophiuchi, $16^{h}\ 7^{m}\ 1^{s}$.

June	21	− 3	19	50.49
	27			50.90
July	14			52.02
	25			51.46

Weisse XVI, 121, $16^{h}\ 7^{m}\ 20^{s}$.

July	10	−12	52	7.54

(*), $16^{h}\ 10^{m}\ 11^{s}$.

1856.		°	′	″
May	22	−13	5	43.52

Lalande 29696, $16^{h}\ 11^{m}\ 28^{s}$.

July	21	−18	29	5.32

(* 11) W., $16^{h}\ 12^{m}\ 25^{s}$.

June	21	−21	30	2.08

O. Arg. N. 16117, $16^{h}\ 15^{m}\ 41^{s}$.

July	15	+71	10	49.88

B. A. C. 5467, $16^{h}\ 15^{m}\ 55^{s}$.

May	21	−19	42	21.17

α Scorpii, $16^{h}\ 20^{m}\ 50^{s}$.

May	20	−26	7	2.97
	22			2.87
	28			2.85
June	27			2.87
July	1			2.56
	5			3.52
	14			4.69
	17			4.03
	21			2.81
	25			3.27

η Draconis, $16^{h}\ 22^{m}\ 6^{s}$.

July	22	+61	49	55.35

(*), $16^{h}\ 27^{m}\ 46^{s}$.

May	20	− 4	7	22.76
	22			22.64

Lalande 30207, $16^{h}\ 29^{m}\ 57^{s}$.

May	28	−22	36	19.21

(*), $16^{h}\ 30^{m}\ 42^{s}$.

July	1	−26	10	44.49
	10			45.08
	17			46.36

O. Arg. S. 15811, $16^{h}\ 31^{m}\ 35^{s}$.

July	1	−26	10	23.73
	10			23.03
	17			23.12

(*), $16^{h}\ 34^{m}\ 29^{s}$.

July	1	−26	11	12.42
	10			12.08
	17			12.84

Lalande 30479, $16^{h}\ 38^{m}\ 42^{s}$.

June	19	−19	50	25.06

Lalande 30556, $16^{h}\ 41^{m}\ 31^{s}$.

May	20	−26	29	36.48
	22			36.90
June	3			37.96
	18			36.85
July	1			36.88
	4			37.06
	10			36.92

(*), $16^{h}\ 43^{m}\ 10^{s}$.

1856.		°	′	″
May	20	−26	37	47.08
	22			49.11
	28			48.50
June	20			49.70
	21			48.90

(*), $16^{h}\ 43^{m}\ 33^{s}$.

May	20	−26	40	38.66
	22			39.14
	28			37.58
June	21			38.87

Lalande 30641, $16^{h}\ 44^{m}\ 9^{s}$.

May	23	−19	6	53.85
July	21			54.03

(*), $16^{h}\ 44^{m}\ 16^{s}$.

June	3	−26	30	41.84
	19			40.15
July	10			40.82
	15			39.67

Lalande 30671, $16^{h}\ 45^{m}\ 5^{s}$.

July	22	− 4	54	41.35

B. A. C. 5663, $16^{h}\ 45^{m}\ 9^{s}$.

June	2	−20	10	38.21
July	26			40.35

(*), $16^{h}\ 45^{m}\ 34^{s}$.

July	1	−26	30	19.36
	4			19.31
	10			21.19
	15			20.76

(*), $16^{h}\ 48^{m}\ 48^{s}$.

July	10	−26	27	34.27

Lalande 30788, $16^{h}\ 49^{m}\ 21^{s}$,

May	23	−21	33	2.88
	28			2.46
	26			4.11

O. Arg. S. 16158, $16^{h}\ 49^{m}\ 48^{s}$.

June	3	−26	53	25.06
	19			23.99
	21			24.43
July	1			24.56

O. Arg. S. 16168, $16^{h}\ 50^{m}\ 41^{s}$.

June	3	−26	57	37.84
	19			36.67
	21			37.96
July	1			37.12

O. Arg. S. 16206, $16^{h}\ 52^{m}\ 36^{s}$.

May	20	−27	2	17.89
	21			18.29
	22			18.39
June	18			18.34

O. Arg. S. 16208, $16^{h}\ 52^{m}\ 45^{s}$.

May	22	−27	3	42.55
June	18			41.79

O. ARG. S. 16240, 16^h 54^m 22^s.

1856.		°	′	″
July	1	−26	53	31.35

O. ARG. S. 16262, 16^h 55^m 18^s.

May	20	−27	0	38.73
	21			40.07
	22			39.60
June	18			38.51

GROOMBRIDGE 2411, 16^h 59^m 5^s.

June	20	+73	20	17.92

B. A. C. 5771, 17^h 0^m 7^s.

June	2	−17	25	10.33
	19			10.51
July	17			10.99

O. ARG. S. 16366, 17^h 0^m 21^s.

May	22	−27	12	41.09
	23			39.74
	28			41.00
June	18			40.35

ε URSÆ MINORIS, 17^h 0^m 27^s.

July	4	+82	15	41.00
	10			40.78
	15			41.93
	21			41.62
	22			42.23
	24			41.49
	26			41.36

GROOMBRIDGE 2418, 17^h 3^m 21^s.

June	21	+73	23	23.42
July	1			22.56

O. ARG. S. 16532, 17^h 7^m 44^s.

May	20	−27	23	56.32
	22			55.79
June	3			55.18
	19			54.32

α HERCULIS, 17^h 8^m 16^s.

July	22	+14	33	9.98
	24			9.69
	26			10.10
August	6			8.96

B. A. C. 5827, 17^h 9^m 29^s.

July	25	−24	7	48.26

B. A. C. 5829, 17^h 9^m 29^s.

July	25	−24	7	40.44

(*), 17^h 11^m 20^s.

May	22	−27	37	22.29
	28			20.71
June	2			21.08
	3			22.19
	19			20.82

B. A. C. 5839, 17^h 11^m 45^s.

1856.		°	′	″
May	23	−17	36	21.32
June	18			23.00
	20			21.96
	27			21.44

WEISSE XVII, 202, 17^h 12^m 31^s.

July	21	− 5	45	42.57

(*), 17^h 13^m 28^s.

May	20	−27	51	34.32
	21			36.10
	22			35.12
July	14			36.40
	17			34.85

(*), 17^h 13^m 47^s.

June	16	−24	48	47.08

O. ARG S. 16676, 17^h 14^m 0^s.

June	3	−27	32	7.01
	19			5.35
July	10			7.69
	15			7.09

LALANDE 31543, 17^h 14^m 27^s.

May	28	−17	33	46.62
June	18			46.79
	20			46.59
	27			45.81

(*), 17^h 14^m 28^s.

June	21	−27	49	42.74
July	1			43.95
	4			42.51

WEISSE XVII, 254, 17^h 15^m 12^s.

July	22	− 6	11	10.84

LALANDE 31784, 17^h 21^m 31^s.

May	20	−17	41	22.17
	22			21.44
June	3			22.62
	19			21.91

O. ARG. S. 16854, 17^h 21^m 49^s.

May	20	−17	41	44.23
	22			44.42
	23			44.78
June	3			44.79
	18			44.95
	19			44.58

LALANDE 31931, 17^h 25^m 49^s.

May	20	−17	44	0.15
	22			0.32
	28			0.73
June	3			0.39
	18			0.85

β DRACONIS, 17^h 27^m 17^s.

1856.		°	′	″
July	1	+52	24	24.14
	4			23.93
	15			23.34
	21			23.60
	22			22.95

MADRAS 1165, 17^h 26^m 58^s.

August	6	−24	31	40.35

α OPHIUCHI, 17^h 28^m 26^s.

June	21	+12	39	54.27
July	10			54.32
	17			54.35
August	7			53.66
	9			54.01

LALANDE 32045, 17^h 29^m 18^s.

August	22	−24	52	33.89

B. A. C. 5946, 17^h 29^m 22^s.

May	20	−27	57	25.59
	21			26.66
	22			25.43
June	20			26.26

O. ARG. S. 17063, 17^h 32^m 33^s.

June	3	−18	0	15.29
	18			15.43
	19			15.63

O. ARG. S. 17068, 17^h 32^m 56^s.

June	3	−18	4	9.12
	19			10.46

(*), 17^h 33^m 8^s.

August	22	−19	22	40.29

O. ARG. S. 17098, 17^h 34^m 7^s.

August	9	−19	19	40.67

O. ARG. S. 17114, 17^h 35^m 2^s.

August	9	−19	26	10.94

TAYLOR 8219, 17^h 39^m 16^s.

May	20	−18	2	60.43
	22			60.53
	23			59.93
June	3			60.44
	18			60.49
	19			60.73

WEISSE XVII, 787, 17^h 40^m 10^s.

July	22	−13	33	7.46
	25			7.33

μ HERCULIS, 17^h 40^m 59^s.

July	10	+27	48	18.44
	17			18.13
August	6			18.04

WEISSE XVII, 810, 17^h 41^m 17^s.

1856.		°	′	″
June	2	−11	17	24.05
July	15			24.18
	24			24.68

WEISSE XVII, 834, 17^h 42^m 33^s.

May	28	−12	6	53.09
June	21			53.62

WEISSE XVII, 835, 17^h 42^m 38^s.

June	14	−12	53	23.54
July	26			24.82

LALANDE 32559, 17^h 43^m 14^s.

August	22	−25	43	49.01

WEISSE XVII, 867, 17^h 44^m 3^s.

August	7	−14	59	8.30
	9			7.01

B. A. C. 6041, 17^h 44^m 14^s.

August	22	−19	4	50.51

(*), 17^h 44^m 31^s.

May	20	−28	1	10.01
	21			9.68
	22			10.67
June	19			9.92

LALANDE 32706, 17^h 46^m 53^s.

May	28	−18	15	41.16
June	2			39.56
	18			39.93
	20			39.52

B. A. C. 6063, 17^h 47^m 51^s.

May	21	−28	2	17.50
	22			18.28
June	3			18.86
	19			17.79

B. A. C. 6065, 17^h 48^m 16^s

July	14	−15	47	1.78
	22			1.10
	25			0.99

WEISSE XVII, 966, 17^h 48^m 20^s.

July	10	−15	9	20.02

(*), 17^h 48^m 21^s.

July	4	−15	17	51.07
	24			51.32

MADRAS 1209, 17^h 48^m 45^s.

June	21	−15	39	34.02
August	7			32.85

O. ARG. S. 17433, 17^h 50^m 35^s.

July	26	−15	35	13.33

(*), 17^h 52^m 28^s.

1856.		°	′	″
June	21	−15	39	25.47
August	22			25.48

(*), 17^h 53^m 2^s.

May	23	−27	52	5.62
	28			6.00
June	19			6.28
	20			7.16

γ DRACONIS, 17^h 53^m 21^s.

July	15	+51	30	24.62
	17			24.63

(*), 17^h 54^m 5^s.

May	21	−27	49	17.06
	22			17.18
June	3			17.91
July	1			17.25

O. ARG. S. 17558, 17^h 55^m 52^s.

May	28	−27	51	54.19
June	19			54.16

LALANDE 33089, 17^h 56^m 30^s.

July	22	−17	1	60.26
	24			59.12

O. ARG. S. 17576, 17^h 56^m 31^s.

May	22	−27	50	14.01
	28			13.93
June	3			13.74
July	1			13.42

(*), 17^h 59^m 37^s.

May	22	−27	39	26.84
	23			28.04
June	18			27.14
July	4			28.93
	10			28.10
	14			29.76
	15			28.47
	17			28.83

O. ARG. S. 17695, 18^h 0^m 27^s.

June	2	−27	45	2.73
	3			4.29
	19			2.48
July	1			2.99

(*33) W., 18^h 2^m 52^s.

July	24	−17	13	33.75
	26			34.42

B. A. C. 6161, 18^h 3^m 10^s.

July	25	−23	43	32.15

O. ARG. S. 17833, 18^h 4^m 44^s.

May	28	−25	10	50.45
June	3			51.56
	19			51.36
July	4			49.94

(*), 18^h 5^m 22^s.

1856.		°	′	″
June	2	−27	32	5.23
	18			6.89
	21			6.66
July	1			5.71

μ¹ SAGITTARII, 18^h 5^m 23^s.

August	15	−21	5	27.77
September	26			28.88

(*34) W., 18^h 6^m 29^s.

July	22	−17	23	55.62

O. ARG. S. 17922, 18^h 7^m 17^s.

May	23	−25	45	0.64
June	14			3.23
	15			1.99
	20			2.62

(*), 18^h 7^m 36^s.

May	21	−27	27	14.37
	22			13.05
July	10			15.15

O. ARG. S. 17975, 18^h 9^m 3^s.

Aug.	9	−23	38	7.00

B. A. C. 6194, 18^h 9^m 17^s.

May	30	−27	5	19.94
June	3			20.06
	27			20.72
July	17			22.04

LALANDE 33598, 18^h 9^m 37^s.

June	18	−18	50	41.15
	19			41.42
July	4			42.62

(*), 18^h 10^m 0^s.

May	28	−25	59	3.08
June	21			2.76
July	1			2.46

LALANDE 33684, 18^h 11^m 24^s.

July	24	−23	22	6.07
August	15			5.40

LALANDE 33694, 18^h 11^m 40^s.

July	26	−17	48	16.16
August	20			14.67

B. A. C. 6214, 18^h 12^m 30^s.

May	20	−26	8	33.06
	22			33.43
July	15			33.77

LALANDE 33748, 18^h 13^m 9^s.

June	18	−18	55	4.68
	19			5.78
July	15			6.67

(*), 18^h 13^m.

1856.		°	′	″
June	21	−26	31	6.76

(*), 18^h 13^m.

June	21	−26	30	30.17

TAYLOR 8458, 18^h 13^m 38^s.

May	30	−26	28	38.09
July	1			38.85
	10			39.07
	17			38.92

B. A. C. 6222, 18^h 13^m 33^s.

July	25	−22	58	54.59
August	7			54.53

O. ARG. S. 18151, 18^h 15^m 26^s.

June	3	−26	30	53.46
	18			53.78

O. ARG. S. 18160, 18^h 15^m 55^s.

May	28	−26	33	41.65
	30			42.13
June	3			42.23
	18			41.91
	21			42.52

δ URSÆ MINORIS, 18^h 17^m 30^s.

July	17	+86	36	7.53
	22			7.33

δ URSÆ MINORIS, S. P., 18^h 17^m 30^s.

March	15	+86	36	6.35
	17			5.81

O. ARG. S. 18229, 18^h 19^m 0^s.

May	20	−26	42	45.29
	21			46.31
	22			46.35
	23			46.55

B. A. C. 6266, 18^h 19^m 38^s.

July	25	−23	4	54 22
August	22			54.26
	23			54.43

(*18) W., 18^h 19^m 45^s.

July	24	−22	29	42.64
	26			43.84
August	15			44.33

(*17) W., 18^h 21^m 13^s.

July	15	−22	46	11.18
August	20			10.29

B. A. C. 6293, 18^h 23^m 11^s.

August	7	−18	21	18.63
	9			17.76

B. A. C. 6294, 18^h 23^m 14^s.

1856.		°	′	″
August	6	−18	29	40.50
	22			42.06

B. A. C. 6301, 18^h 24^m 15^s.

May	20	−19	4	5.95
	22			6.56
June	2			6.96
	3			7.27

LALANDE 34229, 18^h 24^m 19^s.

July	26	−22	13	57.27

O. ARG. S. 18413, 18^h 26^m 53^s.

August	25	−22	11	46.56

LALANDE 34354, 18^h 27^m 23^s.

August	7	−18	39	26.77
	15			26.03

LALANDE 34401, 18^h 28^m 20^s.

July	24	−18	53	48.34
August	9			48.24

(*19) W., 18^h 29^m 8^s.

August	20	−21	48	46.61
	23			46.83

B. A. C. 6336, 18^h 29^m 31^s.

August	25	−21	30	32.58

(*35) W., 18^h 30^m 30^s.

July	24	−18	53	59.92
August	9			59.22

(*20) W., 18^h 32^m 20^s.

July	26	−21	46	55.35
August	23			55.60

α LYRÆ, 18^h 32^m 12^s.

May	22	+38	39	20.25
	23			19.66
June	3			20.28
July	10			20.72
	15			19.40
October	8			19.42

(*36) W., 18^h 36^m 2^s.

July	24	−18	53	53.17
August	9			52.33

(*21) W., 18^h 36^m 32^s.

August	7	−21	29	59.92
	25			58.00

O. ARG. S. 18683, 18^h 40^m 3^s.

August	23	−22	13	47.56
	25			45.85

(*), 18^{h} 41^{m} 4^{s}.

1856.		°	′	″
August	27	−44	37	41.40

Brisbane 6501, 18^{h} 41^{m} 57^{s}.

August	27	−44	41	41.99

Madras 1304, 18^{h} 44^{m} 43^{s}.

August	26	−19	17	2.08

β Lyræ, 18^{h} 44^{m} 55^{s}.

July	26	+33	12	7.62
August	7			7.96
	9			8.49
	22			8.07
September	4			8.94
	26			9.67
October	8			8.67

B. A. C. 6454, 18^{h} 49^{m} 2^{s}.

August	27	−20	50	7.83

B. A. C. 6461, 18^{h} 49^{m} 23^{s}.

July	24	−21	17	12.57
	25			12.88
August	6			12.72

O. Arg. S. 18916, 18^{h} 51^{m} 12^{s}.

July	22	−22	0	53.64

(*), 18^{h} 52^{m} 44^{s}.

July	22	−22	2	5.95

O. Arg. S. 18978, 18^{h} 54^{m} 22^{s}.

August	9	−20	37	39.15
	21			39.70

(* 22) W., 18^{h} 54^{m} 24^{s}.

July	26	−20	36	24.00
August	7			24.46
	9			23.16
	21			23.98

Lalande 35497, 18^{h} 54^{m} 50^{s}.

August	15	−19	26	36.76

(*), 18^{h} 55^{m} 4^{s}.

September	2	−15	4	43.57
	4			43.34

B. A. C. 6507, 18^{h} 56^{m} 16^{s}.

July	25	−21	56	34.57

ζ Aquilæ, 18^{h} 58^{m} 58^{s}.

June	20	+13	39	30.06
September	18			28.95
	26			29.80

O. Arg. S. 19098, 18^{h} 59^{m} 39^{s}.

1856.		°	′	″
August	26	−21	54	34.94

O. Arg. S. 19104 18^{h} 59^{m} 49^{s}.

August	26	−22	0	18.87

B. A. C. 6536, 19^{h} 0^{m} 4^{s}.

August	15	−19	30	20.33
	20			19.83
	27			20.81

B. A. C. 6548, 19^{h} 1^{m} 26^{s}.

August	21	−21	14	31.96
September	10			32.30
October	8			32.70

B. A. C. 6550, 19^{h} 1^{m} 32^{s}.

July	26	−20	1	15.49
August	6			15.63
	7			15.34
	9			14.74

O. Arg. S. 19245, 19^{h} 4^{m} 34^{s}.

August	25	−26	8	14.12
	26			13.76

Lalande 36087, 19^{h} 7^{m} 12^{s}.

August	9	−20	1	27.26
September	26			28.29
October	6			29.21

O. Arg. S. 19306, 19^{h} 7^{m} 34^{s}.

September	2	−22	4	35.74
	4			35.79
	18			36.83

O. Arg. S. 19319, 19^{h} 8^{m} 14^{s}.

September	4	−22	2	19.63
	18			18.69

Madras 1351, 19^{h} 8^{m} 55^{s}.

August	7	−21	18	57.93
	15			58.77

(*), 19^{h} 9^{m} 28^{s}.

August	30	−18	9	55.46

O. Arg. S. 19374, 19^{h} 10^{m} 50^{s}.

August	30	−18	10	41.86

ω Aquilæ, 19^{h} 11^{m} 15^{s}.

August	23	+11	20	44.54

B. A. C. 6616, 19^{h} 13^{m} 25^{s}.

August	6	−19	29	31.54
September	15			32.00
October	8			33.43

B. A. C. 6619, 19^{h} 13^{m} 32^{s}.

1856.		°	′	″
August	30	−18	6	25.17

Gr. C. 1719, 19^{h} 14^{m} 22^{s}.

August	7	−20	54	2.56

O, Arg. S. 19472, 19^{h} 15^{m} 20^{s}.

August	30	−18	7	8.54

(*), 19^{h} 17^{m} 58^{s}.

September	18	−22	3	0.42

δ Aquilæ, 19^{h} 18^{m} 26^{s}.

June	2	+ 2	50	20.57
August	9			19.59
	15			18.90
	20			19.31
	23			19.15
	25			18.95
September	2			18.97
	4			20.12

O. Arg. S. 19623, 19^{h} 21^{m} 29^{s}.

August	27	−19	46	30.62

(*), 19^{h} 21^{m} 58^{s}.

August	27	−19	43	26.34

O. Arg. S. 19631, 19^{h} 21^{m} 58^{s}.

August	21	−19	40	16.72

(*), 19^{h} 23^{m} 15^{s}.

August	9	−20	42	36.26
	20			36.00

Lalande 36857, 19^{h} 23^{m} 31^{s}.

July	26	−19	40	36.33
August	21			35.62
	27			36.61
October	8			36.92

Lalande 36878, 19^{h} 23^{m} 51^{s}.

August	7	−20	41	34.41
	9			32.40
	20			33.34

O. Arg. S. 19715, 19^{h} 25^{m} 57^{s}.

August	15	−19	52	6.94
	23			7.56
September	2			7.36

O. Arg. S. 19732, 19^{h} 27^{m} 5^{s}.

September	20	−19	52	51.50

O. Arg. S. 19748, 19^{h} 27^{m} 54^{s}.

September	2	−19	53	52.99

O. Arg. S. 19753, 19^{h} 28^{m} 3^{s}.

1856.		°	′	″
September	18	−19	12	31.58

B. A. C. 6707, 19^{h} 28^{m} 16^{s}.

August	6	−19	9	28.66
September	10			29.59
	13			30.42
	18			29.56
	26			28.90

O. Arg. S. 19770, 19^{h} 28^{m} 39^{s}.

September	13	−19	5	25.26

B. A. C. 6710, 19^{h} 28^{m} 56^{s}.

October	8	−18	32	18.29

O. Arg. S. 19780, 19^{h} 29^{m} 8^{s}.

August	25	−29	7	24.84
	29			23.60

O. Arg. S. 19811, 19^{h} 30^{m} 18^{s}.

August	27	−20	37	6.61

(*), 19^{h} 30^{m} 20^{s}.

August	26	−27	22	45.47

Lalande 37221, 19^{h} 31^{m} 36^{s}.

July	26	−22	22	43.44
September	18			42.73

Madras 1417, 19^{h} 31^{m} 55^{s}.

July	25	−20	51	52.41
August	7			52.73
	9			51.54

O. Arg. S. 19863, 19^{h} 33^{m} 6^{s}.

August	20	−26	42	20.46
	30			19.32

O. Arg. S. 19874, 19^{h} 33^{m} 48^{s}.

August	15	−26	46	3.97
September	16			2.15

Lalande 37507, 19^{h} 38^{m} 3^{s}.

August	9	−21	51	33.72
September	13			33.78
October	8			33.63

B. A. C. 6760, 19^{h} 38^{m} 12^{s}.

August	23	−20	5	37.69
September	10			38.59
	24			37.96
	26			37.71

O. Arg. S. 19956, 19^{h} 39^{m} 12^{s}.

August	25	−22	10	1.17

O. Arg. S. 19957, 19^h 39^m 35^s.

1856.		°	′	″
August	29	−26	14	17.34

γ Aquilæ, 19^h 39^m 36^s.

August	7	+10	16	29.38
	21			29.79
	27			29.56

Weisse XIX, 1160, 19^h 41^m 53^s.

August	7	+10	20	57.44
	26			57.15
	27			56.71

(*), 19^h 43^m 2^s.

September	4	−22	29	44.07

α Aquilæ, 19^h 43^m 57^s.

August	21	+ 8	30	5.42
	23			5.22
September	3			5.83

(*), 19^h 44^m 21^s.

September	16	−22	34	6.99
	20			8.14

(*), 19^h 46^m 19^s.

August	20	−22	6	8.52
	25			8.22

Lalande 37873, 19^h 47^m 15^s.

August	29	−19	39	22.47
September	22			23.27
	24			22.38

(*), 19^h 48^m 18^s.

September	20	−22	37	26.04

(*), 19^h 49^m 27^s.

August	9	−17	27	16.68
	25			17.75
	26			16.82

O. Arg. S. 20116, 19^h 50^m 16^s.

August	27	−22	37	27.27
September	2			26.65

O. Arg. S. 20126, 19^h 50^m 46^s.

August	27	−22	38	20.66
September	2			19.81

B. A. C. 6850, 19^h 51^m 16^s.

September	2	−22	35	14.57
	10			14.50
	13			14.20
	16			13.61
	20			14.30

(*), 19^h 53^m 21^s.

September	4	−22	29	29.82
	13			29.58

Lalande 38140, 19^h 53^m 32^s,

1856.		°	′	″
September	17	−17	14	56.61

Lalande 38164, 19^h 53^m 54^s.

August	15	−19	28	57.24
September	26			55.80

O. Arg. S. 20200, 19^h 56^m 9^s.

September	16	−22	34	41.84
	20			41.57

Lalande 38290, 19^h 56^m 57^s.

August	26	−19	9	50.23
September	24			49.45

Madras 1483, 19^h 57^m 24^s.

August	20	−16	45	59.20
September	10			59.97

B. A. C. 6903, 20^h 0^m 8^s.

August	21	−19	12	19.35
	25			19.78
	26			20.52
	27			20.04
	29			19.85
September	26			18.82

O. Arg. S. 20274, 20^h 1^m 38^s.

September	22	−18	45	7.92

λ Ursæ Minoris, 20^h 3^m 54^s.

August	7	+88	53	25.83
	23			26.24
	30			24.75
September	2			24.84
	4			25.70
	16			25.64
	18			25.03

λ Ursæ Minoris, S. P., 20^h 3^m 54^s.

March	17	+88	53	23.49

α^1 Capricorni, 20^h 9^m 53^s.

August	25	−12	56	15.38
	26			16.78
	27			16.54
	29			16.03

α^2 Capricorni, 20^h 10^m 17^s.

August	25	−12	58	32.86
	26			33.68
	27			33.90
	29			33.77
September	24			32.15
	25			33.43

B. A. C. 6981, 20^h 11^m 20^s.

August	21	−19	33	8.27
September	17			6.75
	22			7.03

O. Arg. S. 20429, 20^h 13^m 12^s.

1856.		°	′	″
August	30	−23	55	0.99
September	2			0.42
	4			0.02
	26			0.05

(*), 20^h 14^m 54^s.

September	18	−21	17	22.91
	25			23.26

(*), 20^h 17^m 36^s.

August	20	−33	45	32.32
	26			33.73
	27			33.10

Lalande 39247, 20^h 18^m 13^s.

September	3	−15	25	59.44
	17			59.48

O. Arg. S. 20501, 20^h 18^m 43^s.

September	18	−21	15	43.64
	25			43.40

O. Arg. S. 20521, 20^h 19^m 53^s.

August	29	−23	28	20.10

O. Arg. S. 20544, 20^h 21^m 23^s.

August	7	−23	18	29.09
September	26			28.09

B. A. C. 7053, 20^h 21^m 51^s.

August	30	−19	2	47.28
September	20			48.23

B. A. C. 7054, 20^h 21^m 52^s.

August	30	−19	2	35.78
September	20			36.03
	22			34.43

O. Arg. S. 20569, 20^h 23^m 26^s.

September	27	−22	58	19.18

Weisse XX, 610, 20^h 24^m 54^s.

September	4	− 8	40	0.00
	13			0.47

(*), 20^h 25^m 19^s.

September	18	−21	22	13.51
	25			12.13

Weisse XX, 664, 20^h 26^m 54^s.

August	20	−14	55	5.66

O. Arg. S. 20675, 20^h 30^m 14^s.

September	17	−21	54	34.89
	24			34.77

B. A. C. 7116, 20^h 30^m 18^s.

1856.		°	′	″
September	18	−21	28	43.00
	20			42.32
	27			41.65

(*), 20^h 30^m,

September	27	−21	27	30.72

(*), 20^h 30^m 29^s.

September	26	−21	49	8.85

O. Arg. S. 20697, 20^h 31^m 30^s.

September	18	−21	25	38.04
	20			37.21

B. A. C. 7134, 20^h 31^m 56^s.

September	3	−18	37	41.84
	22			41.34

O. Arg. S. 20709, 20^h 32^m 5^s.

September	18	−21	27	5.11
	20			5.63
	27			4.29

Weisse XX, 860, 20^h 34^m 4^s.

October	8	−14	23	56.52

B. A. C. 7159, 20^h 34^m 42^s.

August	30	−18	36	25.83
September	2			26.99
	4			26.50

α Cygni, 20^h 36^m 39^s.

August	20	+44	46	54.38
	25			54.52
	26			53.61
September	13			54.96

(*), 20^h 36^m 45^s.

September	26	−21	23	41.37

O. Arg. S. 20861, (1st *,) 20^h 40^m 27^s.

September	4	−18	42	43.18
	13			42.99
October	7			42.69

O. Arg. S. 20861, (2d *,) 20^h 40^m 28^s.

September	4	−18	42	50.46
	13			50.58
October	7			48.90

Weisse XX, 1022, 20^h 40^m 34^s.

September	17	−12	58	5.26
	18			6.43

O. Arg. S. 20902, $20^{h} 43^{m} 11^{s}$.

1856.		°	′	″
September	2	−27	45	50.90
	16			50.12
October	10			50.72

(*), $20^{h} 43^{m} 34^{s}$.

August	20	−39	25	(47.47)
	25			44.46
	26			43.89

O. Arg. S. 20922, $20^{h} 45^{m} 4^{s}$.

September	20	−18	4	50.75
	27			52.39

B. A. C. 7249, $20^{h} 46^{m} 54^{s}$.

September	24	−18	27	1.95
October	3			2.35
	6			4.14

(*), $20^{h} 49^{m} 9^{s}$.

August	20	−39	31	33.06
	25			32.52
	26			32.04

(*), $20^{h} 50^{m} 27^{s}$.

September	18	−12	55	9.55
	27			7.79

(*), $20^{h} 51^{m} 10^{s}$.

August	30	+82	31	56.38
September	4			57.90
	16			56.92
October	10			55.91

B. A. C. 7282, $20^{h} 53^{m} 0^{s}$.

September	15	−18	4	26.07
	17			25.91

Weisse XX, 1394, $20^{h} 54^{m} 47^{s}$.

August	27	−12	59	37.76
September	18			38.52
	24			(35.73)
October	6			37.60

B. A. C. 7322, $20^{h} 58^{m} 5^{s}$.

September	2	−17	47	12.49
October	2			13.53
	3			10.67

61^{1} Cygni, $21^{h} 0^{m} 37^{s}$.

August	25	+38	3	46.73
	26			46.36
	27			47.22
	30			46.20
September	2			45.60
	4			47.15
	16			46.37
	18			46.71
	20			45.48
	25			47.36
	27			47.16
October	2			46.17
	7			46.10

61^{2} Cygni, $21^{h} 0^{m} 39^{s}$.

1856.		°	′	″
August	25	+38	3	41.06
	26			40.96
	27			41.81
	30			40.92
September	2			39.96
	4			41.47
	13			41.11
	16			41.00
	18			41.18
	20			40.02
	25			40.90
	27			41.15
October	7			41.15

ζ Cygni, $21^{h} 6^{m} 59^{s}$.

August	25	+29	39	16.11
	27			15.84
	30			15.29
September	4			16.10
	13			16.23
	16			16.25
	20			16.28
	25			15.63
	27			15.44
October	2			15.66
	6			16.36

(*), $21^{h} 13^{m} 6^{s}$.

September	2	−21	24	33.24
	4			32.78
	18			33.31
October	10			33.92

α Cephei, $21^{h} 15^{m} 14^{s}$.

September	10	+61	59	35.77
	13			34.42

Weisse XXI, 346, $21^{h} 15^{m} 39^{s}$.

September	26	−11	11	1.95
October	3			1.01

B. A. C. 7425, $21^{h} 16^{m} 14^{s}$.

September	2	−21	26	39.88
	4			40.34
	18			40.87

(*), $21^{h} 17^{m} 17^{s}$.

September	25	−25	30	11.61
October	9			12.84

B. A. C. 7463, $21^{h} 22^{m} 9^{s}$.

October	10	−19	45	23.30
	12			21.71

(* 39) W., $21^{h} 22^{m}$.

September	25	−16	28	5.40

β Aquarii, $21^{h} 24^{m} 11^{s}$.

September	4	− 6	11	5.81
	10			5.67
	13			5.73
	16			5.53
	18			6.53
	20			4.68
October	7			6.12

B. A. C. 7485, $21^{h} 25^{m} 59^{s}$.

1856.		°	′	″
September	26	−16	48	54.47
	30			52.92
October	6			54.33

(*), $21^{h} 28^{m} 11^{s}$.

October	9	−16	19	5.10

(*), $21^{h} 28^{m} 34^{s}$.

October	11	−19	0	56.78

B. A. C. 7507, $21^{h} 29^{m} 33^{s}$.

October	11	−19	3	45.97
	12			44.50
	24			46.23

O. Arg. S. 21525, $21^{h} 30^{m} 12^{s}$.

September	2	−17	50	8.46
	4			8.26
	10			9.29
	16			8.40

Rumker 9349, $21^{h} 33^{m} 50^{s}$.

September	22	−15	28	33.05
	24			31.57
	26			33.53
October	6			34.33

B. A. C. 7556, $21^{h} 36^{m} 23^{s}$.

September	10	−15	23	20.28

ε Pegasi, $21^{h} 37^{m} 19^{s}$.

August	25	+ 9	14	6.13
September	13			5.81
	25			5.74
	27			5.76
October	2			4.94
	7			6.89
	9			5.41

B. A. C. 7573, $21^{h} 38^{m} 48^{s}$.

October	11	− 9	55	11.39
November	12			10.79
	24			11.22

(*), $21^{h} 39^{m} 54^{s}$.

September	2	−17	56	26.06
	4			26.26
	10			26.19
	16			25.80

O. Arg. S. 21668, $21^{h} 41^{m} 37^{s}$.

September	27	−19	2	8.38
October	2			9.84

Weisse XXI, 1071, $21^{h} 45^{m} 48^{s}$.

September	22	−14	50	47.05
	26			47.56
October	3			47.32
	6			46.86

B. A. C. 7620, $21^{h} 46^{m} 7^{s}$.

1856.		°	′	″
October	11	−10	58	7.70
	29			6.76
November	12			7.33
	19			6.77

16 Pegasi, $21^{h} 46^{m} 42^{s}$.

August	25	+25	16	4.62

Lalande 42700, $21^{h} 47^{m} 50^{s}$.

September	15	−21	47	58.13

B. A. C. 7649, $21^{h} 50^{m} 56^{s}$.

September	13	−21	50	56.06
	24			55.02
October	3			55.09

Lalande 42813, $21^{h} 51^{m} 6^{s}$.

September	16	−20	16	24.94

(*), $21^{h} 51^{m} 27^{s}$.

October	2	−23	30	19.09

O. Arg. S. 21800, $21^{h} 53^{m} 9^{s}$.

August	25	−21	0	47.03

O. Arg. S. 21829, $21^{h} 55^{m} 36^{s}$.

September	25	−20	47	4.27

O. Arg. S. 21832, $21^{h} 55^{m} 42^{s}$.

September	18	−22	22	34.28

Lalande 42984, $21^{h} 56^{m} 24^{s}$.

September	17	−22	27	21.68
	18			(24.34)
	26			21.58
	27			22.34
	30			21.75
November	24			21.97

(*), $21^{h} 56^{m} 39^{s}$.

October	8	−19	45	7.72

O. Arg. S. 21869, $21^{h} 58^{m} 7^{s}$.

September	13	−19	20	49.55
	15			48.63
	24			48.01
October	6			48.61

O. Arg. S. 21877, $21^{h} 58^{m} 10^{s}$.

October	2	−19	36	36.66

α Aquarii, $21^{h} 58^{m} 35^{s}$.

September	22	− 0	59	54.32
November	19			53.38

Lalande 43106, 22^h 0^m 4^s.

1856.		° ′ ″
October	7	−22 16 26.20

Weisse XXII, 13, 22^h 2^m 7^s.

August	25	− 9 29 6.64

B. A. C. 7724, 22^h 3^m 17^s.

September	4	−21 55 5.70

Lalande 43288, 22^h 4^m 56^s.

September	24	−18 42 58.67

O. Arg. S. 21987, 22^h 5^m 25^s.

October	7	−22 5 45.72

O. Arg. S. 22002, 22^h 6^m 22^s.

October	7	−22 6 11.78

O. Arg. S. 22013, 22^h 7^m 0^s.

September	18	−24 41 50.83
	25	50.15
	27	49.70
	30	48.75
October	29	49.95

B. A. C. 7771, 22^h 9^m 20^s.

September	17	−13 31 40.67
	22	39.24
	26	40.49
October	6	40.11

θ Aquarii, 22^h 9^m 27^s.

August	25	− 8 28 44.66
October	2	46.40
	9	45.52
November	24	44.97

O. Arg. S. 22070, 22^h 11^m 42^s.

September	18	−24 30 10.07
	25	9.42
	27	9.19
	30	8.72

O. Arg. S. 22089, 22^h 13^m 44^s.

October	11	−29 28 33.04

O. Arg. S. 22121, 22^h 16^m 19^s.

October	7	−29 22 51.21

O. Arg. S. 22126, 22^h 16^m 51^s.

September	4	−24 4 30.08
	16	31.40
October	2	31.30
	9	30.93
	19	(28.48)

O. Arg. S. 22142, 22^h 18^m 22^s.

1856.		° ′ ″
September	18	−23 38 5.46
	25	5.51
	30	3.35

O. Arg. S. 22144, 22^h 18^m 29^s.

October	29	−24 23 32.14

Weisse XXII, 467, 22^h 22^m 36^s.

September	22	− 9 7 58.80
	24	57.42
October	3	57.86

B. A. C. 7836, 22^h 22^m 48^s.

September	10	−15 17 59.57
	17	59.62
October	8	60.37

O. Arg. S. 22197, 22^h 23^m 33^s.

September	16	−23 42 45.60
	27	45.09
October	2	45.57

O. Arg. S. 22199, 22^h 23^m 55^s.

August	25	−23 23 23.48
September	18	23.75
October	7	22.54
	9	24.30
	11	23.89

O. Arg. S. 22223, 22^h 26^m 16^s.

September	13	−22 49 25.60
	25	25.24

O. Arg. S. 22230, 22^h 26^m 42^s.

September	18	−23 19 25.66
October	7	(23.37)
	9	25.07
	10	25.21
	11	25.16

Weisse XXII, 644, 22^h 31^m 8^s.

September	17	−14 47 37.65
	22	36.91
October	3	35.26

Weisse XXII, 675, 22^h 32^m 11^s.

September	10	− 8 19 53.03
October	8	53.32

B. A. C. 7909, 22^h 34^m 16^s.

October	10	−30 5 29.50

ζ Pegasi, 22^h 34^m 29^s.

September	30	+10 6 7.01
November	19	7.20

(*), 22^h 35^m 4^s.

1856.		° ′ ″
September	16	−21 40 33.89
	25	35.10
	27	33.13
October	9	34.66

Weisse XXII, 761, 22^h 35^m 54^s.

October	6	− 7 56 49.52
	7	48.59

O. Arg. S. 22378, 22^h 37^m 9^s.

September	18	−21 40 53.32
	25	52.85

O. Arg. S. 22383, 22^h 37^m 46^s.

October	2	−21 36 23.32

B. A. C. 7947, 22^h 40^m 3^s.

October	11	−20 20 32.83

B. A. C. 7954, 22^h 42^m 10^s.

September	22	−14 19 49.00
October	3	50.02

Weisse XXII, 900, 22^h 43^m 16^s.

October	8	− 7 39 0.25

Lalande 44823, 22^h 48^m 0^s.

October	7	−20 53 3.37
	9	3.63

α Piscis Australis, 22^h 49^m 54^s.

September	17	−30 21 49.42
	25	49.03
	27	49.28
	30	47.98
October	2	49.53
	3	47.74
	6	48.15
	11	49.73
	29	48.99
	31	46.83
November	19	47.70
	24	49.28

Weisse XXII, 1057, 22^h 51^m 23^s.

September	24	− 6 25 19.29

Weisse XXII, 1149, 22^h 55^m 4^s.

September	25	−12 3 48.35

Weisse XXII, 1150, 22^h 55^m 4^s.

September	25	−12 3 41.47

Lalande 45049, 22^h 55^m 15^s.

October	7	−21 37 4.15

B. A. C. 8025, 22^h 55^m 47^s.

October	10	−35 30 22.53

α Pegasi, 22^h 57^m 47^s.

1856.		° ′ ″
October	11	+14 27 8.30

Weisse XXII, 1220, 22^h 58^m 10^s.

September	27	+ 0 33 13.49
October	2	11.91

Weisse XXII, 1228, 22^h 58^m 20^s.

October	9	+ 1 0 41.77
November	24	42.46

Weisse XXII, 1232, 22^h 58^m 45^s.

October	6	−11 11 31.74

B. A. C. 8060, 23^h 1^m 33^s.

October	8	+ 1 21 59.96
	28	59.02

Weisse XXIII, 111, 23^h 6^m 54^s.

September	24	+ 4 14 11.79

B. A. C. 8088, 23^h 7^m 14^s.

October	10	−41 51 48.96

Piazzi XXIII, 21, 23^h 8^m 29^s.

October	7	+ 0 32 51.17
	11	51.44

Weisse XXIII, 143, 23^h 8^m 30^s.

November	24	−11 48 21.43

γ Piscium, 23^h 9^m 54^s.

October	9	+ 2 31 4.00

(*), 23^h 10^m 32^s.

October	28	− 6 19 49.46

Weisse XXIII, 309, 23^h 15^m 45^s.

September	24	−11 32 29.15

(*), 23^h 16^m 23^s.

November	13	+ 5 11 30.32

Santini 1633, 23^h 21^m 9^s.

October	28	+ 5 18 18.92

Weisse XXIII, 449, 23^h 22^m 49^s.

September	22	+ 0 23 34.29

Weisse XXIII, 463, 23^h 23^m 35^s.

November	20	−10 55 38.55

Santini 1636, 23^{h} 25^{m} 7^{s}.

1856.		°	′	″
September	24	+ 6	18	54.78

Weisse XXIII, 602, 23^{h} 29^{m} 40^{s}.

November	13	+ 5	8	33.93
	18			34.45

ι Piscium, 23^{h} 32^{m} 45^{s}.

September	17	+ 4	52	5.09
	22			4.95
October	8			3.95
	28			4.28
November	11			4.74
	12			5.10
	20			3.63
	24			4.31
December	26			5.30

Weisse XXIII, 803, 23^{h} 39^{m} 53^{s}.

October	28	+ 4	28	22.66

Lalande 46629, 23^{h} 41^{m} 4^{s}.

October	9	+ 7	28	6.07
	11			8.13

Lalande 46632, 23^{h} 41^{m} 11^{s}.

October	9	+ 7	24	38.27
	11			39.71

δ Sculptoris, 23^{h} 41^{m} 38^{s}.

November	13	−28	54	15.65
	22			16.50
December	26			15.31

Weisse XXIII, 934, 23^{h} 46^{m} 2^{s}.

November	18	+ 4	22	44.60
	20			44.67

(* 59) W., 23^{h} 47^{m} 43^{s}.

October	9	− 1	3	33.69

B. A. C. 8313, 23^{h} 48^{m} 5^{s}.

October	10	−32	42	1.68

Santini 1664, 23^{h} 48^{m} 29^{s}.

September	17	+ 7	26	41.53
	22			43.34

Weisse XXIII, 1006, 23^{h} 49^{m} 38^{s}.

October	11	+ 3	56	44.28

ω Piscium, 23^{h} 52^{m} 7^{s}.

November	13	+ 6	5	17.82
	22			17.47
December	26			18.37

Weisse XXIII, 1075, 23^{h} 52^{m} 50^{s}.

October	28	+ 0	18	34.31

Weisse XXIII, 1090, 23^{h} 53^{m} 24^{s}.

1856.		°	′	″
October	28	+ 0	17	10.32

O. Arg. S. 23182, 23^{h} 53^{m} 34^{s}.

November	11	−28	41	12.19

B. A. C. 8353, 23^{h} 55^{m} 14^{s}.

November	12	+ 8	10	40.37

Weisse XXIII, 1179, 23^{h} 57^{m} 38^{s}.

October	11	+ 0	45	29.70

Weisse XXIII, 1218, 23^{h} 59^{m} 42^{s}.

October	28	+ 1	4	52.88

Weisse XXIII, 1227, 0^{h} 0^{m} 14^{s}.

1857.				
November	4	−11	48	44.46
	7			44.53

Weisse XXIII, 1242, 0^{h} 0^{m} 39^{s}.

November	11	−11	54	30.72
	27			31.07

Weisse O, 13, 0^{h} 2^{m} 21^{s}.

November	3	−10	57	59.49
December	14		58	2.09
	19			1.30

Weisse O, 28, 0^{h} 2^{m} 54^{s}.

December	3	− 9	45	14.06
	15			14.41

Weisse O, 41, 0^{h} 3^{m} 19^{s}.

December	10	−10	4	12.64
	12			11.03

γ Pegasi, 0^{h} 6^{m} 2^{s}.

September	24	+14	24	18,05
October	1			19.32
	8			17.92
	9			18.19
November	12			18.82

Weisse O, 102, 0^{h} 6^{m} 51^{s}.

November	17	−12	4	57.63
	27			59.08

Weisse O, 112, 0^{h} 7^{m} 31^{s}.

December	7	+ 2	35	9.32

35 Piscium, (1st *,) 0^{h} 7^{m} 46^{s}.

October	17	+ 8	2	35.73
	21			36.24
	31			36.02
November	2			35.04

35 Piscium, (2d *,) 0^{h} 7^{m} 46^{s}.

1857.		°	′	″
October	17	+ 8	2	25.97
	21			27.31
	31			26.66

Weisse O, 124, 0^{h} 8^{m} 7^{s}.

December	14	− 6	54	53.22
	19			5 .24
	24			3.22

Weisse O, 172, 0^{h} 10^{m} 39^{s}.

December	14	− 6	55	52.52
	19			51.98
	24			52.44

Weisse O, 189, 0^{h} 11^{m} 39^{s}.

November	7	−11	43	34.02
	11			33.35

8 Ceti, 0^{h} 12^{m} 17^{s}.

September	24	− 9	36	1.10
October	1			1.43
	8			0.72
	9		35	59.58

Weisse O, 199, 0^{h} 12^{m} 27^{s}.

December	3	− 7	59	47.09
	7			48.16

Weisse O, 202, 0^{h} 12^{m} 40^{s}.

November	4	+12	36	56.72

d Piscium, 0^{h} 13^{m} 24^{s}.

October	12	+ 7	24	45.45
	31			44.55
November	2			45.70

Weisse O, 236, 0^{h} 14^{m} 6^{s}.

November	14	− 5	58	4.78
	27			6.38
December	12			5.67

Weisse O, 239, 0^{h} 14^{m} 15^{s}.

December	3	−11	27	39.32
	10			39.50

Weisse O, 245, 0^{h} 14^{m} 40^{s}.

December	15	+ 5	6	45.83

44 Piscium, 0^{h} 18^{m} 18^{s}.

September	24	+ 1	9	50.57
October	1			50.32
	8			51.60
	9			51.52

Weisse O, 312, 0^{h} 19^{m} 5^{s}.

November	3	+ 3	3	0.67
	4		3	0.73
	7		2	59.55

12 Ceti, 0^{h} 22^{m} 54^{s}.

1857.		°	′	″
October	21	− 4	43	52.86
November	17			52.83
	26			54.07
December	10			53.11
	12			53.09
	14			54.72
	19			53.65

15 Cassiopeæ, 0^{h} 25^{m} 0^{s}.

October	9	+62	9	31.20
	31			30.90
November	12			32.90

Weisse O, 421, 0^{h} 25^{m} 30^{s}.

November	3	− 9	48	24.78
	11			26.02

Weisse O, 434, 0^{h} 26^{m} 3^{s}.

November	14	− 4	37	15.43
December	24			15.54
	31			16.58

Weisse O, 437, 0^{h} 26^{m} 17^{s}.

December	19	− 4	48	53.81

Weisse O, 444, 0^{h} 26^{m} 42^{s}.

November	7	− 9	29	30.12
December	3			29.23

Rumker 138, 0^{h} 28^{m} 1^{s}.

December	7	+34	53	13.36
	10			14.40

Weisse (2) O, 746, 0^{h} 29^{m} 20^{s}.

December	12	+26	16	52.80

53 Piscium, 0^{h} 29^{m} 30^{s}.

October	17	+14	27	37.75
	31			38.74

Weisse (2) O, 832, 0^{h} 32^{m} 27^{s}.

December	1	+25	58	10.13
	3			9.42

α Cassiopeæ, 0^{h} 32^{m} 35^{s}.

December	14	+55	46	7.36

Weisse O, 560, 0^{h} 33^{m} 16^{s}.

November	11	− 8	25	19.96
	17			18.66
	26			20.64

Weisse O, 601, 0^{h} 35^{m} 0^{s}.

November	4	− 3	49	9.57
	7			8.84

β CETI, $0^{h}\,36^{m}\,34^{s}$.

1857.		°	′	″
January	9	−18	45	20.44
October	12			20.22
December	10			20.87
	15			19.68
	19			18.98

WEISSE O, 641, $0^{h}\,37^{m}\,24^{s}$.

November	14	− 6	23	34.92
	17			34.88

(*), $0^{h}\,38^{m}\,35^{s}$.

November	27	− 1	57	7.21

WEISSE O, 678, $0^{h}\,39^{m}\,35^{s}$.

November	2	+ 1	35	30.88
	3			30.29
December	12			30.69

WEISSE O, 687, $0^{h}\,40^{m}\,2^{s}$.

November	11	− 1	55	15.21

ζ ANDROMDÆ, $0^{h}\,39^{m}\,56^{s}$.

October	8	+23	30	17.04
	9			17.83
	31			17.57

WEISSE O, 706, $0^{h}\,40^{m}\,58^{s}$.

December	1	+ 3	18	57.73

δ PISCIUM, $0^{h}\,41^{m}\,26^{s}$.

October	12	+ 6	49	20.66
	17			21.30
December	31			20.63

(*), $0^{h}\,42^{m}\,4^{s}$.

November	26	+ 1	31	18.52
December	7			18.63

RUMKER 340, $0^{h}\,43^{m}\,53^{s}$.

November	2	+ 1	59	1.08
	3		59	1.30
December	14		58	59.80

B. A. C. 237, $0^{h}\,44^{m}\,6^{s}$.

October	21	+ 2	37	29.99
December	10			29.26

WEISSE (2) O, 1167, $0^{h}\,45^{m}\,34^{s}$.

October	8	+29	35	15.76

WEISSE O. 802, $0^{h}\,46^{m}\,16^{s}$.

November	4	+ 2	32	32.60
	7			31.34

WEISSE O, 808, $0^{h}\,46^{m}\,35^{s}$.

November	14	+ 6	30	54.88

(*), $0^{h}\,48^{m}\,18^{s}$.

1857.		°	′	″
November	27	+ 1	32	12.08
December	1			12.83

(*), $0^{h}\,50^{m}\,49^{s}$.

December	7	+ 1	43	44.80
	10			45.29

WEISSE O, 893, $0^{h}\,51^{m}\,50^{s}$.

December	12	+ 1	54	10.06
	31			10.66

WEISSE O, 902, $0^{h}\,52^{m}\,9^{s}$.

December	15	+ 2	19	39.61
	24			38.14

RUMKER 451, $0^{h}\,52^{m}\,27^{s}$.

October	17	+ 3	13	17.72
	21			18.46

WEISSE O, 912, $0^{h}\,52^{m}\,41^{s}$.

December	14	+ 2	32	49.96
	19			49.83

WEISSE O, 928, $0^{h}\,53^{m}\,36^{s}$.

October	8	+ 4	4	43.85
November	2			44.67

WEISSE O, 946, $0^{h}\,54^{m}\,29^{s}$.

November	14	+ 8	51	2.21

B. A. C, 286, $0^{h}\,55^{m}\,12^{s}$.

November	4	+ 8	4	6.35
	11			5.92

(*), $0^{h}\,55^{m}\,26^{s}$.

October	8	+ 3	39	45.14
	12			45.82

ε PISCIUM, $0^{h}\,55^{m}\,41^{s}$.

January	12	+ 7	8	9.03
November	3			9.13

WEISSE O, 979, $0^{h}\,56^{m}\,13^{s}$.

December	12	+ 2	30	11.49
	14			10.53
	19			11.03

WEISSE O, 997, $0^{h}\,57^{m}\,20^{s}$.

November	14	+ 8	50	3.57

B. A. C. 311, $0^{h}\,58^{m}\,34^{s}$.

October	12	+ 4	9	43.97
	17			43.76
November	26			43.00

B. A. C. 312, $0^{h}\,58^{m}\,37^{s}$.

1857.		°	′	″
October	12	+ 4	9	47.89
	17			48.35
November	26			46.35

WSISSE O, 1028, $0^{h}\,58^{m}\,51^{s}$.

December	12	+ 2	31	29.80

WEISSE O, 1048, $0^{h}\,59^{m}\,39^{s}$.

December	14	+ 3	3	41.45
	15			43.10
	19			42.85

(*), $1^{h}\,1^{m}\,44^{s}$.

December	3	+ 8	58	58.77

RUMKER, N. F., 538, $1^{h}\,4^{m}\,14^{s}$.

December	31	+ 3	41	1.85

RUMKER 558, $1^{h}\,7^{m}\,29^{s}$.

December	14	+ 3	51	15.40
	15			16.51
	19			16.20

POLARIS, $1^{h}\,8^{m}\,2^{s}$.

October	8	+88	33	46.96
	12			47.84
	21			46.82
November	2			48.32
	3			47.13
	4			47.04
	7			48.40
	11			47.39
	14			47.51
	17			47.44
	26			46.74
December	1			47.35
	3			47.83
	7			46.64
	10			46.27

POLARIS, S. P., $1^{h}\,8^{m}\,2^{s}$.

April	25	+88	33	49.01
	30			48.02
	9			48.50
	12			48.89
	16			48.04

RUMKER 572, $1^{h}\,9^{m}\,30^{s}$.

December	24	+ 4	18	57.40
	31			56.93

WEISSE I, 139, $1^{h}\,10^{m}\,5^{s}$.

December	15	+ 3	55	33.15
	19			32.81

(*), $1^{h}\,11^{m}\,38^{s}$.

December	19	+ 3	54	59.41

RUMKER 585, $1^{h}\,11^{m}\,50^{s}$.

December	24	+ 4	17	46.25
	31			45.65

WEISSE I, 206, $1^{h}\,13^{m}\,44^{s}$.

1857.		°	′	″
November	27	− 2	2	47.58

θ¹ CETI, $1^{h}\,17^{m}\,2^{s}$.

January	12	− 8	54	23.03

(*), $1^{h}\,21^{m}\,10^{s}$.

December	15	+13	55	56.22

η PISCIUM, $1^{h}\,24^{m}\,0^{s}$.

November	2	+14	37	22.39
	27			21.57
December	19			22.23

WEISSE I, 450, $1^{h}\,26^{m}\,30^{s}$.

January	12	− 2	35	4.85

π PISCIUM, $1^{h}\,29^{m}\,40^{s}$.

December	15	+11	25	27.34

103 PISCIUM, $1^{h}\,31^{m}\,44^{s}$.

November	2	+15	54	49.05
	27			49.68
December	19			50.32

ν PISCIUM, $1^{h}\,34^{m}\,9^{s}$.

November	7	+ 4	46	39.30
December	1			40.45
	14			39.35

ο PISCIUM, $1^{h}\,38^{m}\,2^{s}$.

November	16	+ 8	27	4.67
December	15			6.38

(*), $1^{h}\,39^{m}\,23^{s}$.

December	1	+10	8	35.47

ε CASSIOPEÆ, $1^{h}\,44^{m}\,18^{s}$.

November	17	+62	58	41.11
	27			41.75

β ARIETIS, $1^{h}\,46^{m}\,55^{s}$.

January	9	+20	7	19.84
	1			19.52
	14			18.10
	15			19.82
	24			18.98

48 CASSIOPEÆ, $1^{h}\,50^{m}\,31^{s}$.

November	17	+70	13	31.53
	27			32.04

WEISSE I, 943, $1^{h}\,53^{m}\,17^{s}$.

January	9	+12	42	18.69

WEISSE I, 963, $1^{h}\,54^{m}\,24^{s}$.

December	14	+ 3	22	27.61

WEISSE I, 978, $1^h\ 55^m\ 11^s$.

1857.			°	′	″
December	1	+	8	24	17.79
	15				19.10
	19				18.17

WEISSE I, 1038, $1^h\ 58^m\ 47^s$.

December	19	+	8	46	6.79

WEISSE I, 1040, $1^h\ 58^m\ 49^s$.

January	12	+	7	34	43.74

α ARIETIS, $1^h\ 59^m\ 17^s$.

November	27	+	22	47	54.80

WEISSE I, 1071, $2^h\ 0^m\ 13^s$.

November	17	+	8	10	37.97
December	14				36.64

WEISSE I, 1080, $2^h\ 0^m\ 55^s$.

November	17	+	8	11	1.13
December	14				0.79

WEISSE II, 38, $2^h\ 4^m\ 21^s$.

November	12	+	8	54	58.34
December	1				58.44

B. A. C. 687, $2^h\ 6^m\ 11^s$.

January	12	+	4	21	26.23

WEISSE II, 144, $2^h\ 10^m\ 31^s$.

November	17	+	12	46	51.76
December	1				51.69

(*), $2^h\ 11^m\ 1^s$.

November	27	+	55	15	46.21

WEISSE II, 168, $2^h\ 11^m\ 30^s$.

December	15	−	5	31	3.44
	19				3.66

(*), $2^h\ 11^m\ 31^s$.

December	15	−	5	33	52.45
	19				53.40

i PERSEI, $2^h\ 12^m\ 38^s$.

November	27	+	55	12	8.47

WEISSE II, 250, $2^h\ 16^m\ 25^s$.

January	12	−	6	49	46.20

WEISSE II, 278, $2^h\ 17^m\ 44^s$.

December	1	+	7	54	56.16

ξ^2 CETI, $2^h\ 20^m\ 43^s$.

November	17	+	7	49	50.24

30 ARIETIS, $2^h\ 28^m\ 52^s$.

1857.			°	′	″
December	1	+	24	2	10.54

B. A. C. 797, $2^h\ 28^m\ 56^s$.

December	1	+	24	2	8.95

B. A. C. 800, $2^h\ 29^m\ 10^s$.

January	9	+	7	7	6.99

ν ARIETIS, $2^h\ 30^m\ 52^s$.

November	27	+	21	21	14.02

38 ARIETIS, $2^h\ 37^m\ 20^s$.

November	17	+	11	51	14.56
December	1				14.94

WEISSE II, 742, $2^h\ 43^m\ 26^s$.

January	9	−	7	23	12.22

(*), $2^h\ 46^m\ 29^s$.

December	1	−	2	12	56.55

B. A. C. 929, $2^h\ 52^m\ 10^s$.

January	9	+	8	20	51.75

γ PERSEI, $2^h\ 54^m\ 26^s$.

December	1	+	52	57	16.98

WEISSE III, 26, $3^h\ 3^m\ 15^s$.

December	1	+	9	28	17.08

δ ARIETIS, $3^h\ 3^m\ 36^s$.

November	17	+	19	11	40.67

WEISSE III, 35, $3^h\ 4^m\ 28^s$.

January	9	+	8	11	28.22

64 ARIETIS, $3^h\ 16^m\ 2^s$.

February	2	+	24	13	32.94

WEISSE III, 295, $3^h\ 17^m\ 24^s$.

December	1	+	9	30	45.27

WEISSE (2) III, 721, $3^h\ 33^m\ 23^s$.

January	6	+	18	56	5.76

RUMKER 940, $3^h\ 34^m\ 21^s$.

February	2	+	14	20	26.74
	11				24.16

WEISSE (2) III, 931, $3^h\ 42^m\ 12^s$.

January	6	+	26	38	56.56

(*), $3^h\ 48^m\ 42^s$.

1857.			°	′	″
January	6	+	19	40	24.96

γ^1 ERIDANI, $3^h\ 51^m\ 30^s$.

February	11	−	13	54	32.26

RUMKER 1084, $3^h\ 58^m\ 19^s$.

January	9	+	15	18	59.69

RUMKER 1104, $4^h\ 3^m\ 42^s$.

January	15	+	28	4	11.03

o^1 ERIDANI, $4^h\ 5^m\ 2^s$.

February	11	−	7	12	20.57

B. A. C. 1316, $4^h\ 10^m\ 5^s$.

January	9	+	21	14	3.92

RUMKER 1163, $4^h\ 13^m\ 30^s$.

January	6	+	16	28	12.22
	15				13.52

RUMKER 1167, $4^h\ 14^m\ 42^s$.

January	6	+	16	27	31.59
	15				32.29

63 TAURI, $4^h\ 15^m\ 22^s$.

January	6	+	16	26	49.91
	15				50.82

(*), $4^h\ 16^m\ 25^s$.

January	13	+	16	28	33.36

(*), $4^h\ 18^m\ 21^s$.

January	13	+	16	26	56.40

WEISSE (2) IV, 391, $4^h\ 18^m\ 38^s$.

January	6	+	16	25	36.84
	15				37.85

B. A. C. 1402, $4^h\ 23^m\ 51^s$.

January	9	+	15	32	53.47

α TAURI, $4^h\ 27^m\ 53^s$.

February	2	+	16	13	29.90

WEISSE IV, 646, $4^h\ 30^m\ 21^s$.

January	6	+	7	1	55.98
	13				56.95

B. A. C. 1437, $4^h\ 31^m\ 15^s$.

January	9	+	15	38	15.03

WEISSE IV, 705, $4^h\ 32^m\ 27^s$.

1857.			°	′	″
January	13	+	6	59	33.45

(*), $4^h\ 36^m\ 5^s$.

February	11	−	1	43	9.96

WEISSE IV, 809, $4^h\ 37^m\ 36^s$.

February	11	−	1	41	46.36

(*), $4^h\ 41^m\ 10^s$.

January	13	+	1	13	3.23

WEISSE IV, 888, $4^h\ 41^m\ 32^s$.

February	2	−	1	36	20.52
January	6				24.07

WEISSE IV, 925, $4^h\ 43^m\ 16^s$.

January	15	+	1	17	0.76

WEISSE IV, 972, $4^h\ 44^m\ 59^s$.

January	6	+	1	16	19.04
	15				19.94

(*), $4^h\ 46^m\ 15^s$.

January	15	+	1	17	37.55

(*), $4^h\ 46^m\ 40^s$.

January	6	+	1	20	11.94

(*), $4^h\ 49^m\ 36^s$.

January	6	+	1	17	48.11

α AURIGÆ, $5^h\ 6^m\ 21^s$.

January	15	+	45	51	3.47
February	9				3.44
	11				3.19

WEISSE (2) V, 451, $5^h\ 16^m\ 36^s$.

February	11	+	30	34	4.38

β TAURI, $5^h\ 17^m\ 27^s$.

January	15	+	28	29	6.35

WEISSE V, 449, $5^h\ 19^m\ 13^s$.

February	23	−	13	15	23.70

δ ORIONIS, $5^h\ 24^m\ 51^s$.

February	9	−	0	24	21.38

B. A. C. 1742, $5^h\ 26^m\ 54^s$.

February	11	+	23	56	33.97

WEISSE (2) V, 782, $5^h\ 26^m\ 58^s$.

1857.		° ′ ″
January	13 . .	+31 3 21.55

ε ORIONIS, $5^h\ 29^m\ 7^s$.

January	15 . .	− 1 17 40.26

WEISSE V, 874, $5^h\ 34^m\ 22^s$.

February	23 . .	−13 45 31.55

α COLUMBÆ, $5^h\ 34^m\ 35^s$.

January	13 . .	− 34 9 4.10
February	9 . .	1.50
	10 . .	0.73
	11 . .	0.67

WEISSE V, 1143, $5^h\ 45^m\ 12^s$.

February	23 . .	−13 50 34.00

α ORIONIS, $5^h\ 47^m\ 36^s$.

February	10 . .	+ 7 22 39.51

WEISSE (2) V, 1598, $5^h\ 48^m\ 58^s$.

January	13 . .	+21 57 40.59
February	11 . .	42.52

B. A. C. 1934, $5^h\ 55^m\ 10^s$.

February	11 . .	+19 41 21.12

WEISSE V, 1487, $5^h\ 58^m\ 14^s$.

February	23 . .	−14 1 39.86

ν ORIONIS, $5^h\ 59^m\ 35^s$.

January	15 . .	+14 46 52.95
February	17 . .	(50.80)

LALANDE 11684, $6^h\ 2^m\ 9^s$.

January	13 . .	+26 2 14.88

WEISSE (2) VI, 12, $6^h\ 2^m\ 39^s$.

February	11 . .	+31 11 54.21

LALANDE 11714, $6^h\ 3^m\ 1^s$.

January	13 . .	+26 0 39.94

WEISSE VI, 264, $6^h\ 9^m\ 34^s$.

February	23 . .	−14 23 6.16

μ GEMINORUM, $6^h\ 14^m\ 27^s$.

January	13 . .	+22 34 53.68
	15 . .	53.89

(*), $6^h\ 18^m\ 18^s$.

January	13 . .	+24 18 9.63
	15 . .	10.06

WEISSE (2) VI, 533, $6^h\ 19^m\ 23^s$.

1857.		° ′ ″
January	13 . .	+24 20 14.37
	15 . .	15.12

WEISSE VI, 544, $6^h\ 19^m\ 40^s$.

February	9 . .	−14 25 41.44

WEISSE (2) VI, 809, $6^h\ 27^m\ 59^s$.

January	13 . .	+24 32 22.35
	15 . .	22.96

WEISSE (2) VI, 826, $6^h\ 28^m\ 31^s$.

January	13 . .	+24 30 38.95
	15 . .	38.33

γ GEMINORUM, $6^h\ 29^m\ 38^s$.

February	17 . .	+16 30 52.03

WEISSE (2) VI, 935, $6^h\ 31^m\ 31^s$.

February	9 . .	+23 47 46.49

51 CEPHEI, $6^h\ 33^m\ 38^s$.

February	10 . .	+87 14 54.12

51 CEPHEI, S. P., $6^h\ 33^m\ 39^s$.

June	20 . .	+87 14 53.87
	25 . .	54.99
	27 . .	54.29
July	7 . .	54.51
	14 . .	55.06
	25 . .	53.74
August	11 . .	55.43

WEISSE VI, 1069, $6^h\ 35^m\ 28^s$.

February	23 . .	−14 20 35.58

B. A. C. 2221, $6^h\ 40^m\ 28^s$.

February	9 . .	−14 16 42.07

WEISSE VI, 1351, $6^h\ 44^m\ 25^s$.

February	9 . .	−14 34 49.43

O. ARG. N. 7442, $6^h\ 50^m\ 46^s$.

February	26 . .	+60 47 49.21

RUMKER 2086, $6^h\ 57^m\ 12^s$.

February	9 . .	+60 57 32.32

WEISSE VII, 250, $7^h\ 8^m\ 47^s$.

February	23 . .	−14 22 7.59

O. ARG. N. 7753, $7^h\ 9^m\ 36^s$.

February	26 . .	+60 14 28.83

RUMKER 2175, $7^h\ 9^m\ 53^s$.

February	9 . .	+60 9 19.88

WEISSE VII, 320, $7^h\ 11^m\ 10^s$.

1857.		° ′ ″
February	17 . .	+12 5 34.22
	28 . .	35.55

(*), $7^h\ 17^m\ 28^s$.

February	26 . .	+10 24 44.45

(*), $7^h\ 19^m\ 44^s$.

February	26 . .	+10 21 55.48

(*), $7^h\ 22^m\ 58^s$.

February	17 . .	−18 35 25.39

(*), $7^h\ 29^m\ 1^s$.

March	10 . .	+21 46 30.44

(*), $7^h\ 31^m\ 56^s$.

March	7 . .	+21 46 8.38
	10 . .	6.82

(*), $7^h\ 34^m\ 10^s$.

February	23 . .	−14 19 21.11

WEISSE VII, 1053, $7^h\ 34^m\ 40^s$.

February	28 . .	+13 34 12.81

B. A. C. 2544, $7^h\ 35^m\ 2^s$.

February	17 . .	+22 43 32.73

(*), $7^h\ 43^m\ 43^s$.

February	28 . .	+ 0 28 59.65

(*), $7^h\ 44^m\ 53^s$.

February	23 . .	+ 0 31 48.60

(*), $7^h\ 45^m\ 57^s$.

March	7 . .	+20 32 29.50

(*), $7^h\ 45^m\ 58^s$.

February	23 . .	+ 0 32 9.13

WEISSE (2) VII, 1212, $7^h\ 46^m\ 28^s$.

February	17 . .	+39 39 1.09

B. A. C. 2632, $7^h\ 47^m\ 29^s$.

February	3 . .	+20 15 0.62
	10 . .	14 59.33

WEISSE (2) VII, 1366, $7^h\ 48^m\ 25^s$.

March	10 . .	+20 15 41.82

(*), $7^h\ 50^m\ 3^s$.

February	26 . .	+20 31 46.88
	28 . .	46.82

6 CANCRI, $7^h\ 54^m\ 55^s$.

February	28 . .	+28 10 58.83

(*), $7^h\ 56^m\ 17^s$.

1857.		° ′ ″
February	3 . .	+20 11 20.91

WEISSE (2) VII, 1597, $7^h\ 58^m\ 11^s$.

February	26 . .	+16 46 53.31

WEISSE (2) VII, 1659, $8^h\ 0^m\ 14^s$.

February	26 . .	+16 49 1.63

WEISSE (2) VII, 1669, $8^h\ 0^m\ 29^s$.

March	7 . .	+16 51 14.47

(*), $8^h\ 0^m\ 46^s$.

February	23 . .	+42 2 42.14

ρ ARGUS, $8^h\ 1^m\ 35^s$.

February	3 . .	−23 54 12.63
	17 . .	11.26

O. ARG. N. 8922, $8^h\ 15^m\ 38^s$.

February	26 . .	+56 58 34.86

B. A. C. 2806, $8^h\ 16^m\ 16^s$.

February	3 . .	+11 4 49.59

WEISSE (2) VIII, 429, $8^h\ 19^m\ 1^s$.

February	28 . .	+19 42 38.77

η CANCRI, $8^h\ 24^m\ 36^s$.

February	17 . .	+20 54 49.72
	26 . .	49.86

(*), $8^h\ 30^m\ 51^s$.

February	28 . .	+ 6 52 32.84

WEISSE VIII, 828, $8^h\ 32^m\ 13^s$.

February	26 . .	+12 2 0.63

WEISSE VIII, 885, $8^h\ 33^m\ 53^s$.

February	17 . .	−14 12 13.73

ε HYDRÆ, $8^h\ 39^m\ 22^s$.

February	3 . .	+ 6 55 47.08
	28 . .	47.88
March	7 . .	47.58

(*), $8^h\ 40^m\ 44^s$.

April	7 . .	+22 42 58.57

B. A. C. 2995, $8^h\ 43^m\ 14^s$.

February	26 . .	+15 52 2.77

Weisse VIII, 1276, $8^h\ 49^m\ 35^s$.

1857.			° ′ ″
April	7	. .	−13 22 15.39

ι Ursæ Majoris, $8^h\ 49^m\ 36^s$.

February	17	. .	+48 35 16.78
	26	. .	17.17
March	7	. .	17.60

Rumker 2702, $8^h\ 49^m\ 38^s$.

February	3	. .	+54 19 7.35
	28	. .	8.11

Weisse VIII, 1282, $8^h\ 49^m\ 52^s$.

April	7	. .	−13 23 47.65

83 Cancri, $9^h\ 11^m\ 10^s$.

March	7	. .	+18 17 47.72
April	23	. .	47.26

B. A. C. 3194, $9^h\ 15^m\ 25^s$.

February	3	. .	+25 46 45.55
	28	. .	43.49

Weisse (2) IX, 478, $9^h\ 23^m\ 3^s$.

February	3	. .	+21 54 13.67

Weisse (2) IX, 486, $9^h\ 23^m\ 17^s$.

February	28	. .	+25 1 41.89

δ Ursæ Majoris, $9^h\ 23^m\ 28^s$.

April	7	. .	+52 18 47.15
	23	. .	46.74

B. A. C. 3318, $9^h\ 35^m\ 31^s$.

February	3	. .	+20 49 51.84
April	7	. .	52.73

ε Leonis, $9^h\ 37^m\ 54^s$.

April	23	. .	+24 25 1.77

Weisse (2) IX, 831, $9^h\ 39^m\ 44^s$.

April	7	. .	+44 11 0.23
	23	. .	0.60

Weisse (2) IX, 867, $9^h\ 41^m\ 22^s$.

March	7	. .	+18 42 24.76

B. A. C. 3367, $9^h\ 44^m\ 0^s$.

February	28	. .	−35 37 0.92

(*), $9^h\ 44^m\ 39^s$.

February	28	. .	−35 36 36.63

Weisse (2) IX, 1086, $9^h\ 51^m\ 23^s$.

February	3	. .	+42 59 9.84
April	7	. .	10.22

π Leonis, $9^h\ 52^m\ 49^s$.

1857.			° ′ ″
April	29	. .	+ 8 42 51.01

Weisse IX, 1204, $9^h\ 56^m\ 15^s$.

April	7	. .	+12 47 51.85

Weisse (2) X, 1282, $10^h\ 0^m\ 5^s$.

February	3	. .	+16 57 33.52

Weisse (2) X, 1316, $10^h\ 1^m\ 32^s$.

April	11	. .	+21 1 1.89

Rumker 3076, $10^h\ 3^m\ 8^s$.

April	25	. .	+12 30 44.47

Weisse X, 76, $10^h\ 6^m\ 0^s$.

March	7	. .	+12 1 48.25
April	29	. .	48.98

(*), $10^h\ 6^m$.

March	7	. .	+12 2 39.70

Weisse X, 173, $10^h\ 10^m\ 56^s$.

April	7	. .	+11 32 10.48
	11	. .	9.29
	23	. .	9.57
	29	. .	10.55

Weisse X, 234, $10^h\ 14^m\ 28^s$.

April	7	. .	+11 24 17.30

Weisse X, 276, $10^h\ 16^m\ 54^s$.

March	7	. .	+11 17 42.42
April	11	. .	43.56
	23	. .	42.77

Weisse X, 288, $10^h\ 17^m\ 34^s$.

April	25	. .	+10 41 28.24

Weisse (2) X, 360, $10^h\ 18^m\ 50^s$.

February	28	. .	+17 56 5.19

Weisse (2) X, 374, $10^h\ 19^m\ 20^s$.

February	28	. .	+17 55 58.51

B. A. C. 3575, $10^h\ 20^m\ 14^s$.

April	7	. .	+10 28 29.86
	29	. .	28.70

(*), $10^h\ 21^m\ 24^s$.

April	23	. .	− 7 34 26.44
	25	. .	28.26

Weisse X, 377, $10^h\ 21^m\ 56^s$.

March	7	. .	+11 14 27.21

Lalande 20419, $10^h\ 25^m\ 14^s$.

1857.			° ′ ″
April	25	. .	− 7 28 36.32
	30	. .	35.21

Weisse (2) X, 642, $10^h\ 32^m\ 6^s$.

February	28	. .	+36 13 15.88
April	23	. .	16 24

Weisse X, 618, $10^h\ 34^m\ 53^s$.

April	7	. .	+11 5 14.51
	25	. .	13.50
	29	. .	14.78

Weisse X, 656, $10^h\ 37^m\ 3^s$.

April	7	. .	+11 6 36.02

Weisse X, 673, $10^h\ 38^m\ 22^s$.

April	25	. .	+10 45 28.03
	29	. .	29.83
	30	. .	28.35

Weisse X, 716, $10^h\ 40^m\ 49^s$.

February	28	. .	+12 37 47.22
April	23	. .	47.41

l Leonis, $10^h\ 41^m\ 54^s$.

February	3	. .	+11 17 5.67
April	4	. .	4.79

(*), $10^h\ 41^m\ 44^s$.

April	30	. .	+10 30 33.83

Weisse X, 757, $10^h\ 42^m\ 38^s$.

April	30	. .	+10 33 50.67

Weisse X, 822, $10^h\ 45^m\ 29^s$.

April	25	. .	+12 1 51.38

Weisse X, 837, $10^h\ 46^m\ 20^s$.

April	25	. .	+12 3 17.68

Weisse X, 859, $10^h\ 47^m\ 26^s$.

February	3	. .	− 0 46 25.73
	28	. .	24.73
March	7	. .	25.60
April	7	. .	24.55
	23	. .	25.05

Lalande 21026, $10^h\ 48^m\ 58^s$.

February	3	. .	− 0 52 20.20
	28	. .	21.14
March	7	. .	22.39
April	7	. .	20.55
	23	. .	21.68

Weisse X, 987, $10^h\ 55^m\ 15^s$.

April	23	. .	+ 9 55 31.06
	29	. .	30.65
	30	. .	30.72

(*), $10^h\ 55^m\ 1^s$.

1857.			° ′ ″
April	25	. .	+ 9 21 36.39

Weisse X, 1006, $10^h\ 56^m\ 23^s$.

April	7	. .	+ 9 28 59.99
	25	. .	59.34

χ Leonis, $10^h\ 57^m\ 48^s$.

April	4	. .	+ 8 5 30.13

Weisse X, 1075, $10^h\ 59^m\ 56^s$.

February	28	. .	+10 58 7.55
April	29	. .	7.96

Rumker 3457, $11^h\ 3^m\ 15^s$.

April	23	. .	+ 8 39 2.04
	30	. .	1.48

B. A. C. 3837, $11^h\ 6^m\ 45^s$.

April	25	. .	+ 8 49 33.82
	30	. .	34.03

δ Leonis, $11^h\ 6^m\ 39^s$.

April	4	. .	+21 17 24.15

δ Crateris, $11^h\ 12^m\ 21^s$.

April	24	. .	−14 1 16.46

Weisse XI, 234, $11^h\ 14^m\ 26^s$.

April	23	. .	+ 7 59 25.27
	25	. .	24.90
	30	. .	25.26

B. A. C. 3892, $11^h\ 19^m\ 3^s$.

April	4	. .	+ 9 25 45.66

B. A. C. 3915, $11^h\ 23^m\ 11^s$.

April	23	. .	+19 10 49.32

Rumker 3636, $11^h\ 26^m\ 51^s$.

April	24	. .	+15 40 0.85

Weisse XI, 488, $11^h\ 28^m\ 39^s$.

April	23	. .	−13 41 17.04

(*), $11^h\ 32^m\ 39^s$.

May	5	. .	− 5 19 58.97

Rumker 3697, $11^h\ 34^m\ 49^s$.

May	8	. .	+22 59 23.08

Rumker 3706, $11^h\ 35^m\ 26^s$.

April	25	. .	+12 38 23.25

Rumker 3738, $11^{h}\ 39^{m}\ 45^{s}$.

1857.		°	′	″
April	24 . .	+24	29	52.54

(*), $11^{h}\ 40^{m}\ 46^{s}$.

April	30 . .	+21	1	3.54
May	7 . .			2.69

B. A. C. 3990, $11^{h}\ 40^{m}\ 46^{s}$.

April	30 . .	+20	59	49.57
May	7 . .			48.52

Weisse (2) XI, 816, $11^{h}\ 41^{m}\ 48^{s}$.

April	25 . .	+16	54	35.63

β Leonis, $11^{h}\ 41^{m}\ 55^{s}$.

April	17 . .	+15	21	16.84

Weisse (2) XI, 841, $11^{h}\ 42^{m}\ 55^{s}$.

April	30 . .	+21	4	1.89
May	5 . .			1.32
	7 . .			0.52

Weisse (2) XI, 889, $11^{h}\ 45^{m}\ 58^{s}$.

May	8 . .	+17	37	44.76

γ Ursæ Majoris, $11^{h}\ 46^{m}\ 27^{s}$.

April	23 . .	+54	28	22.73

O. Arg. S. 11827, $11^{h}\ 53^{m}\ 20^{s}$.

April	25 . .	−21	6	0.45
May	5 . .			1.95

O. Arg. S. 11828, $11^{h}\ 53^{m}\ 34^{s}$.

April	23 . .	−21	3	28.17
	25 . .			27.68
May	5 . .			27.30

(*), $11^{h}\ 55^{m}\ 36^{s}$.

May	7 . .	− 9	52	11.05

Weisse (2) XI, 1110, $11^{h}\ 56^{m}\ 52^{s}$.

May	8 . .	+19	35	52.71

ε Corvi, $12^{h}\ 2^{m}\ 56^{s}$.

April	24 . .	−21	50	25.66
	25 . .			26.09
	30 . .			27.35
May	5 . .			27.38
	6 . .			27.86
	7 . .			29.19
	12 . .			27.14

B. A. C. 4096, $12^{h}\ 2^{m}\ 55^{s}$.

April	29 . .	+ 6	35	8.44

Weisse XII, 53, $12^{h}\ 4^{m}\ 50^{s}$.

April	23 . .	+ 6	7	16.67

Weisse XII, 63, $12^{h}\ 5^{m}\ 9^{s}$.

1857.		°	′	″
May	8 . .	+ 6	39	13.16

Weisse XII, 91, $12^{h}\ 6^{m}\ 56^{s}$.

April	29 . .	+ 5	46	43.21

Weisse XII, 160, $12^{h}\ 11^{m}\ 0^{s}$.

April	24 . .	+ 5	52	22.23
May	9 . .			21.48

(*), $12^{h}\ 12^{m}\ 18^{s}$.

April	23 . .	+ 7	46	11.37

Rumker 3907, $12^{h}\ 12^{m}\ 32^{s}$.

May	8 . .	+ 6	19	32.80

η Virginis, $12^{h}\ 12^{m}\ 45^{s}$.

April	30 . .	+ 0	6	41.96
May	5 . .			42.17
	7 . .			41.05
	12 . .			42.26

Rumker 3911, $12^{h}\ 12^{m}\ 47^{s}$.

April	25 . .	+ 6	26	54.57

Weisse (2) XII, 446, $12^{h}\ 21^{m}\ 48^{s}$.

April	23 . .	+22	46	43.81
	24 . .			44.41

Weisse (2) XII, 478, $12^{h}\ 23^{m}\ 0^{s}$.

May	6 . .	+25	6	49.80
	8 . .			50.77

Weisse (2) XII, 390, $12^{h}\ 24^{m}\ 4^{s}$.

April	25 . .	− 6	53	23.39
	30 . .			24.95

Weisse (2) XII, 500, $12^{h}\ 24^{m}\ 4^{s}$.

May	9 . .	+24	32	43.78
	12 . .			43.95

Weisse XII, 409, $12^{h}\ 24^{m}\ 43^{s}$.

April	29 . .	+ 6	29	2.06

Weisse XII, 416, $12^{h}\ 25^{m}\ 15^{s}$.

April	29 . .	+ 6	28	32.89

Weisse XII, 515, $12^{h}\ 31^{m}\ 22^{s}$.

April	25 . .	+ 0	59	17.47

Weisse XII, 519, $12^{h}\ 31^{m}\ 32^{s}$.

May	8 . .	+14	34	38.75

Weisse XII, 525, $12^{h}\ 31^{m}\ 59^{s}$.

April	30 . .	+14	38	18.09

(*), $12^{h}\ 31^{m}\ 48^{s}$.

April	24 . .	+14	34	27.12

Weisse XII, 549, $12^{h}\ 33^{m}\ 26^{s}$.

1857.		°	′	″
May	12 . .	− 7	40	21.69

γ Virginis, $12^{h}\ 34^{m}\ 34^{s}$.

May	9 . .	− 0	40	52.59

Weisse XII, 583, $12^{h}\ 35^{m}\ 15^{s}$.

May	7 . .	+ 2	23	9.20

Weisse XII, 584, $12^{h}\ 35^{m}\ 20^{s}$.

April	25 . .	+ 2	5	57.61

Weisse XII, 706, $12^{h}\ 41^{m}\ 49^{s}$.

April	25 . .	+14	48	3.64
May	8 . .			3.36

B. A. C. 4301, $12^{h}\ 41^{m}\ 54^{s}$.

April	30 . .	+14	53	16.00
May	8 . .			15.55
	15 . .			13.94

Weisse XII, 757, $12^{h}\ 44^{m}\ 42^{s}$.

May	7 . .	+ 0	50	54.76

Weisse XII, 786, $12^{h}\ 46^{m}\ 27^{s}$.

May	7 . .	+ 0	52	20.20

Weisse XII, 818, $12^{h}\ 48^{m}\ 28^{s}$.

May	7 . .	+ 0	48	52.75

Weisse XII, 819, $12^{h}\ 48^{m}\ 29^{s}$.

April	25 . .	− 0	57	33.11

B. A. C. 4345, $12^{h}\ 49^{m}\ 27^{s}$.

April	30 . .	+39	4	17.75
May	16 . .			18.54

α Canum Venaticorum, $12^{h}\ 49^{m}\ 28^{s}$.

May	16 . .	+39	4	31.54
June	6 . .			31.56

Weisse XII, 918, $12^{h}\ 54^{m}\ 5^{s}$.

May	12 . .	−10	24	2.36

(*), $13^{h}\ 0^{m}\ 43^{s}$.

May	5 . .	+12	50	3.42
	7 . .			0.90

Weisse XII, 1054, $13^{h}\ 2^{m}\ 19^{s}$.

May	5 . .	+12	49	1.22
	7 . .			0.34

θ Virginis, $13^{h}\ 2^{m}\ 42^{s}$.

May	15 . .	− 4	37	25.51

(*), $13^{h}\ 3^{m}\ 55^{s}$.

June	6 . .	−11	10	49.75

Weisse XIII, 69, $13^{h}\ 5^{m}\ 35^{s}$.

1857.		°	′	″
May	29 . .	+12	18	7.85
June	5 . .			8.47

Weisse XIII, 87, $13^{h}\ 6^{m}\ 29^{s}$.

June	6 . .	−10	48	36.67

Weisse XIII, 181, $13^{h}\ 11^{m}\ 43^{s}$

May	5 . .	− 1	47	33.73
	7 . .			33.71

Weisse XIII, 208, $13^{h}\ 13^{m}\ 7_{s}$.

May	8 . .	+10	44	12.82
	15 . .			14.87

α Virginis, $13^{h}\ 17^{m}\ 49^{s}$.

May	16 . .	−10	25	44.62
	26 . .			43.76
June	5 . .			44.81
	6 . .			44.50

Weisse XIII, 294, $13^{h}\ 18^{m}\ 55^{s}$.

May	9 . .	− 2	55	52.33

Weisse XIII, 331, $13^{h}\ 21^{m}\ 9^{s}$.

May	8 . .	+ 9	5	3.51
	29 . .			5.74

Weisse XIII, 365, $13^{h}\ 23^{m}\ 0^{s}$.

May	15 . .	+ 7	54	11.35

Weisse XIII, 370, $13^{h}\ 23^{m}\ 22^{s}$.

May	5 . .	+ 8	8	22.05

(*), $13^{h}\ 23^{m}\ 45^{s}$.

May	7 . .	+ 8	48	11.01
	16 . .			12.44

Weisse XIII, 392, $13^{h}\ 24^{m}\ 24^{s}$.

June	6 . .	+ 8	46	42.65

Weisse XIII, 461, $13^{h}\ 27^{m}\ 56^{s}$.

May	5 . .	+ 7	10	16.79
	7 . .			17.42
	12 . .			17.86
	29 . .			(19.14)

Weisse XIII, 472, $13^{h}\ 28^{m}\ 13^{s}$.

May	5 . .	+ 7	13	39.12
	7 . .			39.52
	12 . .			39.44

(* 48) W., $13^{h}\ 28^{m}\ 40^{s}$.

May	9 . .	+80	48	54.88

B. A. C. 4547, $13^{h}\ 30^{m}\ 33^{s}$.

May	23 . .	− 2	31	13.94
	26 . .			13.54

η Ursæ Majoris, $13^{h}\ 42^{m}\ 1^{s}$.

1857.		°	′	″
May	12	+50	0	48.75

(*), $13^{h}\ 42^{m}\ 2^{s}$.

May	7	+22	42	56.39
	9			55.67

Weisse XIII, 737, $13^{h}\ 43^{m}\ 17^{s}$.

May	8	+14	11	1.55
	29			2.92

η Bootis, $13^{h}\ 48^{m}\ 1^{s}$.

May	23	+19	6	4.82
	26			4.33

Weisse XIII, 813, $13^{h}\ 48^{m}\ 2^{s}$.

May	7	−11	32	3.05

Rumker 4529, $13^{h}\ 51^{m}\ 1^{s}$.

May	5	+25	41	6.59
	8			5.04
	29			7.18

(*), $13^{h}\ 52^{m}\ 34^{s}$.

May	9	+12	0	13.62

Rumker 4551, $13^{h}\ 54^{m}\ 31^{s}$.

May	7	+22	39	24.32
	23			25.25
June	6			24.15

τ Virginis, $13^{h}\ 54^{m}\ 31^{s}$.

May	12	+ 2	13	26.36
	26			26.55

Weisse XIII, 1071, $14^{h}\ 0^{m}\ 58^{s}$.

June	6	−11	9	43.75

(*), $14^{h}\ 1^{m}\ 35^{s}$.

May	7	+34	4	10.26
	8			11.42
	9			10.82

Weisse (2) XIV, 11, $14^{h}\ 1^{m}\ 53^{s}$.

May	5	+24	58	53.55
	12			52.90

B. A. C. 4700, $14^{h}\ 3^{m}\ 12^{s}$.

May	23	−15	38	19.94

Weisse (2) XIV, 228, $14^{h}\ 10^{m}\ 47^{s}$.

May	7	+41	3	11.82
	8			13.60
	9			12.13

Lalande 26172, $14^{h}\ 11^{m}\ 42^{s}$.

May	16	−17	52	33.29
June	5			32.38
	6			32.93

Weisse (2) XIV, 245, $14^{h}\ 11^{m}\ 43^{s}$.

1857.		°	′	″
May	5	+41	1	18.14
	8			19.64
	9			16.45

Weisse (2) XIV, 248, $14^{h}\ 11^{m}\ 58^{s}$.

June	11	+24	38	52.15

Rumker 4697, $14^{h}\ 18^{m}\ 48^{s}$.

May	26	+ 1	37	40.72

Radcliffe 3200, $14^{h}\ 19^{m}\ 0^{s}$.

May	7	+47	24	17.68
	16			17.56

B. A. C. 4798, $14^{h}\ 22^{m}\ 43^{s}$.

May	29	+ 1	27	17.54
June	5			18.42
	19			18.75

Weisse XIV, 422, $14^{h}\ 23^{m}\ 37^{s}$.

June	11	− 3	10	26.58

Rumker 4730, $14^{h}\ 24^{m}\ 18^{s}$.

May	5	+ 1	32	2.68

(*), $14^{h}\ 24^{m}\ 39^{s}$.

May	16	+49	9	58.85

ρ Bootis, $14^{h}\ 25^{m}\ 48^{s}$.

June	2	+30	59	17.94

B. A. C. 4814, $14^{h}\ 26^{m}\ 58^{s}$.

May	23	−19	49	21.00

(*), $14^{h}\ 27^{m}\ 5^{s}$.

May	7	+50	56	26.31
	9			26.63

Weisse XIV, 540, $14^{h}\ 29^{m}\ 52^{s}$.

June	6	− 3	16	48.29

O. Arg. S. 13856, $14^{h}\ 34^{m}\ 52^{s}$.

May	12	−23	53	25.88
	16			25.94
	26			26.14

O. Arg. S. 13870, $14^{h}\ 35^{m}\ 27^{s}$.

May	12	−23	51	37.29
	16			37.57
	26			38.80

(*), $14^{h}\ 37^{m}\ 20^{s}$.

May	5	+27	7	29.19

B. A. C. 4869, $14^{h}\ 38^{m}\ 22^{s}$.

1857.		°	′	″
June	5	+ 1	18	39.46
	19			39.70

ε Bootis $14^{h}\ 38^{m}\ 52^{s}$.

May	7	+27	39	58.54
	23		40	0.19
June	2		40	0.65
	6		39	59.78
	11		39	58.75

O.Arg. S. 13951, $14^{h}\ 41^{m}\ 12^{s}$.

May	9	−23	40	42.71
	12			43.37

B. A. C. 4888, $14^{h}\ 41^{m}\ 14^{s}$.

May	9	−23	39	57.41
	12			56.66

O. Arg. S. 13958, $14^{h}\ 41^{m}\ 51^{s}$.

May	9	−23	38	6.86
	26			7.92

(*), $14^{h}\ 43^{m}\ 46^{s}$.

May	12	−23	42	25.28

B. A. C. 4898, $14^{h}\ 43^{m}\ 46^{s}$.

June	20	− 1	42	48.65

Groombridge 2168, $14^{h}\ 50^{m}\ 49^{s}$.

June	6	+43	25	32.56

Groombridge 2169, $14^{h}\ 50^{m}\ 51^{s}$.

June	6	+43	21	31.79

β Ursæ Minoris, $14^{h}\ 51^{m}\ 9^{s}$.

May	16	+74	43	38.17
	23			38.79

Weisse XIV, 1016, $14^{h}\ 54^{m}\ 45^{s}$.

May	12	−11	11	11.62
June	5			10.33

B. A. C. 4944, $14^{h}\ 54^{m}\ 38^{s}$.

June	22	+ 0	25	2.07

Weisse XIV, 1072, $14^{h}\ 57^{m}\ 19^{s}$.

May	5	−11	50	45.46
	11			45.92

ψ Bootis, $14^{h}\ 58^{m}\ 27^{s}$.

June	20	+27	29	45.58

Weisse XIV, 1118, $14^{h}\ 59^{m}\ 46^{s}$.

June	5	− 1	44	18.25

Weisse XIV, 1131, $15^{h}\ 0^{m}\ 20^{s}$.

1857.		°	′	″
June	25	+ 0	27	21.50

Weisse XIV, 1142, $15^{h}\ 0^{m}\ 51^{s}$.

June	25	+ 0	29	2.35

Weisse XV, 2, $15^{h}\ 1^{m}\ 53^{s}$.

May	23	− 2	2	18.55
June	26			18.82

B. A. C. 4995, $15^{h}\ 4^{m}\ 15^{s}$.

May	5	−19	15	31.84
	7			33.10
	16			32.07
	22			31.04

Weisse (2) XV, 140, $15^{h}\ 6^{m}\ 34^{s}$.

June	11	+46	0	36.57

β Libræ, $15^{h}\ 9^{m}\ 29^{s}$.

May	12	− 8	51	48.22

Lalande 27852, $15^{h}\ 10^{m}\ 38^{s}$.

May	7	−20	35	21.85
	16			20.26
	20			19.95
	22			(18.33)

Lalande 27880, $15^{h}\ 11^{m}\ 29^{s}$.

May	5	−18	39	17.85
	26			18.83
June	16			19.51

Weisse XV, 221, $15^{h}\ 13^{m}\ 21^{s}$.

June	25	−13	18	38.89

Weisse XV, 249, $15^{h}\ 14^{m}\ 49^{s}$.

June	19	−14	22	26.48

(*), $15^{h}\ 15^{m}\ 7^{s}$.

June	25	−13	17	46.94

Weisse XV, 277, $15^{h}\ 16^{m}\ 11^{s}$.

June	25	−13	16	31.72

O. Arg. S. 14531, $15^{h}\ 16^{m}\ 47^{s}$.

June	11	−21	32	38.94

Lalande 28090, $15^{h}\ 17^{m}\ 59^{s}$.

May	7	−20	53	(7.61)
	16			5.53
June	2			5.16
	6			5.66
	22			4.05
	26			4.77

(*), $15^h 21^m 48^s$.

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June	27 . .	−33 5 41.01

Lalande 28213, $15^h 22^m 35^s$.

May	5 . .	−21 24 4.67

Lalande 28251, $15^h 24^m 1^s$.

May	5 . .	−21 29 11.28
	16 . .	11.00
	20 . .	10.55

B. A. C. 5109, $15^h 24^m 34^s$.

May	7 . .	−19 11 26.38
	26 . .	24.98
June	22 . .	23.63

(*), $15^h 28^m 37^s$.

June	11 . .	−22 8 7.31
	25 . .	8.76

α Coronæ Borealis, $15^h 28^m 46^s$.

June	16 . .	+27 11 17.79

(*), $15^h 29^m 0^s$.

May	5 . .	−22 26 30.96
June	2 . .	29.86

Lalande 28414, $15^h 29^m 35^s$.

June	26 . .	−22 40 25.70
	27 . .	26.08

Lalande 28446, $15^h 30^m 31^s$.

May	26 . .	−22 35 12.96

Lalande 28453, $15^h 30^m 44^s$.

June	19 . .	−17 12 6.28

Lalande 28466, $15^h 31^m 7^s$.

May	7 . .	−22 41 19.83
	16 . .	19.20
	26 . .	18.97
	27 . .	19.86

(*), $15^h 31^m 31^s$.

June	2 . .	−22 25 55.55

B. A. C. 5184, $15^h 34^m 54^s$.

June	19 . .	−15 33 40.99

O. Arg. S. 14835, $15^h 37^m 13^s$.

June	2 . .	−23 3 50.05

B. A. C, 5220, $15^h 40^m 10^s$.

May	16 . .	−23 23 52.06
June	11 . .	52.80
	27 . .	52.67

B. A. C. 5254, $15^h 45^m 36^s$.

1857.		° ′ ″
May	16 . .	−23 33 26.66
	26 . .	26.84
June	2 . .	26.43
	19 . .	26.31
	20 . .	27.09
July	13 . .	26.01

(*), $15^h 47^m 30^s$.

June	27 . .	−16 50 25.47

Weisse XV, 939, $15^h 49^m 49^s$.

June	11 . .	− 2 34 47.03

(*), $15^h 58^m 48^s$.

June	20 . .	−12 6 32.71
	27 . .	32.91

(*), $15^h 59^m$.

June	11 . .	+70 2 21.19

(*), $15^h 59^m$,

June	25 . .	+69 36 11.45

O. Arg. N. 15872, $15^h 59^m$.

June	25 . .	+69 36 54.86

Lalande 29306, $15^h 59^m 12^s$.

June	19 . .	−17 33 15.73

B. A. C. 5345, $15^h 59^m 27^s$.

May	16 . .	−24 4 55.91
June	2 . .	55.77
	5 . .	54.61
	15 . .	56.46
July	13 . .	55.72

(*), $16^h 6^m 16^s$.

July	13 . .	−20 44 50.33
	14 . .	50.12

B. A. C. 5408, $16^h 6^m 35^s$.

June	5 . .	−18 10 20.34
	22 . .	19.86

(*), $16^h 7^m 44^s$.

July	7 . .	−20 57 6.76

δ Ophiuchi, $16^h 7^m 1^s$.

June	26 . .	− 3 19 50.41

O. Arg. S. 15438, $16^h 7^m 19^s$.

June	2 . .	−24 45 41.48
	27 . .	42.59

(*), $16^h 8^m$.

June	11 . .	+70 41 51.72
	20 . .	52.26

Lalande 29696, $16^h 11^m 28^s$.

1857.		° ′ ″
June	15 . .	−18 29 4.45
	19 . .	4.73

O. Arg. S. 15541, $16^h 12^m 26^s$.

June	25 . .	−21 30 0.48

O. Arg. N. 16121, $16^h 15^m 45^s$.

June	22 . .	+71 17 5.55

B. A. C. 5467, $16^h 15^m 54^s$.

June	26 . .	−19 42 20.72

α Scorpii $16^h 20^m 50^s$.

June	20 . .	−26 7 2.11
	25 . .	3.59
July	7 . .	2.55
	14 . .	2.44
August	3 . .	(1.27)

η Draconis, $16^h 22^m 6^s$.

June	11 . .	+61 49 55.98

Lalande 30099, $16^h 26^m 2^s$.

June	26 . .	− 3 57 37.04

Groombridge 2356, $16^h 26^m 53^s$.

June	19 . .	+71 41 46.35
	22 . .	45.71

Lalande 30207, $16^h 29^m 56^s$.

July	14 . .	−22 36 17.44

(*), $16^h 30^m 42^s$.

June	25 . .	−26 10 42.98
	27 . .	43.75
July	7 . .	43.86

O. Arg. S. 15811, $16^h 31^m 36^s$.

June	25 . .	−26 10 22.66
	27 . .	23.55
July	7 . .	22.65

B. A. C. 5580, $16^h 33^m 40^s$.

June	26 . .	−19 39 8.41
August	3 . .	7.55

(*), $16^h 34^m 28^s$.

June	25 . .	−26 11 12.46
	27 . .	12.64
July	7 . .	12.47

ζ Herculis, $16^h 36^m 0^s$.

June	20 . .	+31 51 31.61

B. A. C. 5606, $16^h 36^m 43^s$.

June	5 . .	−22 55 7.83

Lalande 30479, $16^h 38^m 43^s$.

1857.		° ′ ″
June	15 . .	−19 50 23.65
July	13 . .	23.37

Lalande 30506, $16^h 39^m 32^s$.

June	10 . .	−19 37 10.37

Lalande 30556, $16^h 41^m 32^s$.

July	14 . .	−26 29 36.58

Weisse XVI, 792, (1st *,) $16^h 41^m 43^s$.

June	25 . .	− 4 53 35.84

Weisse XVI, 792, (2d *,) $16^h 41^m 46^s$.

June	25 . .	− 4 53 53.96

(*), $16^h 44^m 10^s$.

June	27 . .	−21 7 1.59
August	3 . .	0.47

B. A. C. 5663, $16^h 45^m 9^s$.

June	19 . .	−20 10 38.24
	22 . .	39.11
	26 . .	38.36

Weisse XVI, 912, $16^h 48^m 13^s$.

July	13 . .	− 4 56 18.43

Lalande 30788, $16^h 49^m 25^s$.

June	15 . .	−21 33 1.61

O. Arg. S. 16158, $16^h 49^m 49^s$.

July	25 . .	−26 53 24.07

O. Arg. S. 16163, $16^h 49^m 59^s$.

July	14 . .	−26 47 44.17

κ Ophiuchi, $16^h 51^m 3^s$.

June	11 . .	+ 9 35 45.58
	20 . .	45.24
	25 . .	44.56

B. A. C. 5730, $16^h 54^m 59^s$.

June	5 . .	−24 2 8.33
	22 . .	9.31

B. A. C. 5742, $16^h 55^m 55^s$.

June	5 . .	−24 2 18.53
	22 . .	19.19

B. A. C. 5769, $16^h 59^m 5^s$.

June	15 . .	+73 20 17.70
	20 . .	19.39
	26 . .	19.04

ε Ursæ Minoris, $17^h 0^m 27^s$.

June	25 . .	+82 15 40.21

(*), $17^h 0^m 44^s$.

July	25 . .	−24 10 26.11

O. ARG. S. 16505, $17^h 6^m 35^s$.

1857.		°	′	″
July	7 . .	−26	21	59.89

α HERCULIS, $17^h 8^m 16^s$.

June	11 . .	+14	33	11.88
	20 . .			10.64
	27 . .			9.40

B. A. C. 5827, $17^h 9^m 29^s$.

August	7 . .	−24	7	48.25

WEISSE XVII, 202, $17^h 12^m 31^s$.

July	25 . .	− 5	45	41.96

B. A. C. 5846, $17^h 13^m 6^s$.

July	14 . .	−24	45	37.94

θ OPHIUCHI, $17^h 13^m 25^s$.

June	11 . .	−24	51	21.51
	27 . .			19.87
July	13 . .			17.56

O. ARG. S. 16847, $17^h 21^m 33^s$.

June	27 . .	−17	41	22.57
July	7 . .			22.13

O. ARG. S. 16854, $17^h 21^m 50^s$.

June	27 . .	−17	41	45.04
July	7 . .			45.89

(*), $17^h 21^m 40^s$.

June	20 . .	−40	55	38.92

WEISSE XVII, 409, $17^h 23^m 5^s$.

July	13 . .	− 5	58	17.13

LAÇAILLE 7325, $17^h 23^m 14^s$.

June	19 . .	−41	3	53.47
	20 . .			54.98
	22 . .			53.49
	25 . .			54.60
August	3 . .			54.27
	7 . .			53.80
	14 . .			55.66

LALANDE 31931, $17^h 25^m 50^s$.

June	27 . .	−17	44	0.68

O. ARG. S. 16978, $17^h 28^m 5^s$.

June	27 . .	−17	45	56.64

O. ARG. S. 17070, $17^h 33^m 2^s$.

June	25 . .	−19	22	40.69
July	7 . .			41.03

O. ARG. S. 17098, $17^h 34^m 9^s$.

July	25 . .	−19	19	41.37

LALANDE 32814, $17^h 39^m 6^s$.

1857.		°	′	″
August	7 . .	−25	7	53.28

μ HERCULIS, $17^h 40^m 59^s$.

June	19 . .	+27	48	19.48
	22 . .			18.98
	27 . .			19.58
August	12 . .			19.62
	14 . .			18.19

WEISSE XVII, 834, $17^h 42^m 33^s$.

August	3 . .	−12	6	51.66

LALANDE 32559, $17^h 43^m 14^s$.

June	25 . .	−25	43	49.00

B. A. C. 6041, $17^h 44^m 4^s$.

July	7 . .	−19	4	49.53

B. A. C. 6049, $17^h 45^m 19^s$.

June	27 . .	−10	51	40.22

B. A. C. 6063, $17^h 47^m 52^s$.

July	14 . .	−28	2	17.84
	25 . .			18.47

WEISSE XVII, 966, $17^h 48^m 18^s$.

June	22 . .	−15	9	18.65

(*), $17^h 48^m 21^s$.

June	20 . .	−15	17	50.58

(*), $17^h 49^m 32^s$.

July	14 . .	−28	4	9.15

(*), $17^h 49^m 35^s$.

July	14 . .	−28	1	53.47
	25 . .			52.47

γ DRACONIS, $17^h 53^m 21^s$.

June	27 . .	+51	30	25.65
July	7 . .			24.71
	12 . .			26.00
	14 . .			24.29
	29 . .			24.80

LALANDE 33089, $17^h 56^m 31^s$.

June	20 . .	−17	1	59.35
July	13 . .			58.90

(*), $17^h 57^m 6^s$.

July	14 . .	−27	47	38.32
	25 . .			37.64

LALANDE 33178, $17^h 59^m 7^s$.

June	22 . .	−16	40	0.70

O. ARG. S. 17680, $18^h 0^m 5^s$.

1857.		°	′	″
July	25 . .	−27	47	56.60

(*), $18^h 0^m 5^s$.

August	11 . .	−27	45	18.29

O. ARG. S. 17695, $18^h 0^m 30^s$.

August	11 . .	−27	45	3.53

ο HERCULIS, $18^h 2^m 5^s$.

August	21 . .	+28	44	45.30
	29 . .			44.54

(*), $18^h 4^m 37^s$.

July	13 . .	−17	26	36.85

μ^1 SAGITTARII, $18^h 5^m 23^s$.

June	19 . .	−21	5	28.07
	20 . .			27.60
	22 . .			27.55
	25 . .			29.27
July	7 . .			28.27
August	12 . .			27.56
	13 . .			29.85
	14 . .			30.02

(*), $18^h 6^m 30^s$.

August	7 . .	−17	23	55.20

(*), $18^h 11^m 21^s$.

July	25 . .	−17	46	32.44

LALANDE 33694, $18^h 11^m 40^s$.

June	20 . .	−17	48	13.45
July	25 . .			15.52

δ SAGITTARII, $18^h 12^m 2^s$.

July	7 . .	−29	52	59.07
	14 .			59.94
August	31 . .			59.61

κ LYRÆ, $18^h 14^m 56^s$.

August	13 . .	+36	0	13.46

δ URSÆ MINORIS, $18^h 17^m 30^s$.

June	20 . .	+86	36	6.76
	25 . .			5.02
	27 . .			7.81
July	7 . .			6.98
	14 . .			5.67
	25 . .			7.88
August	11 . .			6.02

δ URSÆ MINORIS, S. P., $18^h 17^m 30^s$.

February	10 . .	+86	36	7.96

LALANDE 33966, $18^h 18^m 15^s$.

August	7 . .	−18	9	42.60

b DRACONIS, $18^h 21^m 50^s$.

1857.		°	′	″
August	24 . .	+58	43	13.19

61 SERPENTIS, $18^h 24^m 44^s$.

August	13 . .	− 1	5	56.55
	20 . .			55.84
	31 . .			57.00

LALANDE 34354; $18^h 27^m 24^s$.

August	3 . .	−18	39	25.27
	7 . .			24.97

B. A. C. 6341, $18^h 29^m 41^s$.

August	24 . .	+23	29	41.60
	31 . .			40.97

α LYRÆ, $18^h 32^m 12^s$.

August	13 . .	+38	39	19.33

(* 36) W., $18^h 35^m 53^s$.

August	7 . .	−18	53	51.99

B. A. C. 6371, $18^h 36^m 54^s$.

August	27 . .	−27	7	48.97

O. ARG. S. 18683, $18^h 40^m 4^s$.

July	14 . .	−22	13	46.67

ϵ^1 LYRÆ, $18^h 39^m 42^s$.

August	20 . .	+39	31	31.56
	24 . .			31.98

31 SAGITTARII, $18^h 43^m 44^s$.

August	31 . .	−22	4	53.27

β LYRÆ, $18^h 44^m 55^s$.

July	7 . .	+33	12	7.91
	25 . .			7.36

MADRAS 1304, $18^h 44^m 43^s$.

August	12 . .	−19	17	0.82

σ SAGITTARII, $18^h 46^m 35^s$.

August	20 . .	−26	27	59.86
	29 . .			58.41
September	7 . .			59.01

B. A. C. 6454, $18^h 49^m 0^s$.

August	7 . .	−20	50	6.26

θ^1 SERPENTIS, $18^h 49^m 10^s$.

August	24 . .	+ 4	1	29.25

θ^2 SERPENTIS, $18^h 49^m 10^s$.

August	24 . .	+ 4	1	24.14

Rumker 6881, 18^{h} 50^{m} 42^{s}.

1857.		°	′	″
July	25	+21	11	53.44
August	12			53.60

B. A. C. 6507, 18^{h} 56^{m} 17^{s}.

August	7	−21	56	31.83

Weisse (2) XVIII, 1790, 18^{h} 57^{m} 42^{s}.

July	7	+21	3	53.02
	25			52.40

Weisse (2) XVIII, 1806, 18^{h} 58^{m} 11^{s}.

July	25	+21	1	16.72

ζ Aquilæ, 18^{h} 58^{m} 58^{s}.

August	3	+13	39	30.67
	14			29.20
	20			29.61

Weisse (2) XVIII, 1835, 18^{h} 59^{m} 0^{s}.

July	14	+21	1	55.74
	25			55.64

B. A. C. 6536, 19^{h} 0^{m} 3^{s}.

August	12	−19	30	19.37

20 Aquilæ, 19^{h} 5^{m} 3^{s}.

August	13	− 8	10	12.17
	20			11.83
September	9			11.52

Madras 1351, 19^{h} 8^{m} 54^{s}.

August	7	−21	18	56.19
	12			56.19

ω Aquilæ, 19^{h} 11^{m} 15^{s}.

August	3	+11	20	46.65
	11			46.06

θ Lyræ, 19^{h} 11^{m} 32^{s}.

August	13	+37	53	11.23
	20			11.01
September	9			11.64

26 Aquilæ, 19^{h} 13^{m} 4^{s}.

August	29	− 5	40	25.90
	31			27.05

κ Cygni, 19^{h} 13^{m} 48^{s}.

September	1	+53	6	41.45

Gr. C. 1719, 19^{h} 14^{m} 23^{s}.

August	7	−20	54	1.35

O. Arg. S. 19525, 19^{h} 17^{m} 29^{s}.

August	12	−19	26	38.94

B. A. C. 6643, 19^{h} 18^{m} 13^{s}.

1857.		°	′	″
August	13	−15	19	37.07
September	3			37.13
	9			35.88

δ Aquilæ, 19^{h} 18^{m} 26^{s}.

August	3	+ 2	50	19.95

4 Vulpeculæ, 19^{h} 19^{m} 19^{s}.

August	31	+19	31	36.23

(*), 19^{h} 20^{m} 36^{s}.

September	3	−15	23	0.16

Lalande 36786, 19^{h} 21^{m} 58^{s}.

August	7	−19	40	16.50
	11			17.84

e Aquilæ, 19^{h} 23^{m} 21^{s}.

August	24	− 3	4	37.25
	29			37.46

Lalande 36857, 19^{h} 23^{m} 30^{s}.

August	7	−19	40	35.46

β Cygni, 19^{h} 25^{m} 4^{s}.

September	1	+27	40	5.21

B. A. C. 6691, 19^{h} 25^{m} 6^{s}.

September	1	+27	40	24.50

μ Aquilæ, 19^{h} 27^{m} 15^{s}.

August	13	+ 7	5	4.44
	31			5.11
September	3			4.32
	9			5.25

h^{2} Sagittarii, 19^{h} 28^{m} 11^{s}.

August	3	−25	11	18.83
	11			17.63

B. A. C. 6707, 19^{h} 28^{m} 36^{s}.

August	12	−19	9	28.24

Lalande 37221, 19^{h} 31^{m} 35^{s}.

August	7	−22	22	42.09

σ Aquilæ, 19^{h} 32^{m} 16^{s}.

August	24	+ 5	4	54.16
	29			54.61
September	23			54.34

Weisse XIX. 875, 19^{h} 34^{m} 19^{s}.

September	9	+11	36	10.21

χ Aquilæ, 19^{h} 35^{m} 59^{s}.

1857.		°	′	″
August	13	+11	29	59.35
	20		30	0.20
	31		29	58.62
September	3			59.08
	9			59.47

Lalande 37507, 19^{h} 38^{m} 13^{s}.

August	12	−21	51	31.48

O. Arg. S. 19957, 19^{h} 39^{m} 34^{s}.

August	11	−26	14	16.96

γ Aquilæ, 19^{h} 39^{m} 36^{s}.

August	24	+10	16	29.81
September	1			28.63
	25			29.38

(*), 19^{h} 41^{m} 56^{s}.

August	7	−22	34	18.54

α Aquilæ, 19^{h} 43^{m} 57^{s}.

August	13	+ 8	30	5.34
	20			5.36
	29			5.05
	31			4.16
September	1			4.87
	23			5.55

(*), 19^{h} 44^{m} 21^{s}.

August	7	−22	34	6.64

β Aquilæ, 19^{h} 48^{m} 26^{s}.

August	24	+ 6	3	36.25
September	5			35.88
	8			35.79
	10			34.92
	15			36.87
	17			34.66
	25			35.61

Lalande 38140, 19^{h} 53^{m} 32^{s}.

August	12	−17	14	52.52

B. A. C. 6903, 20^{h} 0^{m} 8^{s}.

August	12	−19	12	18.24

O. Arg. S 20274, 20^{h} 1^{m} 38^{s}.

August	11	−18	45	8.00
September	26			9.48

λ Ursæ Minoris, 20^{h} 3^{m} 54^{s}.

August	11	+88	53	27.00
	13			26.47
	20			26.73
	24			26.39
	29			26.52
September	1			25.89
	3			24.69
	5			25.42
	8			25.14
	10			26.22
	15			25.89
	17			26.31

o^{2} Cygni, 20^{h} 9^{m} 13^{s}.

1857.		°	′	″
September	24	+46	19	5.21
	26			5.77

33 Cygni, 20^{h} 10^{m} 8^{s}.

September	15	+56	8	25.43
	17			26.54

α^{2} Capricorni, 20^{h} 10^{m} 17^{s}.

August	7	−12	58	32.42

B. A. C. 6987, 20^{h} 12^{m} 20^{s}.

August	12	−20	4	56.64
	13			58.26

γ Cygni, 20^{h} 17^{m} 11^{s}.

August	20	+39	48	36.72
September	3			35.79

71 Draconis, 20^{h} 17^{m} 16^{s}.

September	5	+61	48	49.78
	8			49.11
	10			50.35
October	7			49.00

ρ Capricorni, 20^{h} 20^{m} 52^{s}.

August	29	−18	16	23.46
September	7			(21.62)
	9			22.94
	15			22.01
	17			25.08
	24			23.92
	26			24.91
October	9			23.41

B. A. C. 7053, 20^{h} 21^{m} 51^{s}.

August	7	−19	2	46.08

B, A. C. 7054, 20^{h} 21^{m} 52^{s}.

August	7	−19	2	34.23
	12			34.18

O. Arg. S. 20569, 20^{h} 23^{m} 24^{s}.

August	13	−22	58	18.28

O, Arg. S. 20607, 20^{h} 25^{m} 52^{s}.

August	20	−23	43	27.34
September	26			27.97

O. Arg. S. 20654, 20^{h} 29^{m} 27^{s}.

August	20	−21	49	7.74

B. A. C. 7116, 20^{h} 30^{m} 16^{s}.

August	13	−21	28	44.35
September	3			43.33

27 Vulpeculæ, 20^{h} 31^{m} 6^{s}.

1857.		°	′	″
August	29	+25	58	37.77
	31			36.93
September	1			37.43
	9			37.14
	25			36.81
October	9			37.42

B. A. C. 7128, 20^{h} 31^{m} 51^{s}.

August	7	−24	16	55.15

73 Draconis, 20^{h} 33^{m} 19^{s}.

September	24	+74	28	26.91
	26			27.33
	30			26.03
October	7			25.97

α Cygni, 20^{h} 36^{m} 39^{s}.

September	1	+44	46	54.49
	3			53.73
	9			53.17

O. Arg. S. 20839, 20^{h} 38^{m} 36^{s}.

September	10	−19	56	45.05

57 Cygni, 20^{h} 48^{m} 18^{s}.

August	13	−43	51	31.93
September	1			30.48
	8			31.08
	9			31.15
	24			30.98

32 Vulpeculæ, 20^{h} 48^{m} 36^{s}.

August	24	+27	31	37.87
September	3			36.60
	5			37.66
	15			37.33
	17			37.10
	23			38.45
	30			37.71
October	1			37.12
	7			36.95
	9			38.29

B. A. C. 7259, 20^{h} 48^{m} 56^{s}.

September	1	+43	51	22.63

(*), 20^{h} 51^{m} 1^{s}.

October	6	−31	3	0.04

76 Draconis, 20^{h} 52^{m} 29^{s}.

August	31	+82	0	34.98
September	5			35.64
	10			34.72
	24			33.92
	25			35.16

59 Cygni, 20^{h} 55^{m} 3^{s}.

September	3	+46	58	32.26
	8			32.81
	15			32.98

θ Capricorni, 20^{h} 58^{m} 4^{s}.

1857.		°	′	″
August	24	−17	47	11.37
	29			10.81
September	9			12.16
	23			11.70
October	9			11.40

61^{1} Cygni, 21^{h} 0^{m} 37^{s}.

August	13	+38	3	(48.03)
	20			46.40
September	1			46.16
	3			46.36
	5			46.59
	8			46.02
	10			46.50
	15			46.36
	17			45.86
	24			46.07
	26			46.44
	30			47.15
October	1			46.75
	6			47.46
	8			45.84
	10			45.48

61^{2} Cygni, 21^{h} 0^{m} 39^{s}.

August	13	+38	3	(43.48)
September	1			41.87
	5			41.96
	8			41.39
	10			42.39
	15			41.20
	17			41.53
	24			41.67
	26			41.74
	30			40.99
October	1			42.25
	6			42.43
	8			41.11
	10			41.33

ν Aquarii, 21^{h} 1^{m} 58^{s}.

September	9	−11	56	9.22
October	7			10.21

ζ Cygni, 21^{h} 6^{m} 59^{s}.

August	20	+29	39	15.40
September	3			15.85
	17			15.96

29 Capricorni, 21^{h} 8^{m} 0^{s}.

August	29	−15	45	1.74
	31			1.56
September	23			1.02

B. A. C. 7377, 21^{h} 8^{m} 14^{s}.

September	10	+59	24	42.88
	26			42.98
October	8			42.49

α Equulei, 21^{h} 8^{m} 49^{s}.

October	1	+ 4	40	15.36
	6			16.37
	10			15.47

α Cephei, 21^{h} 15^{m} 14^{s}.

1857.		°	′	″
September	3	+61	59	36.24
	5			36.31
	8			36.26
	15			36.06
	17			36.44
October	1			36.30

ζ Capricorni, 21^{h} 18^{m} 39^{s}.

August	20	−23	0	54.29
	29			53.36
September	1			54.99
	9			53.74
	10			54.96
	23			54.05
	25			54.43

β Aquarii, 21^{h} 24^{m} 11^{s}.

August	29	− 6	11	5.30
September	1			5.69
	3			6.32
	5			5.92
	8			5.95
	9			6.47
	17			7.25
	26			5.94
	30			(3.37)
December	3			5.29

(*), 21^{h} 28^{m} 10^{s}.

October	12	−16	19	5.07

(*), 21^{h} 28^{m} 34^{s}.

September	26	−19	0	56.70

ε Capricorni, 21^{h} 29^{m} 14^{s}.

August	29	−20	5	26.83
	31			26.89
September	9			26.33
	10			28.34
	25			26.93
October	9			26.73

ξ Aquarii, 21^{h} 30^{m} 18^{s}.

September	1	− 8	28	48.79
	5			48.75
	8			46.97
	23			48.13

γ Capricorni, 21^{h} 32^{m} 19^{s}.

September	15	−17	17	33.66
	17			34.08
	25			33.08
October	7			33.89

9 Cephei, 21^{h} 34^{m} 10^{s}.

September	10	+61	27	5.53
	30			5.80
October	6			4.32

π^{1} Cygni, 21^{h} 37^{m} 7^{s}.

September	8	+50	33	6.72
	26			7.77
December	3			7.05

ε Pegasi, 21^{h} 37^{m} 19^{s}.

1857.		°	′	″
August	31	+ 9	14	6.07
September	9			5.30

μ Cygni, 21^{h} 37^{m} 53^{s}.

September	1	+28	6	42.45
	15			42.75
October	12			41.96

B. A. C. 7570, 21^{h} 38^{m} 6^{s}.

September	1	+28	8	33.80
	5			33.72

δ Capricorni, 21^{h} 39^{m} 18^{s}.

September	25	−16	45	36.93
October	8			37.45
	9			36.71

11 Cephei, 21^{h} 39^{m} 50^{s}.

October	10	+70	40	2.81
December	3			3.01

λ Capricorni, 21^{h} 39^{m} 51^{s}.

September	17	−12	0	35.01
	23			33.92

78 Draconis, 21^{h} 41^{m} 20^{s}.

September	10	+71	40	44.17
	30			43.61
October	6			42.73

15 Pegasi, 21^{h} 46^{m} 15^{s}.

August	31	+28	8	23.12
September	1			23.06
	5			23.03
	9			23.81
	15			23.29
October	7			22.87
	9			23.38

16 Pegasi, 21^{h} 46^{m} 41^{s}.

September	8	+25	16	3.72
	17			3.74
	26			3.60
October	8			3.81
	10			4.15
	12			3.52
	17			3.87

O. Arg. S. 21775, 21^{h} 51^{m} 25^{s}.

September	1	−23	32	22.81
	8			21.87
	10			23.34

O. Arg. S. 21832, 21^{h} 55^{m} 38^{s}.

September	26	−22	22	33.17
October	10			32.12

O. Arg. S. 21841, 21^{h} 56^{m} 22^{s}.

September	5	−22	27	21.93
October	6			22.46
	8			21.64

α AQUARII, $21^{h}\ 58^{m}\ 35^{s}$.

1857.		°	′	″
September	17	−0	59	54.94
October	17			54.46
December	7			54.05

35 AQUARII, $22^{h}\ 1^{m}\ 18^{s}$.

September	1	−19	12	11.12
	8			11.65
	10			11.07
October	7			(8.84)
	9			10.04

π¹ PEGASI, $22^{h}\ 3^{m}\ 2^{s}$.

September	17	+32	29	21.73
October	10			22.70
	21			22.11

π² PEGASI, $22^{h}\ 3^{m}\ 46^{s}$.

September	17	+32	29	32.43
October	10			32.69
	21			32.17

O. ARG. S. 21987, $22^{h}\ 5^{m}\ 24^{s}$.

September	26	−22	5	46.46

40 AQUARII, $22^{h}\ 5^{m}\ 57^{s}$.

September	1	−12	36	58.63
	5			58.89
	9			58.46
October	7			57.34

ζ CEPHEI, $22^{h}\ 6^{m}\ 1^{s}$.

September	8	+57	30	42.88
	10			43.21
October	6			43.56

O. ARG. S. 22002, $22^{h}\ 6^{m}\ 21^{s}$.

September	26	−22	6	11.79

θ AQUARII, $22^{h}\ 9^{m}\ 27^{s}$.

September	15	−8	28	43.00
	25			43.46
October	9			44.52
	21			42.59
December	3			43.29
	7			44.72

ε CEPHEI, $22^{h}\ 9^{m}\ 52^{s}$.

October	1	+56	20	48.80
	8			47.68
	12			47.86

γ AQUARII, $22^{h}\ 14^{m}\ 25^{s}$.

September	5	−2	5	29.39
	8			29.45
	9			29.54
October	7			28.57

32 PEGASI, $22^{h}\ 14^{m}\ 52^{s}$.

September	10	+27	37	34.87
	15			35.36
October	6			35.46

51 AQUARII, $22^{h}\ 16^{m}\ 48^{s}$.

1857.		°	′	″
September	17	−5	32	38.86
	26			38.65
October	8			38:36
	9			37.82

β LACERTÆ, $22^{h}\ 18^{m}\ 5^{s}$.

October	1	+51	31	42.74
	10			43.03
	12			42.42

π AQUARII, $22^{h}\ 18^{m}\ 8^{s}$.

September	23	+0	40	6.88
October	21			6.21
December	3			6.09

B. A. C. 7817, $22^{h}\ 18^{m}\ 26^{s}$.

December	7	−24	23	34.42

σ AQUARII, $22^{h}\ 23^{m}\ 14^{s}$.

September	5	−11	23	34.81
	8			34.42
	9			34.74
	17			35.79
	25			(31.61)
October	7			34.08

α LACERTÆ, $22^{h}\ 25^{m}\ 32^{s}$.

September	10	+49	33	49.71
	15			50.43
	26			48.87
October	1			49.45

O. ARG. S. 22223, $22^{h}\ 26^{m}\ 14^{s}$.

November	3	−22	49	24.15

η AQUARII, $22^{h}\ 28^{m}\ 10^{s}$.

October	6	−0	50	15.83
	8			16.61
	10			16.79
	12			16.92
	17			16.53

9 LACERTÆ, $22^{h}\ 31^{m}\ 38^{s}$.

September	8	+50	49	23.58
	10			24.55
	17			23.99
	25			24.72

31 CEPHEI, $22^{h}\ 32^{m}\ 18^{s}$.

September	26	+72	55	1.35
October	7			2.03
	8			0.90
November	3			1.26

30 CEPHEI, $22^{h}\ 33^{m}\ 42^{s}$.

September	15	+62	51	26.95
	24			26.45
October	31			27.17

ζ PEGASI, $22^{h}\ 34^{m}\ 29^{s}$.

1857.		°	′	″
September	23	+10	6	5.60
October	1			4.88
	9			6.00

B. A. C. 7909, $22^{h}\ 34^{m}\ 35^{s}$.

November	3	−30	5	27.92

ο PEGASI, $22^{h}\ 35^{m}\ 11^{s}$.

October	10	+28	34	39.97
	12			39.36
	17			39.39

η PEGASI, $22^{h}\ 36^{m}\ 27^{s}$.

September	8	+29	29	23.92
	17			23.41
December	3			23.29

B. A. C. 7947, $22^{h}\ 40^{m}\ 1^{s}$.

October	12	−20	20	33.22
December	12			32.34

τ² AQUARII, $22^{h}\ 42^{m}\ 11^{s}$.

September	5	−14	19	49.56
	8			49.34
	10			49.59
	17			49.73
	23			49.20
	24			49.28
October	7			48.76
	9			48.50

α PISCIS AUSTRALIS, $22^{h}\ 49^{m}\ 54^{s}$.

September	5	−30	21	47.89
October	1			48.31
	8			47.48
	9			46.07
	10			47.07
	12			47.98
	31			46.66
November	12			48.28
December	3			47.68
	7			48.13
	12			47.65
	19			48.42

WEISSE XXII, 1149, $22^{h}\ 55^{m}\ 3^{s}$.

November	4	−12	3	45.94
December	7			49.13

WEISSE XXII, 1156, $22^{h}\ 55^{m}\ 12^{s}$.

November	4	−12	1	0.28

B. A. C. 8025, $22^{h}\ 55^{m}\ 44^{s}$.

October	8	−35	30	21.47
	19			17.80
	21			18.20

O. ARG. S. 22587, $22^{h}\ 56^{m}\ 39^{s}$.

December	3	−22	59	11.92
	10			12.39

α PEGASI, $22^{h}\ 57^{m}\ 47^{s}$.

1857.		°	′	″
September	24	+14	27	9.43
	26			9.67
October	1			9.24
	9			9.42
	10			9.56
	12			9.44
	31			9.75
November	7			9.92

WEISSE XXII, 1283, $23^{h}\ 1^{m}\ 24^{s}$.

November	11	−5	32	10.50

7 ANDROMEDÆ, $23^{h}\ 6^{m}\ 6^{s}$.

September	5	+48	38	31.17
	8			30.16
	10			31.32
December	3			31.53

φ AQUARII, $23^{h}\ 7^{m}\ 4^{s}$.

September	17	−6	48	12.22
	24			11.25
	26			11.94
October	9			11.14

B. A .C. 8088, $23^{h}\ 7^{m}\ 12^{s}$.

October	18	−41	51	48.95
	27			51.60
	19			49.57

WEISSE XXIII, 177, $23^{h}\ 9^{m}\ 52^{s}$.

November	4	+3	41	55.19
	7			54.93
	11			53.96

γ PISCIUM, $23^{h}\ 9^{m}\ 54^{s}$.

October	12	+2	31	5.52
November	3			6.36
December	7			4.90
	10			4.71

WEISSE XXIII, 183, $23^{h}\ 10^{m}\ 10^{s}$.

November	7	+3	41	15.65
	11			14.09

ψ³ AQUARII, $23^{h}\ 11^{m}\ 40^{s}$.

September	5	−10	22	32.20
	8			32.15
	10			31.94
	24			32.39
	26			31.60
October	7			30.11

υ PEGASI, $23^{h}\ 18^{m}\ 39^{s}$.

September	17	+22	38	1.08
	24			1.21
	26			1.09
October	7			2.45
	9			1.89

κ Piscium, $23^h\ 19^m\ 45^s$.

1857.		°	′	″
October	8	+ 0	28	23.04
	10			23.41
	12			22.95
	17			23.27
	21			24.58
	30			23.19
	31			23.23
November	3			23.40
	4			23.52
	14			24.12
December	19			22.19

13 Andromedæ, $23^h\ 20^m\ 13^s$.

September	5	+42	8	28.82
	8			27.83
	10			28.53

Weisse XXIII, 476, $23^h\ 24^m\ 13^s$.

November	4	− 5	1	21.22
	7			21.87

Weisse XXIII, 534, $23^h\ 26^m\ 44^s$.

December	14	+ 5	11	27.10

Rumker 11367, $23^h\ 28^m\ 17^s$.

December	3	− 7	55	30.62
	7			31.26

Weisse XXIII, 592, $23^h\ 29^m\ 5^s$.

December	10	− 7	53	25.60
	12			25.21

ι Andromedæ, $23^h\ 31^m\ 17^s$.

October	12	+42	29	36.82

ι Piscium, $23^h\ 32^m\ 45^s$.

October	7	+ 4	52	3.89
	8			3.38
December	31			3.79

Weisse XXIII, 678, $23^h\ 33^m\ 20^s$.

November	14	− 2	8	9.31

γ Cephei, $23^h\ 33^m\ 38^s$.

October	17	+76	51	3.44
	21			3.48
November	3			3.97

λ Piscium, $23^h\ 34^m\ 54^s$.

September	17	+ 1	0	34.63
	24			35.29
October	30			35.00

τ Cassiopeæ, $23^h\ 40^m\ 13^s$.

October	1	+57	52	20.40
	8			20.39
	12			20.18
	21			19.56

δ Sculptoris, $23^h\ 41^m\ 38^s$.

1857.		°	′	″
October	7	−28	54	14.69
	14			15.49
December	3			15.84
	7			17.08
	12			16.01
	31			15.64

B. A. C. 8313, $23^h\ 48^m\ 2^s$.

November	3	−32	42	3.13

B. A C. 8314, $23^h\ 48^m\ 4^s$.

December	31	+73	37	53.01

Weisse XXIII, 994, $23^h\ 49^m\ 7^s$.

December	19	+ 3	50	55.06

Weisse XXIII, 1032, $23^h\ 50^m\ 37^s$.

November	11	+ 4	37	32.47

ω Piscium, $23^h\ 52^m\ 7^s$.

October	1	+ 6	5	17.59
	8			18.58
	12			17.38
	21			18.09
November	12			19.09
	14			19.26
	27			17.20
December	3			18.40
	7			18.78
	12			19.12
	14			18.00
	15			18.56

30 Piscium, $23^h\ 54^m\ 47^s$.

October	7	− 6	47	30.17
	9			31.14
November	2			31.51
	7			30.91

Weisse XXIII, 1142, $23^h\ 55^m\ 35^s$.

November	3	+ 5	15	21.19
	4			21.10

2 Ceti, $23^h\ 56^m\ 33^s$.

October	1	−18	6	56.89
	8			56.18
	31			54.39

33 Piscium, $23^h\ 58^m\ 10^s$.

October	12	− 6	29	26.97
	17			27.01
	21			26.45

Weisse XXIII, 1196, $23^h\ 58^m\ 23^s$.

December	3	−10	54	24.41
	7			24.15

Weisse XXIII, 1208, $23^h\ 59^m\ 7^s$.

November	17	−11	33	28.31
December	10			28.85

α Andromedæ, $0^h\ 1^m\ 6^s$.

1858.		°	′	″
November	13	+28	19	2.10

Weisse XXIII, 1250, $0^h\ 1^m\ 12^s$.

December	17	+ 2	39	45.11

Weisse XXIII, 1269, $0^h\ 1^m\ 44^s$.

September	20	+12	1	36.01
	27			33.96
October	15			34.85

Weisse O, 4, $0^h\ 1^m\ 58^s$.

September	20	+12	1	55.14
	27			54.33
October	15			54.71

Santini 8, $0^h\ 4^m\ 37^s$.

October	26	+ 8	21	43.06

Weisse O, 90, $0^h\ 5^m\ 55^s$.

December	17	+ 2	36	50.68

γ Pegasi, $0^h\ 6^m\ 2^s$.

October	23	+14	24	18.02
November	19			19.42

Weisse O, 112, $0^h\ 7^m\ 31^s$.

December	17	+ 2	35	8.23

35 Piscium, (1st *,) $0^h\ 7^m\ 46^s$.

October	20	+ 8	2	35.38
	27			36.13

35 Piscium, (2d *,) $0^h\ 7^m\ 46^s$.

October	20	+ 8	2	25.64
	27			26.83

d Piscium, $0^h\ 13^m\ 23^s$.

October	20	+ 7	24	43.95

Weisse O, 287, $0^h\ 17^m\ 23^s$.

November	19	+ 2	35	56.15
December	17			54.86

45 Piscium, $0^h\ 18^m\ 29^s$.

September	29	+ 6	54	59.72
October	15			60.77

12 Ceti, $0^h\ 22^m\ 54^s$.

January	1	− 4	43	53.52
October	23			52.54
	26			52.87
November	18			52.90

Weisse O, 376, $0^h\ 23^m\ 20^s$.

October	27	+ 2	29	34.46
November	19			34.54

Weisse O, 437, $0^h\ 26^m\ 17^s$.

1858.		°	′	″
October	15	− 4	48	53.79

Weisse O, 443, $0^h\ 26^m\ 45^s$.

October	27	+ 2	32	52.04
November	19			52.43

Weisse O, 452, $0^h\ 26^m\ 55^s$.

December	17	+ 5	11	1.83

π Andromedæ, $0^h\ 29^m\ 25^s$.

January	7	+32	56	52.68
	12			51.73

Weisse O, 503, $0^h\ 30^m\ 0^s$.

October	15	− 1	38	8.29

α Cassiopeæ, $0^h\ 32^m\ 35^s$.

November	18	+55	46	6.15

Weisse O, 595, $0^h\ 34^m\ 50^s$.

September	29	+ 3	0	50.28
December	17			49.84

Weisse O, 608, $0^h\ 35^m\ 31^s$.

September	29	+ 3	1	23.71
October	27			25.71
December	17			25.45

β Ceti, $0^h\ 36^m\ 36^s$.

November	17	−18	45	19.98

Wiesse O, 642, $0^h\ 37^m\ 15^s$.

November	26	−14	10	53.51

ζ Andromedæ, $0^h\ 39^m\ 56^s$.

January	7	+23	30	17.94
	12			17.09

Weisse O, 711, $0^h\ 41^m\ 9^s$.

November	19	+ 3	22	45.24

B. A. C. 230, $0^h\ 42^m\ 44^s$.

November	26	−14	19	15.48

Weisse O, 742, $0^h\ 43^m\ 15^s$.

January	1	+ 6	20	44.61

Weisse O, 775, $0^h\ 44^m\ 1^s$.

September	29	+ 3	17	52.57
October	15			53.68
	27			53.88

20 Ceti, $0^h\,45^m\,51^s$.

1858.	° ′ ″
November 18 . .	− 1 54 18.58

B. A. C. 243, $0^h\,46^m\,7^s$.

September 29 . .	+ 3 19 33.87
October 15 . .	34.45
27 . .	35.56

Weisse O, 801, $0^h\,46^m\,12^s$.

October 20 . .	+ 8 33 1.06

(*), $0^h\,50^m\,0^s$.

November 19 . .	+ 3 1 7.80

Weisse O, 925, $0^h\,53^m\,15^s$.

November 26 . .	+ 7 56 48.30

ε Piscium, $0^h\,55^m\,41^s$.

January 20 . .	+ 7 8 8.12
22 . .	7.64
October 20 . .	6.80
27 . .	7.52
November 13 . .	7.37

Weisse O, 997, $0^h\,57^m\,20^s$.

September 29 . .	+ 8 50 2.02

Rumker, N. F., 538, $1^h\,1^m\,13^s$.

January 1 . .	+ 3 41 2.05

Polaris, $1^h\,8^m\,2^s$.

January 12 . .	+88 33 46.71
20 . .	46.57
22 . .	46.72
September 29 . .	47.11
October 20 . .	46.94
27 . .	46.18
November 19 . .	47.25
26 . .	47.81
December 10 . .	47.40
17 . .	46.82

Polaris, S. P., $1^h\,8^m\,2^s$.

March 30 . .	+88 33 49.88
April 3 . .	47.35
9 . .	47.51
16 . .	47.64
21 . .	47.76
27 . .	47.96
May 12 . .	48.64
13 . .	48.99
22 . .	48.05
June 2 . .	48.06
7 . .	46.61
19 . .	47.42
25 . .	46.75

Rumker, N. F., 572, $1^h\,9^m\,30^s$.

January 1 . .	+ 4 18 57.36

Rumker, N. F., 585, $1^h\,11^m\,50^s$.

January 1 . .	+ 4 17 46.04

μ Piscium, $1^h\,22^m\,51^s$.

1858.	° ′ ″
January 7 . .	+ 5 25 16.27
12 . .	15.52

η Piscium, $1^h\,24^m\,0^s$.

January 20 . .	+14 37 21.47
22 . .	22.34
December 10 . .	21.75

Weisse I, 410, $1^h\,24^m\,31^s$.

October 26 . .	+ 9 16 1.06

Rumker, N. F., 755, $1^h\,27^m\,26^s$.

January 7 . .	+ 6 2 39.48
12 . .	38.07

π Piscium, $1^h\,29^m\,40^s$.

January 20 . .	+11 25 26.30

ν Piscium, $1^h\,34^m\,9^s$.

January 19 . .	+ 4 46 39.69
November 18 . .	40.71
December 16 . .	39.86

ο Piscium, $1^h\,38^m\,0^s$.

January 7 . .	+ 8 27 7.09
12 . .	6.77

γ^1 Arietis, $1^h\,45^m\,51^s$.

November 19 . .	+18 36 20.99

γ^2 Arietis, $1^h\,45^m\,51^s$.

November 19 . .	+18 36 29.39

β Arietis, $1^h\,46^m\,55^s$.

January 7 . .	+20 7 19.58
12 . .	19.47
19 . .	18.96
November 26 . .	19.74

ι Arietis, $1^h\,50^m\,23^s$.

November 19 . .	+17 7 57.04

58 Ceti, $1^h\,50^m\,52^s$.

December 16 . .	− 2 44 37.94

Weisse I, 1038, $1^h\,58^m\,37^s$.

January 19 . .	+ 8 46 6.08

α Arietis, $1^h\,59^m\,17^s$.

November 18 . .	+22 47 54.78

B. A. C. 672, $2^h\,4^m\,0^s$.

November 19 . .	+ 7 54 48.83
December 16 . .	49.24

Weisse II, 72, $2^h\,5^m\,58^s$.

1858.	° ′ ″
January 20 . .	+ 4 5 32.82

67 Ceti, $2^h\,10^m\,0^s$.

January 19 . .	− 7 4 8.62
December 10 . .	9.20
17 . .	8.34

(*), $2^h\,17^m\,33^s$.

November 19 . .	+61 10 6.93

B. A. C. 771, $2^h\,23^m\,9^s$.

December 18 . .	+17 4 56.50

30 Arietis, $2^h\,28^m\,52^s$.

January 20 . .	+24 2 11.34

B. A. C. 797, $2^h\,28^m\,56^s$.

January 20 . .	+24 2 7.98

Weisse II, 556, $2^h\,32^m\,58^s$.

November 19 . .	+15 4 59.22

γ Ceti, $2^h\,36^m\,3^s$.

January 22 . .	+ 2 38 38.44
February 6 . .	37.43
December 17 . .	37.03

B. A. C. 866, $2^h\,40^m\,38^s$.

January 20 . .	+24 36 5.24

τ Persei, $2^h\,44^m\,21^s$.

January 19 . .	+52 11 8.89
22 . .	10.29

ρ^3 Arietis, $2^h\,48^m\,33^s$.

January 20 . .	+17 27 44.13
February 6 . .	44.28

ε Arietis, $2^h\,51^m\,12^s$.

November 19 . .	+20 46 40.59

γ Persei, $2^h\,54^m\,26^s$.

January 19 . .	+52 57 16.75

β Persei, $2^h\,59^m\,3^s$.

February 6 . .	+40 24 46.88
8 . .	47.37

Weisse III, 26, $3^h\,3^m\,16^s$.

January 20 . .	+ 9 28 16.21

δ Arietis, $3^h\,3^m\,36^s$.

January 19 . .	+19 11 39.25
December 17 . .	39.23

ζ Arietis, $3^h\,6^m\,51^s$.

1858.	° ′ ″
November 19 . .	+20 31 21.90

Weisse III, 168, $3^h\,10^m\,8^s$.

February 8 . .	+13 19 50.35

τ^1 Arietis, $3^h\,13^m\,9^s$.

January 19 . .	+20 38 22.07
20 . .	22.27

64 Arietis, $3^h\,16^m\,2^s$.

December 28 . .	+24 13 32.15

Weisse III, 295, $3^h\,17^m\,25^s$.

January 20 . .	+ 9 30 45.58

ξ Tauri, $3^h\,19^m\,35^s$.

February 8 . .	+ 8 14 30.89

66 Arietis, $3^h\,20^m\,16^s$.

January 19 . .	+22 19 7.11

f Tauri, $3^h\,23^m\,9^s$.

February 6 . .	+12 27 13.91

Weisse (2) III, 639, $3^h\,30^m\,8^s$.

February 8 . .	+18 53 51.78

11 Tauri, $3^h\,32^m\,25^s$.

February 6 . .	+24 52 23.94

η Tauri, $3^h\,39^m\,10^s$.

January 19 . .	+23 40 9.17
20 . .	9.13
February 6 . .	8.59

27 Tauri, $3^h\,40^m\,50^s$.

February 6 . .	+23 37 18.94

ζ Persei, $3^h\,45^m\,20^s$.

February 17 . .	+31 27 50.90

Rumker 1023, $3^h\,46^m\,28^s$.

December 16 . .	+16 12 20.72

ε Persei, $3^h\,48^m\,28^s$.

January 19 . .	+39 36 5.16
20 . .	4.28

λ Tauri, $3^h\,52^m\,55^s$.

February 6 . .	+12 5 30.02

A^1 Tauri, 3^h 56^m 25^s.

1858.		°	′	″
February	3	+21	41	45.58
	17			46.19

μ Persei, 4^h 4^m 38^s.

February	17	+48	2	57.99

o^1 Eridani, 4^h 5^m 2^s.

January	20	−7	12	19.55
February	6			19.46
December	16			19.56

(*), 4^h 5^m 50^s.

February	3	+44	19	37.93

Weisse (2) IV, 137, 4^h 8^m 24^s.

February	3	+44	20	9.21

γ Tauri, 4^h 11^m 50^s.

January	20	+15	17	8.59
February	6			8.99
	25			9.69
	27			8.77

ε Tauri, 4^h 20^m 27^s.

January	20	+18	51	59.21
February	3			58.86
	27			58.22

85 Tauri, 4^h 23^m 52^s.

February	6	+15	32	51.44
	25			51.31
December	16			51.24

σ^2 Tauri, 4^h 31^m 16^s.

December	16	+15	38	13.56

c^2 Tauri, 4^h 32^m 16^s.

February	17	+11	55	9.16
	25			9.28
	27			8.38

Weisse (2) IV, 713, 4^h 33^m 1^s.

February	6	+22	24	5.80

(*), 4^h 40^m 57^s.

February	8	−1	36	37.18

Lalande 9043, 4^h 41^m 34^s.

February	8	−1	36	24.52

i Tauri, 4^h 43^m 11^s.

February	6	+18	35	53.32
	17			52.54
	25			52.17
	27			52.21

ι Aurigæ, 4^h 47^m 53^s.

1858.		°	′	″
March	24	+32	56	23.74
December	28			24.92

o^2 Orionis, 4^h 48^m 31^s.

February	6	+13	17	23.20
	17			22.90

κ Tauri, 4^h 49^m 35^s.

February	8	+24	49	49.16
	27			49.25

ε Leporis, 4^h 59^m 32^s.

February	6	−22	33	42.96
	8			43.32
	17			42.08

α Aurigæ, 5^h 6^m 21^s.

February	6	+45	51	4.79
	17			3.13
March	24			2.98

β Orionis, 5^h 7^m 48^s.

February	8	−8	21	58.84
March	24			60.15

β Tauri, 5^h 17^m 26^s.

February	6	+28	29	6.74
	8			6.66
	17			6.87
	25			5.81
	27			6.09
March	24			6.23

δ Orionis, 5^h 24^m 51^s.

February	6	−0	24	22.51
	8			22.94
	17			22.01
	25			22.43
	27			23.80

125 Tauri, 5^h 31^m 3^s.

February	25	+25	48	52.86
	27			52.01

α Columbæ, 5^h 34^m 35^s.

February	6	−34	9	4.82
March	10			6.32
	12			4.15

129 Tauri, 5^h 38^m 42^s.

February	8	+15	45	49.97
	17			49.94
	25			49.59
	27			48.99

χ^1 Orionis, 5^h 46^m 6^s.

February	17	+20	14	48.22
	25			47.82
	27			46.48

δ Aurigæ, 5^h 48^m 0^s.

1858.		°	′	″
March	10	+54	16	5.17
	24			6.33

ν Orionis, 5^h 59^m 35^s.

February	25	+14	46	52.99
	27			51.90
March	10			51.49
	24			51.41

3 Geminorum, 6^h 1^m 14^s.

February	6	+23	7	56.53
	8			56.17

η Geminorum, 6^h 6^m 25^s.

February	6	+22	32	36.27
	8			35.41
March	10			35.79

κ Aurigæ, 6^h 6^m 27^s.

February	25	+29	32	44.15
	27			42.23
March	24			42.50

B. A. C. 2023, 6^h 9^m 34^s.

February	17	+27	15	37.00
March	12			35.81

μ Geminorum, 6^h 14^m 29^s.

March	10	+22	34	53.06

Lalande 12237, 6^h 17^m 28^s.

February	27	+25	35	6.74

(*), 6^h 21^m 12^s.

February	27	+25	31	8.13

γ Geminorum, 6^h 29^m 38^s.

March	31	+16	30	53.45

35 Aurigæ, 6^h 32^m 54^s.

February	27	+44	39	14.75

51 Cephei, 6^h 33^m 38^s.

February	6	+87	14	54.93
	8			53.49
	17			54.92
	23			53.17
	25			54.06
March	10			53.59
	12			53.72
	24			54.77

51 Cephei, S. P., 6^h 33^m 38^s.

1858.		°	′	″
June	28	+87	14	54.94
	29			54.56
	30			55.43
July	6			54.59
	7			55.28
	9			53.57
	10			54.56
	15			54.49
	22			53.26
	24			54.23
	26			52.99
	27			53.08
	28			54.26
	29			53.07
August	4			53.40
	6			53.04
	7			54.05
	9			53.83
	10			54.35
	11			54.41
	13			53.47
	16			53.35
	17			52.92
	19			54.08
	20			53.39
	23			54.08
	24			53.48
September	6			54.49

α Canis Majoris, 6^h 38^m 59^s.

March	24	−16	31	37.69
	31			36.32

θ Geminorum, 6^h 43^m 34^s.

February	23	+34	7	31.03
	25			30.99
	27			30.45
March	12			30.11

Lalande 13504, 6^h 52^m 20^s.

February	27	+24	40	18.65
March	12			18.99

B. A. C. 2299, 6^h 53^m 51^s.

March	24	+24	24	38.98

ζ Geminorum, 6^h 55^m 50^s.

February	23	+20	46	17.48
	25			18.36

τ Geminorum, 7^h 2^m 13^s.

March	24	+30	28	13.96
	31			13.68

O. Arg. N, 7753, 7^h 9^m 33^s.

March	24	+60	14	28.34

δ Geminorum, 7^h 11^m 46^s.

March	31	+22	14	10.89

(*), 7^h 12^m 25^s.

March	10	+25	15	39.48

(*), 7^h 12^m 25^s.

March	10	+25	18	15.87

Weisse VII, 529, 7^{h} 17^{m} 48^{s}.

1858.		°	′	″
March	12	−14	28	8.88
	24			9.01

Weisse VII, 756, 7^{h} 25^{m} 19^{s}.

March	24	+10	43	1.96

α^{1} Geminorum, 7^{h} 25^{m} 39^{s}.

March	13	+32	11	26.18
	31			25.49

α^{2} Geminorum, 7^{h} 25^{m} 40^{s}.

March	13	+32	11	28.35
	31			28.59

υ Geminorum, 7^{h} 27^{m} 17^{s}.

February	27	+27	12	11.13
March	10			11.28

Weisse VII, 968, 7^{h} 31^{m} 50^{s}.

March	24	+10	42	37.66

α Canis Minoris, 7^{h} 31^{m} 58^{s}.

March	29	+ 5	34	50.18
	31			50.67

Weisse VII, 1053, 7^{h} 34^{m} 40^{s}.

March	12	+13	34	11.16

κ Geminorum, 7^{h} 35^{m} 59^{s}.

February	25	+24	43	47.84
	27			47.90
March	10			48.08

(*), 7^{h} 40^{m} 46^{s}.

March	13	−14	16	7.19
	24			7.33

φ Geminorum, 7^{h} 44^{m} 55^{s}.

February	23	+27	7	27.53
	25			28.45
	27			27.94
March	10			29.25
	12			28.03
	31			28.91

1 Cancri, 7^{h} 49^{m} 2^{s}.

February	23	+16	9	38.74
	25			38.50
	27			39.32
March	10			39.67

(*), 7^{h} 49^{m} 53^{s}.

March	24	+20	31	44.16

3 Cancri, 7^{h} 52^{m} 45^{s}.

March	12	+17	41	20.47
	13			20.68
	18			20.28

6 Cancri, 7^{h} 54^{m} 55^{s}.

1858.		°	′	″
March	31	+28	10	59.51

d^{1} Cancri, 8^{h} 15^{m} 21^{s}.

March	29	+18	46	42.16
	31			41.47

θ Cancri, 8^{h} 23^{m} 37^{s}.

March	29	+18	33	52.30
	31			52.44

40 Cancri, 8^{h} 32^{m} 8^{s}.

March	24	+20	27	44.62

γ Cancri, 8^{h} 35^{m} 15^{s}.

March	25	+21	58	7.99

ε Hydræ; 8^{h} 39^{m} 22^{s}.

March	12	+ 6	55	46.92
	29			47.28
	31			46.45

6 Ursæ Majoris, 8^{h} 44^{m} 34^{s}.

March	24	+65	8	7.36
	25			7.86

ι Ursæ Majoris, 8^{h} 49^{m} 36^{s}.

March	13	+48	35	16.45
	29			17.80

σ^{2} Cancri, 8^{h} 49^{m} 46^{s}.

March	31	+16	6	57.89

κ Ursæ Majoris, 8^{h} 54^{m} 5^{s}.

March	25	+47	42	25.09
April	21			25.22

79 Cancri, 9^{h} 2^{m} 18^{s}.

March	13	+22	33	43.66
	17			44.87
	29			43.96

c Ursæ Majoris, 9^{h} 3^{m} 14^{s}.

March	31	+61	59	48.39
April	21			47.93

e Ursæ Majoris, 9^{h} 6^{m} 6^{s}.

March	17	+54	35	49.27
	29			48.52
	31			48.42

83 Cancri, 9^{h} 11^{m} 10^{s}.

March	13	+18	17	46.95

h Ursæ Majoris, 9^{h} 20^{m} 26^{s}.

1858.		°	′	″
March	18	+63	40	14.13
	29			14.70
	31			15.25

α Hydræ, 9^{h} 20^{m} 42^{s}.

March	13	− 8	3	13.48

d Ursæ Majoris, 9^{h} 22^{m} 3^{s}.

March	25	+70	26	31.01
April	21			31.05

ξ Leonis, 9^{h} 24^{m} 23^{s}.

March	31	+11	55	3.61
April	21			3.31

26 Ursæ Majoris, 9^{h} 25^{m} 13^{s}.

March	13	+52	40	16.86
	29			16.55

2 Sextantis, 9^{h} 31^{m} 9^{s}.

March	23	+ 5	16	47.08
April	21			45.69
	24			46.23

Weisse (2) IX, 686, 9^{h} 32^{m} 45^{s}.

March	25	+39	35	16.06

ο Leonis, 9^{h} 33^{m} 40^{s}.

March	13	+10	31	37.34
	18			37.29

ψ Leonis, 9^{h} 36^{m} 6^{s}.

March	29	+14	39	36.10
April	21			35.80

(*), 9^{h} 39^{m} 45^{s}.

March	18	+12	4	27.04

B. A. C. 3345, 9^{h} 40^{m} 1^{s}.

March	18	+12	4	34.07
	23			34.10

Weisse IX, 871, 9^{h} 40^{m} 11^{s}.

April	24	+11	1	51.64

φ Ursæ Majoris, 9^{h} 42^{m} 33^{s}.

March	29	+54	42	57.55
April	21			57.21

B. A. C. 3367, 9^{h} 43^{m} 56^{s}.

April	24	−35	37	1.07

(*), 9^{h} 44^{m} 39^{s}.

April	24	−35	36	35.55

ν Leonis, 9^{h} 50^{m} 41^{s}.

1858.		°	′	″
March	13	+13	6	38.62
	17			37.78
	23			38.86

(*), 9^{h} 56^{m} 6^{s}.

April	24	+13	33	16.12

Weisse IX, 1204, 9^{h} 56^{m} 17^{s}.

March	18	+12	47	50.07

Weisse (2) IX, 1230, 9^{h} 57^{m} 39^{s}.

March	13	+17	8	38.83
	17			38.38

B. A. C. 3468, 10^{h} 2^{m} 54^{s}.

March	18	+38	5	22.96
April	9			23.37

32 Ursæ Majoris, 10^{h} 7^{m} 50^{s}.

March	17	+65	48	16.97
	25			16.33

λ Ursæ Majoris, 10^{h} 8^{m} 39^{s}.

April	21	+43	36	41.92

Rumker 3113, 10^{h} 8^{m} 41^{s}.

April	16	+12	21	50.25

Weisse (2) X, 197, 10^{h} 10^{m} 7^{s}.

March	18	+38	12	25.54

γ^{1} Leonis, 10^{h} 12^{m} 15^{s}.

March	13	+20	32	53.55
	17			52.88
	25			53.32

μ Ursæ Majoris, 10^{h} 13^{m} 59^{s}.

April	21	+42	11	46.93

Weisse X, 234, 10^{h} 14^{m} 26^{s}.

March	30	+11	24	16.14

Weisse X, 288, 10^{h} 17^{m} 39^{s}.

April	9	+10	41	28.60

Weisse X, 316, 10^{h} 19^{m} 0^{s}.

April	16	+11	12	53.73

(*), 10^{h} 21^{m} 27^{s}.

March	23	− 7	34	27.01

36 Ursæ Majoris, 10^{h} 21^{m} 38^{s}.

March	18	+56	41	49.17
	29			47.99

Weisse X, 377, $10^{h}\,21^{m}\,58^{s}$.

1858.		° ′ ″
March	13	+11 14 27.19
	17	27.65

ρ Leonis, $10^{h}\,25^{m}\,26^{s}$.

March	25	+10 1 30.92
	29	31.68

37 Ursæ Majoris, $10^{h}\,26^{m}\,6^{s}$.

April	9	+57 48 6.63
	21	6.34

(*), $10^{h}\,27^{m}\,20^{s}$.

March	30	− 9 10 41.12

48 Leonis, $10^{h}\,27^{m}\,29^{s}$.

April	24	+ 7 40 22.41

Weisse X, 526, $10^{h}\,30^{m}\,18^{s}$.

March	23	− 9 6 24.16

Weisse (2) X, 642, $10^{h}\,32^{m}\,6^{s}$.

March	13	+36 13 15.29

38 Ursæ Majoris, $10^{h}\,32^{m}\,21^{s}$.

April	21	+66 26 52.92
	24	53.62

Weisse (2) X, 696, $10^{h}\,34^{m}\,36^{s}$.

March	18	+36 6 33.46
	29	32.85

Weisse X, 618, $10^{h}\,34^{m}\,54^{s}$.

March	25	+11 5 12.54
	30	12.46

34 Sextantis, $10^{h}\,35^{m}\,24^{s}$.

May	12	+ 4 18 48.39

Weisse X, 656, $10^{h}\,37^{m}\,5^{s}$.

March	25	+11 6 33.56
	30	33.51

κ Leonis, $10^{h}\,39^{m}\,0^{s}$.

March	23	+14 55 57.11
April	24	56.29

42 Ursæ Majoris, $10^{h}\,42^{m}\,34^{s}$.

April	21	+60 3 42.15
May	12	43.20

Weisse X, 822, $10^{h}\,45^{m}\,30^{s}$.

March	18	+12 1 50.61

Weisse X, 837, $10^{h}\,46^{m}$.

March	18	+12 3 19.04

d Leonis, $10^{h}\,53^{m}\,20^{s}$.

1858.		° ′ ″
March	18	+ 4 22 7.21
	25	5.75
April	21	6.37
	24	5.92

(*), $10^{h}\,55^{m}\,0^{s}$.

April	16	+ 9 21 36.75

Weisse X, 1006, $10^{h}\,56^{m}\,21^{s}$.

April	27	+ 9 28 58.97

χ Leonis, $10^{h}\,57^{m}\,47^{s}$.

April	24	+ 8 5 31.57
May	12	31.03

ψ Ursæ Majoris, $11^{h}\,1^{m}\,47^{s}$.

March	18	+45 15 26.58
April	9	26.52

Weisse XI, 61, $11^{h}\,5^{m}\,20^{s}$.

March	30	+10 37 32.22
April	24	32.79

p^{5} Leonis, $11^{h}\,6^{m}\,35^{s}$.

April	21	+ 0 41 29.20
May	12	28.90

δ Leonis, $11^{h}\,6^{m}\,39^{s}$.

March	25	+21 17 23.76
April	16	24.35

δ Crateris, $11^{h}\,12^{m}\,21^{s}$.

March	25	−14 1 17.90
April	24	18.22

Weisse XI, 221, $11^{h}\,13^{m}\,48^{s}$.

March	30	+ 7 49 56.69
April	9	57.35

σ Leonis, $11^{h}\,13^{m}\,55^{s}$.

March	18	+ 6 47 45.94
April	21	45.73

Weisse XI, 233, $11^{h}\,14^{m}\,21^{s}$.

April	16	+ 4 58 29.59

Weisse XI, 235, $11^{h}\,14^{m}\,30^{s}$.

April	27	+ 9 56 8.31

B. A. C. 3892, $11^{h}\,19^{m}\,3^{s}$.

April	9	+ 9 25 45.50

Weisse (2) 344, $11^{h}\,19^{m}\,4^{s}$.

April	27	+21 17 24.38

τ Leonis, $11^{h}\,20^{m}\,44^{s}$.

1858.		° ′ ″
March	18	+ 3 37 36.44
April	21	36.58

λ Draconis, $11^{h}\,23^{m}\,3^{s}$.

April	24	+70 6 9.56

e Leonis, $11^{h}\,23^{m}\,10^{s}$.

March	25	− 2 13 54.19
	31	55.21

Weisse (2) 526, $11^{h}\,28^{m}\,30^{s}$.

March	30	+20 52 41.62

B. A. C. 3937, $11^{h}\,28^{m}\,55^{s}$.

April	9	+28 33 16.18
	16	15.95

υ Leonis, $11^{h}\,29^{m}\,47^{s}$.

March	18	− 0 3 3.50
	25	4.03
April	24	4.23
May	12	3.48

59 Ursæ Majoris, $11^{h}\,30^{m}\,52^{s}$.

April	3	+44 24 4.55
	21	5.74

Weisse (2) XI, 592, $11^{h}\,31^{m}\,10^{s}$.

March	30	+20 52 30.72

Weisse (2) XI, 600, $11^{h}\,31^{m}\,24^{s}$.

April	16	+24 6 15.84

χ Ursæ Majoris, $11^{h}\,38^{m}\,39^{s}$.

March	25	+48 33 20.13
	31	20.26

ν Virginis, $11^{h}\,38^{m}\,40^{s}$.

April	21	+ 7 18 50.38
May	12	49.51

Weisse (2) XI, 816, $11^{h}\,41^{m}\,50^{s}$.

March	30	+16 54 35.06

β Leonis, $11^{h}\,41^{m}\,55^{s}$.

April	9	+15 21 15.79
	16	15.92

β Virginis, $11^{h}\,43^{m}\,24^{s}$.

April	21	+ 2 33 14.42
May	12	13.80

γ Ursæ Majoris, $11^{h}\,46^{m}\,27^{s}$.

1858.		° ′ ″
April	27	+54 28 22.54

b Virginis, $11^{h}\,52^{m}\,46^{s}$.

March	18	+ 4 26 4.91
	30	5.17

π Virginis, $11^{h}\,53^{m}\,43^{s}$.

April	9	+ 7 23 41.88
	16	41.93

67 Ursæ Majoris, $11^{h}\,55^{m}\,0^{s}$.

April	21	+43 49 20.69
	27	19.39
May	12	20.15

Weisse XII, 16, $12^{h}\,2^{m}\,33^{s}$.

March	30	+ 8 57 29.78
April	16	31.97

ε Corvi, $12^{h}\,2^{m}\,56^{s}$.

March	18	−21 50 27.37
April	21	27.42
	27	27.99
May	12	28.33
June	2	27.96

? Weisse XII, 49, $12^{h}\,4^{m}\,22^{s}$.

March	25	+ 8 8 56.43
April	3	56.05

δ Ursæ Majoris, $12^{h}\,8^{m}\,29^{s}$.

April	9	+57 48 37.65
	16	37.25

Weisse XII, 144, $12^{h}\,10^{m}\,14^{s}$.

March	30	+ 7 22 50.32
April	3	49.96

η Virginis, $12^{h}\,12^{m}\,45^{s}$.

April	21	+ 0 6 41.36
	27	40.89
May	12	40.45
	13	41.07
June	2	40.58

Weisse XII, 193, $12^{h}\,12^{m}\,47^{s}$.

March	18	+ 6 26 53.78
	25	53.35

B. A. C. 4168, $12^{h}\,15^{m}\,25^{s}$.

March	30	+ 6 5 2.88
April	3	2.59

Weisse XII, 291, $12^{h}\,18^{m}\,40^{s}$.

April	9	− 4 5 6.09
	16	5.51

73 URSÆ MAJORIS, $12^{h}\ 20^{m}\ 56^{s}$.

1858.		° ′ ″
April	21 . .	+56 29 17.84
	27 . .	17.50
June	2 . .	18.52

WEISSE XII, 402, $12^{h}\ 24^{m}\ 26^{s}$.

March	25 . .	− 4 16 49.30
	30 . .	48.82

WEISSE XII, 409, $12^{h}\ 24^{m}\ 44^{s}$.

May	12 . .	+ 6 29 0.65

WEISSE XII, 416, $12^{h}\ 25^{m}\ 13^{s}$.

May	12 . .	+ 6 28 31.10

WEISSE XII, 433, $12^{h}\ 25^{m}\ 29^{s}$.

May	13 . .	+ 3 41 4.49

κ DRACONIS, $12^{h}\ 27^{m}\ 29^{s}$.

April	9 . .	+70 33 38.38
	16 . .	36.63

WEISSE XII, 516, $12^{h}\ 31^{m}\ 28^{s}$.

March	25 . .	− 4 33 10.67
April	3 . .	11.54

WEISSE XII, 525, $12^{h}\ 31^{m}\ 58^{s}$.

May	12 . .	+14 38 18.95

WEISSE XII, 564, $12^{h}\ 34^{m}\ 23^{s}$.

May	13 . .	+ 2 45 58.97

WEISSE XII, 579, $12^{h}\ 35^{m}\ 1^{s}$.

April	3 . .	− 4 50 7.37
	9 . .	6.62

WEISSE XII, 583, $12^{h}\ 35^{m}\ 15^{s}$.

April	16 . .	+ 2 23 8.88

WEISSE XII, 584, $12^{h}\ 35^{m}\ 20^{s}$.

April	27 . .	+ 2 5 57.00

WEISSE XII, 585, $12^{h}\ 35^{m}\ 23^{s}$.

March	25 . .	− 4 41 51.78
	30 . .	52.15

(*), $12^{h}\ 44^{m}\ 41^{s}$.

March	25 . .	+ 0 57 16.81

WEISSE XII, 757, $12^{h}\ 44^{m}\ 41^{s}$.

March	25 . .	+ 0 50 52.39

WEISSE XII, 764, $12^{h}\ 45^{m}\ 17^{s}$.

May	12 . .	+ 0 59 28.88

38 VIRGINIS, $12^{h}\ 46^{m}\ 2^{s}$.

1858.		° ′ ″
April	9 . .	− 2 47 29.28
	16 . .	28.19

ψ VIRGINIS, $12^{h}\ 47^{m}\ 4^{s}$.

June	2 . .	− 8 46 40.67
	7 . .	40.58

WEISSE XII, 820, $12^{h}\ 48^{m}\ 30^{s}$.

April	16 . .	− 2 47 29.35

α CANUM VENATICORUM, $12^{h}\ 49^{m}\ 27^{s}$.

April	3 . .	+39 4 29.29
	27 . .	30.34
May	22 . .	29.94

B. A. C. 4345, $12^{h}\ 49^{m}\ 28^{s}$.

April	3 . .	+39 4 15.76
	27 . .	17.04
May	22 . .	16.86

WEISSE XII, 878, $12^{h}\ 51^{m}\ 49^{s}$.

May	12 . .	− 1 19 22.44
	22 . .	22.35

78 URSÆ MAJORIS, $12^{h}\ 54^{m}\ 44^{s}$.

April	3 . .	+57 7 16.03
	9 . .	17.91
	16 . .	17.12
June	2 . .	17.87

θ VIRGINIS, $13^{h}\ 2^{m}\ 43^{s}$.

March	30 . .	− 4 47 27.82
April	3 . .	26.32
	9 . .	26.27
	16 . .	26.58
	21 . .	26.47
	27 . .	26.90
May	12 . .	27.69

WEISSE XIII, 268, $13^{h}\ 17^{m}\ 12^{s}$.

April	27 . .	+ 0 24 60.31
May	13 . .	59.80
	22 . .	60.07

α VIRGINIS, $13^{h}\ 17^{m}\ 48^{s}$.

June	7 . .	−10 25 46.01

WEISSE XIII, 318, $13^{h}\ 20^{m}\ 20^{s}$.

May	22 . .	+ 0 21 3.71

WEISSE XIII, 324, $13^{h}\ 20^{m}\ 53^{s}$.

May	22 . .	+ 0 24 40.20

l^{2} VIRGINIS, $13^{h}\ 24^{m}\ 41^{s}$.

May	13 . .	− 5 31 54.40
June	2 . .	54.49

ζ VIRGINIS, $13^{h}\ 27^{m}\ 34^{s}$.

1858.		° ′ ″
June	21 . .	+ 0 7 15.64
	25 . .	16.27

B. A. C. 4560, $13^{h}\ 33^{m}\ 32^{s}$.

May	13 . .	−12 4 18.61

m VIRGINIS, $13^{h}\ 34^{m}\ 16^{s}$.

April	16 . .	− 7 59 42.01
June	2 . .	42.79

3 BOOTIS, $13^{h}\ 40^{m}\ 14^{s}$.

June	21 . .	+26 24 19.72
	25 . .	20.66

WEISSE (2) XIII, 854, $13^{h}\ 40^{m}\ 59^{s}$.

April	27 . .	+34 0 32.34

89 VIRGINIS, $13^{h}\ 42^{m}\ 16^{s}$.

April	16 . .	−17 26 7.02
June	2 . .	6.84

WEISSE (2) XIII, 984, $13^{h}\ 45^{m}\ 36^{s}$.

May	13 . .	+36 24 32.83

WEISSE (2) XIII, 997, $13^{h}\ 46^{m}\ 21^{s}$.

May	13 . .	+36 22 20.24

WEISSE XIII, 797, $13^{h}\ 47^{m}\ 3^{s}$.

June	2 . .	+10 55 33.85

i DRACONIS, $13^{h}\ 47^{m}\ 21^{s}$.

June	7 . .	+65 24 56.29
	21 . .	55.02

RUMKER 4522, $13^{h}\ 49^{m}\ 45^{s}$.

April	27 . .	+26 36 19.77

α DRACONIS, $14^{h}\ 0^{m}\ 36^{s}$.

June	7 . .	+65 2 43.92
	21 . .	44.06

(*), $14^{h}\ 2^{m}\ 0^{s}$.

May	13 . .	+66 16 24.14
	28 . .	23.74

B. A. C. 4700, $14^{h}\ 3^{m}\ 13^{s}$.

April	27 . .	−15 38 20.17
May	22 . .	20.14

WEISSE (2) XIV, 40, $14^{h}\ 3^{m}\ 13^{s}$.

June	1 . .	+23 49 7.83
	2 . .	8.07

d BOOTIS, $14^{h}\ 4^{m}\ 0^{s}$.

June	25 . .	+25 45 22.75

κ VIRGINIS, $14^{h}\ 5^{m}\ 26^{s}$.

1858.		° ′ ″
June	7 . .	− 9 37 13.90
	21 . .	12.88

(*), $14^{h}\ 9^{m}\ 48^{s}$.

May	22 . .	− 4 29 56.27
June	2 . .	56.53
	10 . .	56.36

WEISSE XIV, 171, $14^{h}\ 10^{m}\ 32^{s}$.

June	2 . .	− 4 29 3.07

WEISSE XIV, 174, $14^{h}\ 10^{m}\ 39^{s}$.

May	22 . .	− 4 29 37.09
June	2 . .	37.09
	10 . .	38.13

WEISSE (2) XIV, 248, $14^{h}\ 12^{m}\ 0^{s}$.

April	27 . .	+24 38 50.09
May	22 . .	49.98

O. ARG. S. 13544, $14^{h}\ 12^{m}\ 37^{s}$.

June	1 . .	−23 51 41.03
	2 . .	41.54

LALANDE 26210, $14^{h}\ 13^{m}\ 5^{s}$.

June	15 . .	−18 41 21.57

2 LIBRÆ, $14^{h}\ 15^{m}\ 53^{s}$.

June	25 . .	−11 4 21.56
	26 . .	22.20

θ BOOTIS, $14^{h}\ 20^{m}\ 26^{s}$.

June	7 . .	+52 29 56.37

WEISSE XIV, 422, $14^{h}\ 23^{m}\ 37^{s}$.

May	22 . .	− 3 10 26.61
	28 . .	27.70

WEISSE XIV, 423, $14^{h}\ 23^{m}\ 42^{s}$.

May	13 . .	− 5 10 41.44
	21 . .	40.36

O. ARG. S. 13694, $14^{h}\ 23^{m}\ 45^{s}$.

June	1 . .	−23 56 8.90
	2 . .	10.26

ρ BOOTIS, $14^{h}\ 25^{m}\ 47^{s}$.

June	25 . .	+30 59 14.49
	26 . .	14.92

WEISSE XIV, 503, $14^{h}\ 28^{m}\ 5^{s}$.

May	13 . .	− 5 13 4.03
	21 . .	3.27

σ BOOTIS, $14^{h}\ 28^{m}\ 36^{s}$.

June	21 . .	+30 21 18.21

WEISSE XIV, 519, 14^h 28^m 54^s.

1858.		°	′	″
June	15	−3	10	4.93
	18			6.03

RUMKER 4761, 14^h 29^m 25^s.

June	7	+1	40	5.52
	10			3.55

WEISSE XIV, 606, 14^h 33^m 37^s.

May	22	−5	51	18.80
	28			19.53

WEISSE XIV, 608, 14^h 33^m 44^s.

June	1	−10	45	39.02
	5			39.80

μ VIRGINIS, 14^h 35^m 40^s.

June	25	−5	2	50.31
	26			51.01

WEISSE XIV, 668, 14^h 37^m 1^s.

May	13	−5	47	36.32
	21			35.64

(*), 14^h 37^m 24^s.

June	15	+27	7	28.74

ε BOOTIS, 14^h 38^m 52^s.

June	19	+27	39	58.17

O. ARG. S. 13953, 14^h 41^m 13^s.

June	18	−23	39	59.01

WEISSE XIV, 759, 14^h 41^m 17^s.

May	22	−6	31	14.03
	28			14.05

μ LIBRÆ, 14^h 41^m 38^s.

June	7	−13	33	48.53
	25			48.45
	26			49.38

O. ARG. S. 13958, 14^h 41^m 50^s.

June	18	−23	38	8.65

WEISSE XIV, 787, 14^h 42^m 39^s.

May	22	−6	34	49.59
	28			49.31

WEISSE XIV, 793, 14^h 43^m 1^s.

May	13	−11	26	9.81
	21			8.41

α^2 LIBRÆ, 14^h 43^m 8^s.

June	19	−15	27	28.21

ξ^2 LIBRÆ, 14^h 49^m 10^s.

1858.		°	′	″
June	25	−10	50	32.00

O. ARG. N. 15005, 14^h 53^m 49^s.

May	22	+59	5	20.47
June	18			22.96

(*), 14^h 54^m 2^s.

May	22	+59	5	48.94

WEISSE (2) XIV, 1183, 14^h 54^m 3^s.

June	19	+43	53	50.25

B. A. C. 4944, 14^h 54^m 39^s.

June	7	+0	24	56.27

ψ BOOTIS, 14^h 58^m 21^s.

June	25	+27	29	43.42

b BOOTIS, 15^h 2^m 21^s.

May	13	+26	50	13.59
June	1			12.66

ι^1 LIBRÆ, 15^h 4^m 15^s.

May	22	−19	15	34.17
June	21			33.49

B. A. C. 5018, 15^h 6^m 53^s.

June	19	−27	16	49.75

3 SERPENTIS, 15^h 8^m 14^s.

June	10	+5	27	40.70
	25			40.78

β LIBRÆ, 15^h 9^m 27^s.

June	1	−8	51	49.48
	5			49.34

δ BOOTIS, 15^h 9^m 51^s.

June	26	+33	50	18.95

28 LIBRÆ, 15^h 12^m 59^s.

May	13	−17	38	52.36
	21			49.56
June	21			50.58

B. A. C. 5062, 15^h 14^m 37^s.

June	25	−26	11	4.40

(*), 15^h 15^m 7^s.

June	15	−13	17	47.49

O. ARG. S. 14531, 15^h 16^m 50^s.

May	28	−21	32	38.77

10 SERPENTIS, 15^h 21^m 34^s.

1858.		°	′	″
May	13	+2	19	49.27
June	1			51.64
	10			51.11

ι DRACONIS, 15^h 21^m 52^s.

June	5	+59	27	27.07
	21			26.32

O. ARG. S. 14607, 15^h 22^m 38^s.

June	15	−21	23	45.24

B. A. C. 5105, 15^h 24^m 0^s.

June	26	−23	24	1.59

B. A. C. 5110, 15^h 24^m 48^s.

June	18	−25	19	20.32
	28			19.83

(*), 15^h 26^m 56^s.

June	28	−25	15	42.80

γ LIBRÆ, 15^h 27^m 42^s.

May	28	−14	19	11.82
June	1			10.63

α CORONÆ BOREALIS, 15^h 28^m 45^s.

June	25	+27	11	16.79
July	26			16.01

μ CORONÆ, 15^h 30^m 7^s.

June	5	+39	28	36.29
	10			37.07

42 LIBRÆ, 15^h 32^m 0^s.

June	21	−23	21	35.24
	26			36.13
	30			36.13

WEISSE XV, 637, 15^h 33^m 49^s.

May	21	−15	6	20.40
	22			20.59

WEISSE XV, 644, 15^h 34^m 11^s.

May	21	−15	6	51.22
	22			51.89

(*), 15^h 35^m 8^s.

June	1	−17	14	51.18
	10			52.08
	15			53.44

(*), 15^h 35^m 34^s.

May	28	−10	28	22.10

α SERPENTIS, 15^h 37^m 22^s.

1858.		°	′	″
June	21	+6	52	8.10
	25			7.51
July	26			6.54

WEISSE XV, 744, 15^h 39^m 15^s.

May	21	−14	47	51.90

B. A. C. 5211, 15^h 39^m 31^s.

June	19	−25	33	1.01
	28			0.43

B. A. C. 5220, 15^h 40^m 10^s.

June	18	−23	23	55.01
	30			54.38

WEISSE XV, 818, 15^h 43^m 5^s.

June	5	−2	37	36.99

WEISSE XV, 844, 15^h 44^m 18^s.

June	5	−2	39	50.56

λ LIBRÆ, 15^h 45^m 14^s.

June	21	−19	44	42.66
	26			44.12
	30			43.39

B. A. C. 5254, 15^h 45^m 36^s.

May	28	−23	33	28.18

B. A. C. 5257, 15^h 45^m 50^s.

June	1	−16	18	56.61
	15			55.55

B. A. C. 5258, 15^h 46^m 0^s.

June	19	−26	55	11.40
	28			10.69

(*), 15^h 46^m 4^s.

June	5	−2	36	31.70
July	9			31.08

(*), 15^h 46^m 43^s.

June	10	−10	40	19.53

B. A. C. 5264, 15^h 46^m 56^s.

June	18	−18	57	59.98

B. A. C. 5275, 15^h 48^m 41^s.

June	29	−27	13	48.31
July	6			48.11

B. A. C. 5278, 15^h 49^m 1^s.

May	21	−21	4	26.37

ζ Ursæ Minoris, 15^h 49^m 8^s.

1858.		°	′	″
July	26 . .	+78	13	22.89

B. A. C. 5286, 15^h 50^m 13^s.

July	10 . .	−24	25	28.72

π Scorpii, 15^h 50^m 23^s.

June	26 . .	−25	42	28.33

δ Scorpii, 15^h 52^m 3^s.

May	28 . .	−22	13	11.49
June	21 . .			10.86

Weisse XV, 1011, 15^h 53^m 52^s.

June	15 . .	−10	52	51.64

Weisse XV, 1019, 15^h 54^m 28^s.

June	15 . .	−10	53	51.04

β^1 Scorpii, 15^h 57^m 18^s.

June	1 . .	−19	25	9.05
	30 . .			8.78
July	9 . .			9.35
	26 . .			8.54

B. A. C. 5330, 15^h 57^m 18^s.

June	1 . .	−19	24	56.53
July	9 . .			57.21
	26 . .			57.00

B. A, C. 5335, 15^h 57^m 46^s.

June	18 . .	−23	13	17.42
July	6 . .			16.63

O. Arg. N. 15864, 15^h 58^m 44^s.

June	10 . .	+70	6	46.22

(*), 15^h 58^m 47^s.

June	10 . .	+70	8	0.43

B. A. C. 5345, 15^h 59^m 28^s.

June	29 . .	−24	4	57.52
July	7 . .			58.15

B. A. C. 5351, 15^h 59^m 50^s.

June	5 . .	−12	21	56.02

B. A. C. 5354, 16^h 0^m 24^s.

July	10 . .	−23	18	29.60

Weisse XVI, 19, 16^h 2^m 31^s.

May	21 . .	− 3	5	41.91

48 Serpentis, 16^h 5^m 8^s.

June	26 . .	+17	1	49.32

B. A. C. 5394, 16^h 5^m 21^s.

1858.		°	′	″
June	29 . .	−24	3	36.56
July	7 . .			35.88

B. A. C. 5409, 16^h 6^m 45^s.

June	18 . .	−26	50	55.03
	25 . .			53.45
July	6 . .			53.58

δ Ophiuchi, 16^h 7^m 0^s.

June	5 . .	− 3	19	51.63
	21 . .			51.12

B. A. C. 5416, 16^h 7^m 16^s.

July	15 . .	−30	15	59.86

O. Arg. S. 15438, 16^h 7^m 18^s.

June	1 . .	−24	45	43.98
	15 . .			43.46

B. A. C. 5421, 16^h 8^m 7^s.

July	10 . .	−29	23	27.86

B. A. C. 5430, 16^h 9^m 38^s.

June	29 . .	−27	41	34.25
July	9 . .			33.82

O. Arg. S. 15490, 16^h 10^m 24^s.

May	21 . .	−21	14	44.15

σ Scorpii, 16^h 12^m 40^s.

June	26 . .	−25	15	12.53

B. A. C. 5468, 16^h 15^m 12^s.

June	18 . .	−31	5	38.17
July	7 . .			37.30

φ Ophiuchi, 16^h 15^m 55^s.

June	5 . .	−19	42	22.71
	21 . .			22.57

B. A. C. 5471, 16^h 16^m 47^s.

July	9 . .	−31	22	36.63
	10 . .			37.38

B. A. C. 5476, 16^h 17^m 2^s.

July	15 . .	−29	35	49.00

α Scorpii, 16^h 20^m 49^s.

June	15 . .	−26	7	3.88

22 Scorpii, 16^h 21^m 42^s.

June	1 . .	−24	48	12.75
	26 . .			12.44
July	26 . .			13.16

B. A. C. 5522, 16^h 24^m 8^s.

1858.		°	′	″
June	18 . .	−31	15	1.77
	28 . .			0.81

τ Scorpii, 16^h 27^m 10^s.

June	18 . .	−27	55	19.67
	26 . .			19.15

σ Herculis, 16^h 29^m 34^s.

June	1 . .	+42	43	40.48
July	26 . .			39.70

B. A. C. 5556, 16^h 30^m 28^s.

June	28 . .	−29	38	29.21
	29 . .			29.68

B. A. C. 5557, 16^h 30^m 30^s.

July	15 . .	−30	10	57.40

42 Herculis, 16^h 34^m 57^s.

June	1 . .	+49	12	13.98
July	6 . .			14.12

B. A. C. 5600, 16^h 35^m 36^s.

July	15 . .	−27	11	22.00

B. A. C. 5612, 16^h 37^m 56^s.

July	7 . .	−31	11	37.71
	9 . .			37.68

O. Arg. S. 15923, 16^h 37^m 56^s.

July	15 . .	−27	13	19.46

B. A. C. 5622, 16^h 39^m 28^s.

June	28 . .	−30	56	56.55
	29 . .			56.40

g Draconis, 16^h 40^m 2^s.

June	30 . .	+64	51	16.94
July	26 . .			16.70

B. A. C. 5678, 16^h 46^m 10^s.

June	29 . .	−31	10	6.27
July	7 . .			6.33

(*), 16^h 46^m 35^s.

July	10 . .	−31	6	0.08

B. A. C. 5684, 16^h 46^m 53^s.

June	28 . .	−31	14	21.02
July	6 . .			21.84

B. A. C. 5690, 16^h 47^m 19^s.

July	9 . .	−31	4	38.62
	10 . .			38.42

O. Arg. S. 16162, 16^h 50^m 4^s.

1858.		°	′	″
July	26 . .	−26	47	45.29

κ Ophiuchi, 16^h 51^m 3^s.

July	22 . .	+ 9	35	43.14
August	19 . .			43.09

O. Arg. S. 16206, 16^h 52^m 36^s.

June	1 . .	−27	2	20.52
	15 . .			19.87

B. A. C. 5730, 16^h 55^m 0^s.

June	28 . .	−24	2	11.56
July	5 . .			10.74
	9 . .			11.25

O. Arg. S. 16263, 16^h 55^m 18^s.

June	1 . .	−27	0	41.17

B. A. C. 5739, 16^h 55^m 47^s.

June	29 . .	−31	9	43.62
	30 . .			44.91

B. A. C. 5743, 16^h 56^m 0^s.

July	7 . .	−23	11	18.93

B. A. C. 5756, 16^h 57^m 34^s.

July	10 . .	−29	57	14.94

ε Ursæ Minoris, 17^h 0^m 35^s.

August	19 . .	+82	15	40.51

η Ophiuchi, 17^h 2^m 21^s.

June	1 . .	−15	32	53.97
July	26 . .			52.82

B. A. C. 5791, 17^h 3^m 38^s.

July	9 . .	−25	4	40.60
	10 . .			41.09

B. A. C. 5793, 17^h 3^m 53^s.

June	29 . .	−32	15	52.79
July	5 . .			51.35

O. Arg. S. 16451, 17^h 3^m 56^s.

July	9 . .	−25	3	1.33
	10 . .			2.31

B. A. C. 5796, 17^h 5^m 16^s.

July	6 . .	−27	37	35.14
	7 . .			36.31

B. A. C. 5808, (1st *,) 17^h 6^m 34^s.

June	15 . .	−26	23	36.34

B. A. C. 5808, (2d *,) 17^h 6^m 34^s.

1858.		°	′	″
June	15	−26	23	33.02

B. A. C. 5809, 17^h 6^m 56^s.

June	28	−30	2	42.15
	30			42.48

B. A. C. 5816, 17^h 7^m 52^s.

July	24	−25	8	36.37
	26			37.42

B. A. C. 5818, 17^h 7^m 57^s.

July	28	−30	11	25.73

α HERCULIS, 17^h 8^m 16^s.

June	18	+14	33	9.23
July	22			9.45

B. A. C. 5848, 17^h 13^m 13^s.

July	6	−30	21	27.09
	7			27.78

θ OPHIUCHI, 17^h 13^m 25^s.

June	15	−24	51	20.40
	18			21.70
August	19			19.79

B. A. C. 5861, 17^h 15^m 34^s.

June	28	−28	31	3.61
	29			3.68

(*), 17^h 16^m 30^s.

July	7	−30	23	33.88

B. A. C. 5869, 17^h 16^m 36^s.

July	10	−29	32	17.67
	15			16.64

B. A. C. 5878, 17^h 18^m 16^s.

July	28	−25	48	57.90

σ OPHIUCHI, 17^h 19^m 35^s.

July	5	+ 4	15	55.48
	26			53.51

B. A. C. 5892, 17^h 19^m 40^s.

June	30	−31	15	43.88
July	24			43.40

(*), 17^h 22^m 32^s.

July	9	−31	45	40.28

B. A. C. 5908, 17^h 22^m 56^s.

July	6	−31	42	59.51
	7			60.28
	9			60.59

B. A. C. 5924, 17^h 25^m 36^s.

1858.		°	′	″
July	9	−31	46	14.75
August	19			14.42

B. A. C. 5925, 17^h 25^m 36^s.

August	23	−32	28	47.90

B. A. C. 5943, 17^h 28^m 56^s.

June	28	−28	20	48.50
	29			48.27
	30			49.09
July	7			48.23
	10			49.05

B. A. C. 5946, 17^h 29^m 26^s.

July	24	−27	57	26.86
	28			27.10

ν^1 DRACONIS, 17^h 29^m 25^s.

July	5	+55	16	52.61
	26			52.29

ν^2 DRACONIS, 17^h 29^m 30^s.

July	5	+55	16	10.65
	26			10.46

B. A. C. 5952, 17^h 30^m 12^s.

July	9	−28	19	24.56
	10			25.08

B. A. C. 5977, 17^h 33^m 56^s.

July	6	−32	58	41.28
	9			41.97

B. A. C. 5983, 17^h 34^m 38^s.

July	28	−30	6	19.39
August	4			20.43

B. A. C. 5989, 17^h 35^m 48^s.

June	28	−23	36	37.80
	29			37.46

(*), 17^h 38^m 12^s.

June	28	−23	37	27.89
	29			27.54

3 SAGITTARII, 17^h 38^m 45^s.

August	23	−27	46	23.88

B. A. C. 6011, 17^h 39^m 10^s.

June	30	−32	36	52.60
July	10			52.35
	26			51.97

μ HERCULIS, 17^h 41^m 2^s.

July	7	+27	48	16.92
	22			17.03

B. A. C. 6039, 17^h 44^m 6^s.

1858.		°	′	″
July	9	−31	59	38.33
	10			37.91
	28			37.35

30 DRACONIS, 17^h 45^m 43^s.

August	6	+50	48	56.95

B. A. C. 6057, 17^h 47^m 9^s.

June	28	−32	26	48.28
	29			48.50

B. A. C. 6063, 17^h 47^m 52^s.

July	26	−28	2	19.55
September	6			20.24

B. A. C. 6072, 17^h 49^m 48^s.

July	15	−28	44	22.32

B. A. C. 6076, 17^h 50^m 44^s.

June	29	−33	23	33.41
August	11			34.31

(*), 17^h 50^m 46^s.

August	10	−15	35	13.17

(*), 17^h 55^m 20^s.

July	10	−25	39	50.91

(*), 17^h 55^m 50^s.

July	24	−25	39	48.49

O. ARG. S. 17576, 17^h 56^m 32^s.

July	6	−27	50	13.76

B. A. C. 6113, 17^h 56^m 45^s.

July	26	−29	16	48.13
	29			49.24

B. A. C. 6131, 17^h 59^m 58^s.

June	29	−31	10	27.79
August	7			27.89

(*), 18^h 0^m 11^s.

August	10	−27	45	19.51

B. A. C. 6132, 18^h 0^m 17^s.

July	15	−25	29	20.40
August	9			19.42

O. ARG. S. 17695, 18^h 0^m 35^s.

August	10	−27	45	4.80

B. A. C. 6144, 18^h 0^m 55^s.

1858.		°	′	″
September	6	−32	9	45.11

o HERCULIS, 18^h 2^m 4^s.

August	19	+28	44	44.51

B. A. C. 6160, 18^h 3^m 4^s.

June	30	−28	55	38.61
July	6			37.30

O. ARG. S. 17797, 18^h 3^m 43^s.

July	10	−28	15	45.34
August	10			46.79

B. A. C. 6163, 18^h 3^m 49^s.

July	10	−28	15	52.53
August	11			53.04

(*), 18^h 4^m 35^s.

August	13	−17	26	37.06

μ^1 SAGITTARII, 18^h 5^m 25^s.

July	5	−21	5	28.05
August	6			28.89

B. A. C. 6175, 18^h 6^m 31^s.

July	15	−32	22	46.17
	24			45.57

B. A. C. 6179, 18^h 6^m 52^s.

August	16	−20	45	57.14
	17			57.45
	23			57.41

B. A. C. 6181, 18^h 7^m 10^s.

June	29	−31	11	55.49
July	7			54.27

B. A. C. 6182, 18^h 7^m 15^s.

July	9	−31	21	38.21
August	7			38.40

(*), 18^h 7^m 33^s.

July	26	−30	26	45.50

B. A. C. 6190, 18^h 8^m 31^s.

September	6	−28	41	45.90

B. A. C. 6192, 18^h 8^m 39^s.

July	28	−33	26	30.41
	29			29.86

δ SAGITTARII, 18^h 12^m 2^s.

August	19	−29	53	59.41

δ Ursæ Minoris, $18^h\ 17^m\ 30^s$.

1858.		°	′	″
June	28	+86	36	6.36
	29			7.12
	30			6.08
July	6			6.51
	7			5.98
	9			7.38
	10			7.22
	15			6.50
	22			6.46
	24			6.47
	26			6.93
	27			6.91
	28			6.89
	29			7.12
August	4			6.84
	6			6.84
	7			6.58
	9			6.13
	10			6.76
	11			7.19
	13			6.64
	16			7.05
	17			7.22
	19			6.52
	20			6.98
	23			6.13
September	6			6.02

δ Ursæ Minoris, S. P., $18^h\ 17^m\ 30^s$.

February	6	+86	36	7.24
	8			8.36
	17			7.80
March	10			8.07
	12			8.24
	24			7.08

B. A. C. 6403, $18^h\ 41^m\ 58^s$.

July	15	−31	7	6.20
August	13			6.00
	16			6.91

31 Sagittarii, $18^h\ 43^m\ 44^s$.

July	29	−22	4	56.20

β Lyræ, $18^h\ 44^m\ 55^s$.

July	24	+33	12	6.69

ν¹ Sagittarii, $18^h\ 45^m\ 43^s$.

August	19	−22	54	47.89
	20			47.45
	23			47.90

ν² Sagittarii, $18^h\ 46^m\ 39^s$.

August	20	−22	50	31.55
	23			31.73

θ¹ Serpentis, $18^h\ 49^m\ 15^s$.

August	24	+ 4	1	28.13

θ² Serpentis, , $18^h\ 49^m\ 16^s$.

August	24	+ 4	1	22.78

B. A. C. 6465, $18^h\ 49^m\ 46^s$.

July	15	−25	3	32.07

B. A. C. 6479, $18^h\ 51^m\ 50^s$.

1858.		°	′	″
July	24	−25	7	58.98

Lalande 35468, $18^h\ 54^m\ 0^s$.

August	17	−17	3	2.33

B. A. C. 6512, $18^h\ 56^m\ 56^s$.

July	15	−29	17	13.36
August	24			14.14

B. A. C. 6537, $19^h\ 0^m\ 11^s$.

August	19	−30	50	36.10

B. A. C. 6540, $19^h\ 0^m\ 17^s$.

September	6	−23	24	23.25

(*), $19^h\ 0^m\ 28^s$.

August	19	−30	51	44.85

B. A. C. 6554, $19^h\ 2^m\ 27^s$.

August	9	−29	43	34.67
	11			34.31
	17			33.86

B. A. C. 6565, $19^h\ 5^m\ 16^s$.

July	15	−27	6	21.62
	27			21.35

B. A. C. 6568, $19^h\ 5^m\ 43^s$.

August	23	−30	3	58.20
	24			58.17

B. A. C. 6577, $19^h\ 7^m\ 18^s$.

August	7	−30	41	58.29
	10			59.81
	13			58.32

B. A. C. 6578, $19^h\ 7^m\ 35^s$.

September	6	−25	54	20.94

53 Draconis, $19^h\ {}^m9\ 0^s$.

July	24	+56	37	17.57
	29			18.39
August	4			18.42

54 Draconis, $19^h\ 11^m\ 26^s$.

August	6	+57	27	52.35
	17			52.32
	19			51.91

δ Draconis, $19^h\ 12^m\ 30^s$.

August	16	+67	24	56.03
September	3			55.73

B. A. C. 6611, $19^h\ 13^m\ 7^s$.

August	9	−26	25	25.35
	11			25.05
	13			25.01

B. A. C, 6613, $19^h\ 13^m\ 12^s$.

1858.		°	′	″
September	6	−29	46	54.05
	10			56.01

(*), $19^h\ 13^m\ 23^s$.

August	13	−26	26	11.33

2 Sagittæ, $19^h\ 18^m\ 4^s$.

July	24	+16	40	2.21
	29			3.43

δ Aquilæ, $19^h\ 18^m\ 27^s$.

July	27	+ 2	50	19.32

3 Sagittæ, $19^h\ 18^m\ 27^s$.

July	24	+16	41	8.48
	29			8.49

2 Cygni, $19^h\ 18^m\ 36^s$.

August	17	+29	20	59.01

4 Vulpeculæ, $19^h\ 19^m\ 19^s$.

August	6	+19	31	36.14

O. Arg. S. 19612, $19^h\ 21^m\ 10^s$.

August	4	−27	43	7.68
	7			6.64

O. Arg. S. 19618, $19^h\ 21^m\ 21^s$.

August	9	−27	37	56.35
	10			56.28

B. A. C. 6677, $19^h\ 23^m\ 20^s$.

August	11	−28	30	13.03
	16			12.33

B. A. C. 6682, $19^h\ 23^m\ 56^s$.

September	3	−28	17	1.46
	6			0.33
	13			0.47

β Cygni, $19^h\ 25^m\ 6^s$.

July	27	+27	40	4.85

B. A. C. 6691, $19^h\ 25^m\ 8^s$.

July	27	+27	40	24.74

O. Arg. S. 19694, $19^h\ 25^m\ 25^s$.

September	10	−27	27	33.95

(*), $19^h\ 29^m\ 43^s$.

August	10	−27	40	10.80

O. Arg. S. 19796, $19^h\ 29^m\ 48^s$.

September	13	−28	5	55.09

O. Arg. S. 19809, $19^h\ 30^m\ 17^s$.

1858.		°	′	″
August	4	−27	41	1.85
	7			1.05
	10			0.87

O. Arg. S. 19830, $19^h\ 31^m\ 19^s$.

September	3	−27	51	4.00
	6			2.63

O. Arg. S. 19839, $19^h\ 31^m\ 53^s$.

August	9	−27	36	52.90
	10			52.26

O. Arg. S. 19845, $19^h\ 32^m\ 9^s$.

August	11	−28	0	49.79
	16			49.54

σ Draconis, $19^h\ 32^m\ 36^s$.

July	24	+69	25	22.25
August	6			22.38

θ Cygni, $19^h\ 32^m\ 42^s$.

July	27	+49	53	55.13
	29			54.57

Weisse XIX, 875, $19^h\ 34^m\ 19^s$.

August	13	+11	36	7.91

Weisse XIX, 886, $19^h\ 34^m\ 43^s$.

August	13	+11	37	32.60

O. Arg. S. 19901, $19^h\ 35^m\ 43^s$.

August	25	−27	58	13.76
September	20			15.01

O. Arg. S. 19908, $19^h\ 36^m\ 16^s$.

August	24	−27	8	11.36
September	21			10.82

O. Arg. S. 19915, $19^h\ 36^m\ 29^s$.

September	10	−26	56	31.14

O. Arg. S. 19916, $19^h\ 36^m\ 37^s$.

August	4	−27	43	44.96
	7			44.13

O. Arg. S. 19933, $19^h\ 37^m\ 42^s$.

August	9	−27	36	11.73
	10			11.64

O. Arg. S. 19944, $19^h\ 38^m\ 47^s$.

August	24	−27	9	51.42
September	21			52.24

O. Arg. S. 19960, $19^h\ 39^m\ 42^s$.

September	10	−27	0	1.20

(*), $19^{h}\ 39^{m}\ 50^{s}$.

1858.		° ′ ″
September	13	−27 26 8.24

(*), 19 $40^{m}\ 23^{s}$.

July	29	−28 45 16.36

B. A. C. 6786, $19^{h}\ 41^{m}\ 47^{s}$.

August	11	−27 3 50.75
	24	50.66

O. ARG. S. 19990, $19^{h}\ 41^{m}\ 53^{s}$.

August	10	−27 38 2.51

O. ARG. S. 19997, $19^{h}\ 42^{m}\ 9^{s}$.

August	4	−27 41 57.64
	7	57.25

O. ARG. S, 19998, $19^{h}\ 42^{m}\ 10^{s}$.

August	16	−26 31 7.64

O. ARG. S. 20002, $19^{h}\ 42^{m}\ 20^{s}$.

September	10	−26 59 16.41

B. A. C. 6792, $19^{h}\ 42^{m}\ 32^{s}$.

September	3	−27 49 20.34
	6	20.96

B. A. C. 6795, $19^{h}\ 43^{m}\ 5^{s}$.

September	13	−27 26 3.21

α AQUILÆ, $19^{h}\ 43^{m}\ 57^{s}$.

July	27	+ 8 30 5.92
August	6	6.22

O. ARG. S. 20022, $19^{h}\ 44^{m}\ 6^{s}$.

August	24	−27 11 35.74

O. ARG. S. 20039, $19^{h}\ 44^{m}\ 49^{s}$.

August	19	−27 18 0.02

O, ARG. S. 20046, $19^{h}\ 45^{m}\ 24^{s}$.

August	13	−27 50 57.33
September	6	57.13

O. ARG. S. 20049, $19^{h}\ 45^{m}\ 47^{s}$.

September	20	−27 3 19.10

O. ARG. S. 20051, $19^{h}\ 45^{m}\ 50^{s}$.

September	10	−26 56 9.46

O. ARG. S. 20053, $19^{h}\ 45^{m}\ 53^{s}$.

August	4	−27 42 52.09
	7	51.15

O. ARG. S. 20058, $19^{h}\ 46^{m}\ 32^{s}$.

1858.		° ′ ″
September	13	−27 28 16.54

(*), $19^{h}\ 47^{m}\ 44^{s}$.

August	24	−27 4 16.10

O. ARG, S. 20078, $19^{h}\ 47^{m}\ 59^{s}$.

August	25	−27 59 20.66

β AQUILÆ, $19^{h}\ 48^{m}\ 26^{s}$.

August	31	+ 6 3 35.53

O. ARG. S. 20090, $19^{h}\ 48^{m}\ 45^{s}$.

August	16	−26 35 19.81

O. ARG. S. 20100, $19^{h}\ 48^{m}\ 59^{s}$.

September	6	−27 53 12.87

O. ARG. S. 20118, $19^{h}\ 50^{m}\ 26^{s}$.

August	11	−26 34 17.35
	16	17.08

O. ARG. S. 20123, $19^{h}\ 50^{m}\ 33^{s}$.

August	10	−27 37 12.39

B. A. C. 6854, $19^{h}\ 51^{m}\ 55^{s}$.

July	24	−28 57 54.82
	27	55.66
	29	55.58

B. A. C. 6869, $19^{h}\ 53^{m}\ 28^{s}$.

July	15	+64 20 57.20

O. ARG. S. 20157, $19^{h}\ 53^{m}\ 32^{s}$.

August	19	−28 22 48.02
	25	48.06

O. ARG. S. 20167, $19^{h}\ 54^{m}\ 4^{s}$.

September	20	−28 5 44.98
	21	45.21

O. ARG. S. 20186, $19^{h}\ 55^{m}\ 32^{s}$.

August	4	−28 24 30.91
	7	29.85
	25	31.52

O, ARG, S, 20192, $19^{h}\ 55^{m}\ 47^{s}$.

August	13	−26 42 59.49

O. ARG. S. 20234, $19^{h}\ 58^{m}\ 21^{s}$.

August	10	−27 37 15.26

λ URSÆ MINORIS, $20^{h}\ 3^{m}\ 53^{s}$.

1858.		° ′ ″
July	15	+88 53 24.54
	24	24.75
	27	25.75
	29	25.47
August	4	25.57
	6	25.16
	7	24.62
	10	24.37
	11	25.32
	13	24.58
	16	25.47
	17	26.42
	19	24.89
	23	24.96
	24	25.53
	25	25.46
	31	25.58
September	6	25.91
	10	26.29
	13	25.72
	17	25.44
	20	25.83
	21	26.74
	22	25.27

λ URSÆ MINORIS, S. P., $20^{h}\ 3^{m}\ 53^{s}$.

February	25	+88 53 24.31
	27	25.00
March	10	23.29
	12	24.78
	13	23.93
	18	23.98
	24	24.87
	29	24.71
	31	23.80

B. A. C. 6982, $20^{h}\ 11^{m}\ 24^{s}$.

September	20	−25 39 28.75
	21	29.21

O. ARG. S. 20406, $20^{h}\ 12^{m}\ 8^{s}$.

September	20	−25 38 50.72
	21	49.87

(*), $20^{h}\ 14^{m}\ 49^{s}$.

August	13	−24 56 17.06

O. ARG. S. 20458, $20^{h}\ 15^{m}\ 34^{s}$.

August	25	−24 36 35.41
	31	33.55

O. ARG. S. 20465, $20^{h}\ 16^{m}\ 3^{s}$.

August	11	−23 55 23.12
	16	24.27
	23	21.68

O. ARG. S. 20468, $20^{h}\ 16^{m}\ 16^{s}$.

September	6	−24 58 42.93
	17	42.69

O. ARG. S. 20470, $20^{h}\ 16^{m}\ 23^{s}$.

August	10	−24 42 14.77
	24	15.35

O, ARG. S. 20474, $20^{h}\ 16^{m}\ 31^{s}$.

September	6	−24 59 27.76
	17	30.17

(*), $20^{h}\ 16^{m}\ 53^{s}$.

1858.		° ′ ″
August	7	−23 37 56.33

O. ARG. S. 20482, $20^{h}\ 17^{m}\ 5^{s}$.

August	11	−23 55 52.06
	16	52.75

ρ CAPRICORNI, $20^{h}\ 20^{m}\ 52^{s}$.

August	4	−18 16 25.39

O. ARG. S. 20576, $20^{h}\ 23^{m}\ 50^{s}$.

August	24	−29 4 17.65

B. A. C. 7071, $20^{h}\ 24^{m}\ 9^{s}$.

August	24	−29 3 56.87

B. A. C. 7108, $20^{h}\ 29^{m}\ 32^{s}$.

August	7	−25 35 37.79
	10	36.38
	13	37.04

B. A. C. 7128, $20^{h}\ 31^{m}\ 51^{s}$.

September	3	−24 16 57.55

O. ARG. S. 20762, $20^{h}\ 34^{m}\ 56^{s}$.

August	24	−19 59 6.38

α CYGNI, $20^{h}\ 36^{m}\ 40^{s}$.

September	22	+44 46 53.08

O. ARG. S. 20839, $20^{h}\ 38^{m}\ 37^{s}$.

August	24	−19 56 45.27
September	10	46.05

(*), $20^{h}\ 43^{m}\ 25^{s}$.

September	20	−21 32 47.10

32 VULPECULÆ, $20^{h}\ 48^{m}\ 36^{s}$.

August	4	+27 31 36.12
	11	36.29
	16	36.11
	25	36.77
	31	37.74
September	3	36.54
	6	36.95
	10	36.86
	13	37.09
	27	36.98

LALANDE 40494, $20^{h}\ 49^{m}\ 15^{s}$.

September	20	+36 32 31.25

(*), $20^{h}\ 50^{m}\ 55^{s}$.

August	24	−31 2 58.76

61^1 Cygni, 21^h 0^m 34^s.

1858.		°	′	″
August	4	+38	3	46.64
	7			46.03
	10			46.75
	11			47.15
	13			46.19
	16			46.62
	24			47.15
	25			47.08
	31			46.61
September	3			45.74
	6			46.14
	10			46.22
	13			45.76
	17			46.26
	20			46.07
	21			45.73
	27			46.36

61^2 Cygni, 21^h 0^m 34^s.

August	4	+38	3	41.46
	7			41.13
	10			41.57
	11			41.67
	13			40.35
	16			41.24
	24			42.00
	25			41.81
	31			41.47
September	3			40.95
	6			40.77
	10			40.85
	13			40.23
	17			40.95
	20			40.84
	21			40.43
	27			40.43

ζ Cygni, 21^h 6^m 58^s.

August	25	+29	38	15.75
September	17			16.77
	22			16.78
	30			16.29

Lalande 41341, 21^h 9^m 59^s.

September	13	+36	40	16.31
	20			16.81
	21			16.82

α Cephei, 21^h 15^m 14^s.

October	19	+61	59	35.65

70 Cygni, 21^h 21^m 39^s.

September	13	+36	30	35.21
	17			35.71
	20			35.83
	21			35.50

β Aquarii, 21^h 24^m 11^s.

September	30	− 6	11	4.61

ε Pegasi, 21^h 37^m 18^s.

September	22	+ 9	14	5.74
	27			4.59
October	19			5.65
	23			5.58

B. A. C. 7568, 21^h 37^m 53^s.

September	17	+28	6	42.83
	20			41.61

B. A. C. 7569, 21^h 37^m 53^s.

September	17	+28	6	40.39
	20			39.50

δ Capricorni, 21^h 39^m 18^s.

October	20	−16	45	38.77

μ Capricorni, 21^h 45^m 39^s.

1858.		°	′	″
October	20	−14	12	32.99

16 Pegasi, 21^h 46^m 42^s.

September	23	+25	16	6.29
	30			4.56
October	19			4.10

B. A. C. 7652, 21^h 51^m 27^s.

September	17	−23	32	21.98

O. Arg. S. 21800, 21^h 53^m 10^s.

September	20	−21	0	48.05

α Aquarii, 21^h 58^m 35^s.

October	19	− 0	59	54.89
	23			53.21

ι Aquarii, 21^h 58^m 52^s.

October	20	−14	32	51.26

Lalande 43320, 22^h 5^m 7^s.

September	17	+36	36	18.43
	27			17.51

θ Aquarii, 22^h 9^m 27^s.

September	20	− 8	28	45.08
	30			44.86
October	19			44.34
	20			45.03
	23			44.03

Lalande 43630, 22^h 14^m 20^s.

September	17	+36	35	46.05
	27			44.59

(*), 22^h 15^m 12^s.

September	17	+36	34	32.03
	27			30.49

B. A. C. 7836, 22^h 22^m 47^s.

October	19	−15	18	0.71

σ Aquarii, 22^h 23^m 14^s.

October	27	−11	23	34.63

η Aquarii, 22^h 28^m 10^s.

September	23	− 0	50	14.30
	30			16.56
October	23			16.39

Lalande 44319, 22^h 32^m 44^s.

September	20	+36	38	53.15
	27			52.08

Lalande 44340, 22^h 33^m 53^s.

September	20	+36	37	33.38
	27			32.17

ζ Pegasi, 22^h 34^m 29^s.

October	19	+10	6	4.22
	27			5.21

Lalande 44642, 22^h 42^m 0^s.

September	20	+36	40	51.59
	27			50.29

τ^2 Aquarii, 22^h 42^m 10^s.

October	20	−14	19	50.41
	26			47.91
	27			49.76

δ Aquarii, 22^h 47^m 14^s.

October	20	−16	33	53.03
	27			51.83

α Piscis Australis, 22^h 49^m 54^s.

1858.		°	′	″
September	20	−30	21	47.94
	22			50.03
	27			49.02
	30			47.15
October	19			47.97
	23			47.41

82 Aquarii, 22^h 55^m 16^s.

September	29	− 7	19	30.55

α Pegasi, 22^h 57^m 46^s.

October	20	+14	27	8.54
November	18			8.63

Weisse XXII, 1232, 22^h 58^m 33^s.

October	26	−11	11	29.94

φ Aquarii, 23^h 7^m 4^s.

September	29	− 6	48	12.52
October	20			11.98

γ Piscium, 23^h 9^m 54^s.

September	22	+ 2	31	6.73
October	19			4.85
December	17			(3.44)

ψ^3 Aquarii, 23^h 11^m 40^s.

October	20	−10	22	32.46

B. A. C. 8127, 23^h 13^m 12^s.

October	26	+ 4	37	5.41
November	18			3.85

κ Piscium, 23^h 19^m 46^s.

September	29	+ 0	29	21.11
October	15			23.74
	19			22.01
	23			22.99
December	17			21.48

Weisse XXIII, 423, 23^h 21^m 37^s.

October	9	−10	52	17.66

Weisse XXIII, 476, 23^h 24^m 12^s.

September	20	− 5	1	21.54

Santini 1636, 23^h 25^m 4^s.

October	26	+ 6	18	53.64

16 Piscium, 23^h 29^m 15^s.

September	29	+ 1	19	30.63
October	27			32.31

ι Piscium, 23^h 32^m 45^s.

January	1	+ 4	52	3.83
October	19			3.30
	23			4.18
November	18			3.28

Weisse XXIII, 683, 23^h 33^m 30^s.

September	27	+ 7	9	57.92

Weisse XXIII, 685, 23^h 33^m 33^s.

September	20	+ 7	9	51.90
	27			51.38

Weisse XXIII, 705, 23^h 34^m 33^s.

October	15	+ 7	25	40.99

Weisse XXIII, 710, 23^h 34^m 48^s.

October	27	+ 6	28	32.85
December	17			32.66

λ Piscium, 23^h 34^m 54^s.

		°	′	″
October	20	+ 1	0	34.33

(*), 23^h 36^m 50^s.

December	17	+ 6	28	24.64

Weisse XXIII, 764, 23^h 37^m 40^s.

September	29	+ 6	24	54.23
October	15			54.95

Weisse XXIII, 817, 23^h 40^m 31^s.

October	26	− 1	32	18.93

Weisse XXIII, 828, 23^h 40^m 58^s.

September	20	+ 9	22	11.69
	27			11.44

Weisse XXIII, 831, 23^h 41^m 5^s.

October	15	+ 6	23	10.72
	20			11.86

δ Sculptoris, 23^h 41^m 37^s.

November	18	−28	54	17.03

Weisse XXIII, 870, 23^h 43^m 0^s.

October	27	+ 6	16	9.26

B. A. C. 8300, 23^h 45^m 30^s.

December	17	+10	10	6.01

Weisse XXIII, 932, 23^h 45^m 59^s.

September	29	+ 5	55	12.79

Santini 1664, 23^h 47^m.

October	9	+ 7	26	40.60

B. A. C. 8314, 23^h 48^m 4^s.

January	1	+73	37	54.36

Weisse XXIII, 1030, 23^h 50^m 55^s.

September	20	+10	41	43.12
	27			42.81

27 Piscium, 23^h 51^m 30^s.

October	20	− 4	19	58.99

ω Piscium, 23^h 52^m 7^s.

September	29	+ 6	5	16.19
October	15			17.82

B. A. C. 8353, 23^h 55^m 13^s.

October	26	+ 8	10	39.54
November	18			38.01

Weisse XXIII, 1195, 23^h 58^m 20^s.

October	27	−10	23	38.24
November	19			37.80

Weisse XXIII, 1201, 23^h 58^m 38^s.

September	20	+12	5	43.07
	27			42.15
October	15			41.79

Weisse XXIII, 1212, 23^h 59^m 20^s.

September	20	+12	3	6.47
	27			4.63
October	15			5.40

Weisse XXIII, 1217, 23^h 59^m 41^s.

September	27	+12	3	17.35

OBSERVATIONS WITH THE MURAL CIRCLE

FOR

1853, 1855, 1856, 1857, AND 1858.

Date.	Mean Time.	Limb.	Declination of Center.	C−O	Vertical Semi-diameter.	C−O
SUN.						
1853.	m. s.		° ′ ″	″	° ″	″
January 10	+ 7 56.8	.	− 21 53 50.87	+ 2.8	16 21.15	− 3.15
17	10 30.8	.	20 39 26.40	3.6	19.53	2.03
21	11 43.1	.	19 48 11.70	3.1	20.68	3.48
February 11	14 33.6	.	13 52 10.61	0.5	15.68	1.68
12	14 32.9	.	13 32 13.41	1.2	14.37	0.57
25	13 18.5	.	8 55 13.71	+ 3.7	11.98	0.98
March 3	12 9.3	.	6 38 53.41	− 0.4	14.41	4.91
10	10 28.3	.	3 55 42.47	1.9	9.30	1.60
16	8 48.4	.	1 33 55.76	− 0.6	8.67	2.57
19	7 55.1	.	− 0 22 51.79	+ 1.7	7.38	2.08
29	+ 4 50.4	.	+ 3 32 38.85	+ 2.7	16 4.10	− 1.50
MOON.						
1853.	h. m.		° ′ ″	″	″	″
March 19	7 49.7	.	+ 23 58 2.31	+ 2.4		
April 20	9 57.4	.	+ 6 14 41.29	− 1.4		
MERCURY.						
January 6	22 25.9	.	− 21 16 38.78	+ 0.7	5.13	− 1.7
9	22 26.5	.	21 49 59.83	0.0	4.68	1.5
20	22 42.1	.	23 6 58.39	− 3.7	4.79	2.1
27	22 57.9	.	− 22 51 34.28	− 2.9	4.19	− 1.7
VENUS.						
January 6	21 54.4	.	− 21 32 33.66	− 0.8	8.39	− 2.3
9	21 58.5	.	21 59 28.87	1.0	7.85	1.9
16	22 8.4	.	22 39 33.28	1.0	8.97	3.1
20	22 14.1	.	22 47 36.08	3.0	8.04	2.2
27	22 24.3	.	22 35 14.66	1.5	9.02	3.3
28	22 25.7	.	22 30 44.15	0.8	6.49	0.9
February 9	22 42.1	.	20 44 18.81	2.1	6.99	1.6
10	22 43.4	.	20 31 17.27	− 2.1	7.18	1.8
March 2	23 5.3	.	14 16 8.87	+ 0.5	8.24	2.7
9	23 11.3	.	11 23 1.08	− 0.6	7.37	2.3
15	23 15.8	.	8 42 33.41	+ 1.4	6.69	1.7
18	23 17.9	.	− 7 18 58.83	− 0.4	8.24	− 3.2

Date.	Mean Time.	Limb.	Declination of Center.	C—O	Vertical Semi-diameter.	C—O
			NEPTUNE.			
1853.	h. m.		° ′ ″	″	′ ″	″
September 13	11 24.1	.	− 7 57 1.52	+ 3.2		
19	10 59.9	.	8 0 41.51	2.7		
23	10 43.8	.	8 3 4.65	3.6		
24	10 39.8	.	8 3 38.91	2.9		
October 8	9 43.4	.	8 11 6.91	2.7		
14	9 19.3	.	8 13 49.70	1.5		
15	9 15.3	.	8 14 16.16	2.6		
November 14	7 16.1	.	− 8 21 52.64	+ 0.6		
			CERES.			
May 9	11 16.3	.	− 3 0 29.23	− 66.9		
11	11 6.6	.	− 3 0 53.27	− 66.1		
			PALLAS.			
May 9	11 3.1	.	+ 24 30 14.48	− 21.9		
11	10 53.9	.	+ 24 39 41.06	− 20.1		
			IRIS.			
April 22	9 28.3	.	− 5 5 29.19			
26	9 10.0	.	4 45 3.34			
27	9 6.9	.	− 4 40 14.07			
			FLORA.			
August 10	11 0.8	.	− 23 25 25.74	− 0.1		
11	10 56.0	.	− 23 31 32.28	+ 1.3		
			VICTORIA.			
April 21	12 22.5	.	− 19 41 1.87	+ 52.0		
27	11 54.5	.	18 47 19.67	49.2		
May 2	11 30.4	.	17 59 1.10	48.9		
11	10 56.3	.	− 16 28 13.14	+ 49.3		
			EUTERPE.			
December 13	9 22	.	+ 14 50 36.80			
20	8 52	.	14 54 55.12			
24	8 36	.	15 1 0.53			
27	8 24	.	+ 15 7 9.57			

EGERIA.

Date.	Mean Time.	Limb.	Declination of Center.	C—O	Vertical Semi-diameter.	C—O
1853.	h. m.		° ′ ″	″	′ ″	″
June 4	14 11.2	∘	— 41 16 8.87			
August 6	9 1.2	∘	— 41 16 13.75			

METIS.

October 6	12 10.2	∘	— 1 13 19.71	— 2.6		
8	12 0.4	∘	— 2 21 25.61	— 1.8		

JUPITER.

1855. September 24	9 33.3	∘	— 14 47 32.32	+ 0.1		

VESTA.

September 1	10 42.7	∘	— 24 0 28.32	+ 23.0		
7	10 14.9	∘	20 38.43	19.8		
8	10 10.4	∘	23 15.41	20.3		
10	10 1.5	∘	27 48.10	19.8		
11	9 57.1	∘	29 44.29	19.1		
12	9 52.7	∘	31 28.60	18.2		
17	9 31.2	∘	36 59.88	16.8		
28	9 47.7	∘	31 55.72	15.1		
29	9 43.8	∘	— 24 30 23.09	+ 14.5		

HEBE.

September 7	10 49.8	∘	— 20 58 27.69			
8	10 45.3	∘	21 10 54.48			
10	10 36.3	∘	21 34 53.31			
11	10 31.9	∘	21 46 24.80			
12	10 27.5	∘	— 21 57 39.70			

IRENE.

April 27	12 7.2	∘	— 1 4 52.41			

PSYCHE.

December 6	10 55.4	∘	+ 15 29 42.83			

NEPTUNE.						
Date.	Mean Time.	Limb.	Declination of Center.	C—O	Vertical Semi-diameter.	C—O
1855.	h. m.		° ′ ″	″	′ ″	″
September 11	11 51.2	∘	— 6 15 24.50	+ 3.8		
17	11 27.0	∘	19 17.38	5.1		
29	10 38.6	∘	26 40.34	4.3		
October 9	9 58.5	∘	32 14.43	4.4		
10	9 54.4	∘	32 46.25	5.2		
15	9 34.3	∘	— 35 13.26	+ 4.0		
SUN.						
1856.	m. s.					
June 20	+ 1 30.9	∘	+ 23 27 32.54	— 1.94	15 49.27	— 2.84
21	+ 1 18.0	∘	+ 23 27 33.70	— 1.50	15 49.90	— 3.52
MOON.						
	h. m.					
September 10	8 54.3	S.	— 25 0 54.07	+ 6.67		
October 8	7 37.0	S.	22 55 49.32	6.92		
10	9 23.4	S.	11 38 8.19	+ 0.49		
11	10 14.7	S.	— 4 31 42.35	— 3.25		
November 11	11 30.8	N.	+ 19 45 24.69	0.79		
December 9	10 11.4	S.	+ 22 20 38.33	— 0.53		
JUPITER.						
October 8	11 0.2	∘	— 0 28 20.34	+ 0.34	24.45	— 0.81
10	10 51.4	∘	0 34 7.19	+ 0.29	24.28	0.69
29	9 29.2	∘	1 18 56.77	— 0.23	23.94	1.16
31	9 20.8	∘	1 22 18.75	— 1.15	23.02	0.36
November 11	8 35.1	∘	1 35 25.06	+ 0.16	23.95	1.99
12	8 31.0	∘	1 36 6.91	— 0.59	22.73	0.83
13	8 26.9	∘	1 36 43.88	1.34	23.38	1.55
18	8 6.8	∘	1 38 37.69	— 1.51	23.13	1.60
20	7 58.8	∘	1 38 50.38	+ 0.38	22.60	1.19
22	7 50.8	∘	1 38 40.99	+ 0.19	22.53	1.24
December 8	6 49.1	∘	1 25 30.18	— 1.32	20.88	0.64
26	6 45.4	∘	— 0 47 6.20	— 1.20	19.74	— 0.68

Date.	Mean Time.	Limb.	Declination of Center.	C−O	Vertical Semi-diameter.	C−O
NEPTUNE.						
1856.	h. m.		° ′ ″	″	′ ″	″
October 2	10 31.2	∘	− 5 38 10.10	+ 5.00		
7	10 11.1	∘	5 40 59.28	3.98		
8	10 7.1	∘	5 41 32.69	4.49		
9	10 3.1	∘	5 42 4.53	3.93		
10	9 59.1	∘	5 42 37.02	4.52		
11	9 55.1	∘	5 43 8.30	4.30		
November 19	7 19.6	∘	5 55 41.30	1.80		
24	6 59.8	∘	− 5 55 59.87	+ 3.37		
JUNO.						
August 25	10 10.0	∘	− 7 13 4.77	− 0.29		
26	10 5.4	∘	7 21 48.77	1.29		
27	10 0.8	∘	7 30 34.67	0.49		
29	9 52.0	∘	7 48 3.80	0.25		
September 2	9 34.2	∘	8 22 45.82	0.49		
4	9 27.2	∘	8 39 53.61	0.37		
13	8 47.1	∘	− 9 53 47.20	− 1.06		
VESTA.						
December 29	10 32.3	∘	+ 19 25 31.96	− 13.48		
MELPOMENE.						
October 28	12 0.9	∘	− 6 6 47.47			
November 11	10 45.5	∘	− 7 3 51.11			
MOON.						
1857.						
February 2	6 51.5	S.	+ 23 53 40.40	− 3.40		
March 7	10 25.9	N.	+ 18 58 36.47	− 3.57		
May 5	9 52.2	N.	− 5 53 24.07	+ 4.07		
August 3	10 48.6	S.	26 14 50.97	2.77		
29	7 42.5	S.	28 38 5.39	+ 1.19		
31	9 30.3	S.	24 35 18.29	− 3.89		
September 1	10 22.3	S.	20 21 1.19	+ 4.89		
October 1	10 37.5	S.	− 5 3 27.60	+ 4.60		
November 27	8 36.7	S.	+ 9 3 44.05	− 5.95		
December 24	6 28.1	N.	+ 6 27 14.72	− 4.66		

Date.	Mean Time.		Limb.	Declination of Center.			C−O	Vertical Semi-diameter.		C−O
JUPITER.										
1857.	h.	m.		°	′	″	″	′	″	″
November 17	10	39.5	∘	− 13	12	39.88	+ 1.88			
December 14	8	43.4	∘	12	29	56.31	0.91			
15	8	39.3	∘	12	29	9.39	0.99			
19	8	22.8	∘	− 12	26	41.94	+ 1.84			
NEPTUNE.										
September 5	12	29.6	∘	− 4	29	25.93	+ 5.53			
8	12	17.5	∘	4	31	24.07	4.97			
10	12	9.4	∘	4	32	44.02	5.72			
17	11	41.2	∘	4	37	20.91	5.61			
24	11	13.0	∘	4	41	52.48	5.38			
26	11	4.9	∘	4	43	8.84	5.74			
October 1	10	44.7	∘	4	46	14.45	5.85			
8	10	16.6	∘	4	50	19.94	5.04			
12	10	0.6	∘	4	52	32.22	5.12			
17	9	40.5	∘	4	55	7.54	5.64			
21	9	24.5	∘	4	57	0.53	4.13			
30	8	48.4	∘	5	0	44.30	4.70			
31	8	44.4	∘	5	1	5.54	4.24			
November 3	8	32.5	∘	5	2	6.66	4.36			
4	8	28.5	∘	5	2	25.86	4.66			
7	8	16.6	∘	5	3	19.20	5.40			
11	8	0.7	∘	5	4	19.03	5.43			
December 3	6	33.7	∘	5	6	3.94	4.14			
7	6	18.0	∘	5	5	42.21	5.01			
10	6	6.3	∘	5	5	17.67	6.07			
12	5	58.5	∘	5	4	56.42	6.02			
19	5	31.2	∘	− 5	3	15.03	+ 4.13			
URANUS.										
January 9	7	57.2	∘	+ 17	48	30.47	− 1.87			
VESTA.										
January 9	9	40.0	∘	+ 21	48	44.60	− 0.80			
13	9	21.8	∘	19	58	0.47	+ 0.36			
15	9	12.9	∘	20	2	50.89	− 0.04			
February 9	7	32.1	∘	21	13	19.63	0.94			
11	7	24.7	∘	+ 21	19	36.76	− 0.35			

PALLAS.

Date.	Mean Time.	Limb.	Declination of Center.	C−O	Vertical Semi-diameter.	C−O
1857.	h. m.		° ′ ″	″	′ ″	″
February 9	10 14.9	.	− 21 41 49.21	+ 1.12		
23	9 7.5	.	15 57 54.56	1.13		
28	8 8.5	.	− 13 48 57.98	+ 1.71		
CERES.						
February 3	10 26.3	.	+ 26 20 20.19	+ 2.88		
March 7	10 52.8	.	+ 29 16 50.23	+ 5.03		
MOON.						
1858.						
February 23	8 55.2	N.	+ 27 11 0.15	− 0.85		
March 24	8 43.9	N.	21 55 1.01	3.71		
25	9 34.9	N.	+ 15 33 58.75	2.35		
April 27	11 55.9	S.	− 18 10 37.28	5.42		
June 21	8 36.8	N.	19 58 10.84	4.66		
July 24	11 31.4	S.	25 11 0.73	− 3.07		
August 20	9 25.6	S.	26 12 53.12	+ 3.62		
September 17	8 7.3	S.	24 31 46.86	2.46		
20	10 25.1	S.	− 10 29 23.19	3.69		
October 20	10 29.1	S.	+ 5 41 24.69	+ 2.11		
November 19	10 47.3	N.	+ 20 44 49.75	− 0.05		
MARS.						
May 21	11 22.4	.	− 19 21 43.99	− 1.21	11.41	− 1.61
22	11 17.0	.	19 19 13.52	0.18	11.67	1.87
June 5	10 4.1	.	18 47 12.38	− 0.02	10.60	1.00
7	9 54.3	.	18 44 1.30	+ 1.40	10.80	1.25
10	9 40.0	.	18 40 17.03	0.43	11.31	1.93
15	9 17.3	.	18 37 24.00	+ 0.20	9.83	0.68
21	8 51.8	.	− 18 40 1.87	− 0.73	9.89	− 1.04
JUPITER.						
January 19	6 22.4	.	+ 12 44 18.20	− 2.30	20.48	− 0.31
20	6 18.7	.	12 45 53.54	1.34	20.80	0.74
30	5 42.6	.	13 5 2.33	0.63	19.55	− 0.15
February 6	5 17.9	.	+ 13 21 31.80	− 1.50	18.46	+ 0.53
URANUS.						
January 19	7 35.5	.	+ 18 53 57.58	+ 2.02		
20	7 31.5	.	17 53 53.37	− 2.07		
February 8	6 16.6	.	+ 18 53 34.41	+ 2.19		

Date.	Mean Time.	Limb.	Declination of Center.	C—O	Vertical Semi-diameter.	C—O
JUNO.						
1858.	h. m.		° ′ ″	″	′ ″	″
March 29	8 0.8	.	+ 11 46 25.71	— 0.80		
31	7 54.0	.	+ 11 56 33.01	+ 7.94		
CERES.						
June 1	12 34.4	∘	— 21 52 12.69	— 0.08		
18	11 11.3	∘	22 31 38.07	+ 0.11		
26	10 33.0	∘	— 22 48 39.29	— 0.64		
PALLAS.						
June 10	11 18.7	∘	+ 26 10 47.19	+ 0.51		
15	10 53.2	.	+ 26 1 16.32	— 3.02		
FLORA.						
February 25	8 41.5	∘	+ 25 4 22.69			
27	8 34.0	∘	25 7 17.37			
March 10	7 55.1	∘	25 16 37.01			
12	7 47.5	∘	+ 25 17 8.94			
EUTERPE.						
March 17	9 33.0	∘	+ 12 23 56.60			

APPENDIX III.

CATALOGUE OF STARS

OBSERVED AT THE

UNITED STATES NAVAL OBSERVATORY

DURING

THE YEARS 1845 TO 1871,

AND PREPARED FOR PUBLICATION BY

PROFESSOR M. YARNALL, U. S. N.

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CATALOGUE OF STARS

OBSERVED DURING

THE YEARS 1845 TO 1871, INCLUSIVE.

United States Naval Observatory,
Washington, April 25, 1873.

Admiral: In the latter part of the year 1858, finding the results of nearly six years of my labor with the Mural Circle reduced and nearly ready for the press, it occurred to me to endeavor to complete the observations by observing the Right Ascensions, and, after they should have been observed and reduced, to have them published in the form of a Catalogue. With this view I procured from Captain Maury, then Superintendent of the Observatory, permission to observe with Professor Major on his alternate nights with the Transit Instrument; and Professor A. W. Lawrence, who had been Professor Major's assistant, was transferred to the Mural Circle as my assistant. By continuing to observe in this way, we began rapidly to accumulate observations in Right Ascension, as well as to add to those in Declination until 1859, when, Professor Major having resigned his commission in the Navy, I came into full possession of the Transit Instrument, with Professor T. J. Robinson as my assistant from May, 1860, to July, 1861. These observations were all reduced by me, as published in Appendix II of the present volume.

The stars consisted mainly of stars used in the Army surveys for observations with the zenith telescope, many stars in the lists of the Coast Survey, and many of Lacaille's stars which had mostly been observed by Lacaille only, and for observing which our Observatory was favorably situated. During all these years, Mr. James Ferguson, who so faithfully labored for so many years with the Equatorial, was making constant demands upon me for observations of comparison stars for the objects observed by him; and this will account for the great number of small stars in the Catalogue.

The Right Ascensions at this time, and subsequently, were observed by the chronographic method, and in the manner described in several of our volumes; the Declinations were observed with the telescope micrometer in precisely the same manner as described in any of our volumes after that for 1847.

When the time came for putting these observations in the form of a Catalogue, the number of stars having greatly increased, I concluded to extend its limit so as to include all the stars of which Right Ascensions and Declinations had been published in our volumes; and this, with a few exceptions, has been done.

The idea of forming a General Catalogue of our observations had occurred to Mr. Ferguson; and he, assisted by Professors Hall and Eastman, collected on sheets the observations made from 1845 to 1850, inclusive; and the observations of 1845 having been reduced by Professor Hall to 1850, the collection was transferred to me for further reduction. The stars transferred to me were those of all the instruments, and the places of the stars were united into one for each co-ordinate.

The work of the Meridian Circle was well known to be inferior to that of the Transit Instrument, the Mural Circle, and the Prime Vertical Transit Instrument, and I did not think it well to give it equal weight. I therefore revised the list, separating the observations under the heads of the various instruments, and adding some stars observed with one co-ordinate only, and for that reason not published in the Catalogue for 1845.

RIGHT ASCENSIONS.

The stars whose places are given in this Catalogue were observed for Right Ascension with the Transit Instrument and the old Meridian Circle, the number with the Transit being much the more numerous; those with the Prime Vertical Instrument being entirely rejected. Equal weight was given to all the observations with the Transit Instrument, and half weight to those with the Meridian Circle. The observations, extending over a period of twenty-seven years, were originally reduced with very different data, and the most important step in forming the Catalogue has been to reduce them to a uniform standard. The observations, as published, were reduced to 1845 and 1850, epoch of the sun's mean longitude 281°, and to 1860 and 1870, epoch of the sun's mean longitude 280°.

The epoch adopted for the present Catalogue, to which I have reduced all the observations, is the Besselian epoch 1860.0, when the sun's mean longitude was 280°; and the Right Ascensions for that epoch are found in Dr. Gould's "Standard Places of Fundamental Stars, United States Coast Survey," first edition, which was issued from the Coast Survey Office September 13, 1862, although Dr. Gould had previously furnished the Observatory with a copy in the first part of 1862.

Our star places of time stars are identical with those of Dr. Gould, as published in 1862, and they were afterward published in the American Ephemeris for 1865. This list has been further corrected by some corrections published in the volume of the American Ephemeris for 1869; but, for the sake of consistency, I have thrown out as nearly as possible these corrections from the small number of places used in 1870 and 1871. This list not being quite as large as we desired, Professor Newcomb added some other stars whose places were quite well known, for compiling which he compared the Greenwich, Paris, and Washington observations.

Having so many different epochs and different star-lists, the first step was to reduce all the separate results for Right Ascension, given in the several volumes, to what they

SUPPLEMENTARY NOTE.

The Right Ascensions of the following Catalogue may be reduced to Newcomb's standard, as defined in section 7 of his paper on the Right Ascensions of the Equatorial Fundamental Stars, (Appendix III to the Washington Observations for 1870,) by the application of the following corrections:

1. Proper motion from the mean year of observation to 1860.
2. Systematic correction depending on the Right Ascension and given by the formula,

$$\Delta\alpha = +0^s.021 + 0^s.014 \cos \alpha - 0^s.025 \sin \alpha$$

the value of which may be taken from the following table:

R. A.	Δα	R. A.	Δα
h.	s.	h.	s.
0	+ .035	12	+ .007
1	.029	13	.013
2	.021	14	.021
3	.013	15	.029
4	.006	16	.036
5	+ .001	17	.041
6	− .004	18	.046
7	.007	19	.049
8	.008	20	.050
9	.007	21	.049
10	− .004	22	.045
11	+ .001	23	.041
12	+ .007	24	+ .035

would have been had the same star-places been adopted in the reductions, and had the stars been all reduced to the epoch 1860.0 without any correction for proper motion. For this purpose I have formed, as a standard for reference, the following Table I, in which are given the names of all the clock-stars used, and their Right Ascensions for 1845.0, 1850.0, 1860.0, and 1870.0. These places were formed from the Annual and Secular Variations of the Star-Tables of the American Ephemeris and Nautical Almanac, where available; and for those stars not in the American Ephemeris the values of the Precession and Aberration Constants of those Tables were used; and the proper motions used were those published by the Reverend R. Main in Volume XIX of the Journal of the Royal Astronomical Society.

TABLE I.—*Adopted Positions of Clock-Stars.*

Name of Star.	1845.0.			1850.0.			1860.0.			1870.0.			μ	
	h.	m.	s.	h.	m.	s.	h.	m.	s.	h.	m.	s.		s.
α Andromedæ	0	0	23.16	0	0	38.58	0	1	9.43	0	1	40.29	+	0.010
γ Pegasi	0	5	15.58	0	5	30.98	0	6	1.79	0	6	32.61	+	0.001
12 Ceti			. .			. .	0	22	53.68	0	23	24.27	—	0.002
β Ceti	0	35	48.38	0	36	3.46	0	36	33.60	0	37	3.74	+	0.014
ε Piscium			. .	0	55	9.77	0	55	40.84	0	56	11.92	—	0.004
θ^1 Ceti	1	16	16.61	1	16	31.60	1	17	1.57	1	17	31.55	—	0.005
η Piscium			. .			. .	1	23	59.73	1	24	31.71		0.000
ν Piscium			. .			. .	1	34	8.89	1	34	40.02	—	0.004
ο Piscium			. .			. .	1	38	0.30	1	38	31.91	+	0.006
β Arietis	1	46	5.28	1	47	21.76	1	46	54.74	1	47	27.73	+	0.006
α Arietis	1	58	26.82	1	58	43.63	1	59	17.28	1	59	50.95	+	0.014
ξ^1 Ceti			. .	2	5	3.31	2	5	34.98	2	6	6.67	—	0.004
67 Ceti			. .			. .	2	10	0.11	2	10	30.01	+	0.007
ξ^2 Ceti			. .			. .	2	20	43.15	2	21	14.94	+	0.001
γ Ceti	2	35	16.45	2	35	31.95	2	36	2.96	2	36	33.98	—	0.009
α Ceti	2	54	10.96	2	54	26.59	2	54	57.86	2	55	29.14	—	0.002
δ Arietis			. .			. .	3	3	37.77	3	4	11.94	+	0.010
ζ Arietis			. .			. .			. .	3	7	25.96	—	0.002
ε Eridani			. .			. .	3	26	20.14	3	26	48.33	—	0.070
η Tauri	3	38	16.80	3	38	34.55	3	39	10.06	3	39	45.59	+	0.001
γ Eridani	3	50	47.99	3	51	1.96	3	51	29.92	3	51	57.88	+	0.004
o^1 Eridani			. .			. .	4	5	2.03	4	5	31.27		0.000
γ Tauri			. .			. .	4	11	49.77	4	12	23.84	+	0.009
ε Tauri			. .			. .	4	20	26.71	4	21	1.66	+	0.008
α Tauri	4	27	1.93	4	27	19.10	4	27	53.44	4	28	27.79	+	0.004
μ Eridani			. .			. .	4	38	30.24	4	39	0.25	+	0.006
ι Aurigæ			. .			. .	4	47	52.86	4	48	31.82	—	0.001
11 Orionis			. .			. .	4	56	34.33	4	57	8.57	+	0.002
ε Leporis			. .			. .	4	59	32.16	4	59	57.52		0.000
α Aurigæ	5	5	14.83	5	5	36.92	5	6	21.12	5	7	5.33	+	0.009
β Orionis	5	7	5.44	5	7	19.85	5	7	48.65	5	8	17.45		0.000
β Tauri	5	16	29.85	5	16	48.78	5	17	26.64	5	18	4.51	+	0.002
δ Orionis	5	24	5.38	5	24	20.70	5	24	51.33	5	25	21.97	+	0.001
α Leporis	5	25	53.73	5	26	6.96	5	26	33.42	5	26	59.88	+	0.002
ε Orionis	5	28	21.02	5	28	36.23	5	29	6.64	5	29	37.06	—	0.001
α Columbæ	5	34	2.31	5	34	13.16	5	34	34.88	5	34	56.61	+	0.001
α Orionis	5	46	46.90	5	47	3.14	5	47	35.60	5	48	8.07	+	0.002
ν Orionis			. .			. .	5	59	34.76	6	0	9.02	+	0.001
μ Geminorum	6	13	34.94	6	13	53.10	6	14	29.43	6	15	5.76	+	0.006
γ Geminorum			. .			. .	6	29	37.42	6	30	12.11	+	0.004

TABLE I.—*Adopted Positions of Clock-Stars*—Continued.

Name of Star.	1845.0.			1850.0.			1860.0.			1870.0.			μ	
	h.	m.	s.	h.	m.	s.	h.	m.	s.	h.	m.	s.		s.
α Canis Majoris	6	38	19.20	6	38	32.31	6	38	58.61	6	39	25.02	−	0.037
ε Canis Majoris	6	52	32.13	6	52	43.92	6	53	7.50	6	53	31.08	+	0.001
γ Canis Majoris			. .			. .	6	57	25.50	6	57	52.69	+	0.005
δ Canis Majoris			. . .			. .	7	2	42.00	7	3	6.40		0.000
δ Geminorum	7	10	51.69	7	11	9.65	7	11	45.57	7	12	21.48		0.000
α^2 Geminorum			. .	7	25	1.33	7	25	39.74	7	26	18.13	−	0.015
α Canis Minoris	7	31	11.11	7	31	26.89	7	31	58.35	7	32	29.70	−	0.047
β Geminorum	7	35	49.42	7	36	7.84	7	36	44.68	7	37	21.51	−	0.047
φ Geminorum			. .			. .	7	44	55.50	7	45	32.35		0.000
6 Cancri			. .			. .	7	54	54.89	7	55	31.83	−	0.005
ρ Argus	8	0	56.64	8	1	9.42	8	1	34.98	8	2	0.54	−	0.005
η Cancri			. .			. .	8	24	36.52	8	25	11.30	−	0.005
ε Hydræ	8	38	33.83	8	38	49.76	8	39	21.61	8	39	53.46	−	0.012
κ Cancri			. .			. .	9	0	9.67	9	0	42.24	−	0.003
83 Cancri			. .			. .	9	11	9.80	9	11	43.36	−	0.012
α Hydræ	9	19	58.21	9	20	12.96	9	20	42.46	9	21	11.96	−	0.001
ε Leonis	9	37	2.56	9	37	19.68	9	37	53.91	9	38	28.12	−	0.003
μ Leonis			. .			. .	9	44	47.63	9	45	21.89	−	0.018
π Leonis			. .			. .	9	52	48.80	9	53	20.57	−	0.003
α Leonis	10	0	6.72	10	0	22.75	10	0	54.80	10	1	26.84	−	0.017
γ Leonis			. .			. .	10	12	14.94	10	12	48.13	+	0.020
ρ Leonis			. .			. .	10	25	26.26	10	25	57.93		0.000
l Leonis			. .			. .	10	41	53.70	10	42	25.30	−	0.001
χ Leonis			. .			. .	10	57	47.66	10	58	18.64	−	0.024
δ Leonis	11	5	51.45	11	6	7.48	11	6	39.52	11	7	11.55	+	0.012
δ Crateris	11	11	35.71	11	11	50.67	11	12	20.63	11	12	50.58	−	0.008
τ Leonis			. .			. .	11	20	44.23	11	21	15.11	+	0.002
υ Leonis			. .			. .	11	29	46.89	11	30	17.61		0.000
β Leonis	11	41	8.97	11	41	24.31	11	41	54.98	11	42	25.64	−	0.034
ο Virginis			. .			. .	11	58	4.66	11	58	35.27	−	0.014
ε Corvi			. .			. .	12	2	55.77	12	3	26.58	+	0.001
η Virginis			. .			. .	12	12	44.66	12	13	15.34	−	0.004
β Corvi	12	26	15.28	12	26	30.95	12	27	2.31	12	27	33.68	−	0.001
α Canum Venaticorum	12	48	46.12	12	49	0.22	12	49	28.42	12	49	56.60	−	0.020
θ Virginis			. .			. .	13	2	42.28	13	3	13.28	−	0.002
α Virginis	13	17	2.05	13	17	17.80	13	17	49.31	13	18	20.83	−	0.002
ζ Virginis			. .			. .	13	27	33.71	13	28	4.23	−	0.019
η Bootis	13	47	18.26	13	47	32.55	13	48	1.14	13	48	29.73	−	0.003
τ Virginis			. .			. .	13	54	31.40	13	55	1.92	+	0.005
α Bootis	14	8	35.59	14	8	49.26	14	9	16.60	14	9	43.94	−	0.079

TABLE I.—*Adopted Positions of Clock-Stars*—Continued.

Name of Star.	1845.0.			1850.0.			1860.0.			1870.0.			μ
	h.	m.	s.	h.	m.	s.	h.	m.	s.	h.	m.	s.	s.
ρ Bootis			. .			. .	14	25	47.72	14	26	13.59	− 0.008
ε Bootis	14	38	13.06	14	38	26.16	14	38	52.38	14	39	18.60	− 0.003
α Libræ	14	42	18.78	14	42	35.30	14	43	8.34	14	43	41.40	− 0.008
ψ Bootis			. .			. .	14	58	26.85	14	58	52.58	− 0.010
β Libræ	15	8	40.37	15	8	56.46	15	9	28.64	15	10	0.83	− 0.007
μ Bootis			. .			. .	15	19	12.15	15	19	34.83	− 0.010
α Coronæ Borealis	15	28	7.58	15	28	20.27	15	28	45.66	15	29	11.05	+ 0.010
α Serpentis	15	36	38.20	15	36	52.95	15	37	22.44	15	37	51.94	+ 0.009
ε Serpentis			. .			. .	15	43	50.38	15	44	20.24	+ 0.009
δ Scorpii			. .			. .	15	52	3.64	15	52	38.99	− 0.001
β Scorpii	15	56	25.95	15	56	43.32	15	57	18.07	15	57	52.83	− 0.002
δ Ophiuchi	16	6	13.65	16	6	29.33	16	7	0.69	16	7	32.06	− 0.004
α Scorpii	16	19	54.74	16	20	13.07	16	20	49.73	16	21	26.41	0.000
ζ Ophiuchi			. .			. .	16	29	27.18	16	30	0.15	+ 0.001
ζ Herculis			. .			. .	16	36	0.56	16	36	23.18	− 0.034
κ Ophiuchi			. .			. .	16	51	2.56	16	51	30.90	− 0.022
α Herculis	17	7	34.90	17	7	48.56	17	8	15.89	17	8	43.22	− 0.001
θ Ophiuchi			. .			. .	17	13	24.84			. .	− 0.003
b Ophiuchi			. .			. .	17	17	49.36	17	18	25.94	0.000
α Ophiuchi	17	27	44.47	17	27	58.37	17	28	26.19	17	28	54.91	+ 0.007
μ Herculis			. .			. .	17	40	58.84	17	41	22.29	− 0.025
γ^2 Sagittarii			. .			. .	17	56	48.94	17	57	27.46	− 0.005
μ Sagittarii	18	4	29.70	18	4	47.62	18	5	23.48	18	5	59.34	− 0.002
η Serpentis			. .			. .	18	14	3.95	18	14	34.94	− 0.041
1 Aquilæ			. .			. .	18	27	35.26	18	28	7.90	− 0.002
α Lyræ	18	31	41.43	18	31	51.59	18	32	11.90	18	32	32.21	+ 0.018
β Lyræ	18	44	21.46	18	44	32.53	18	44	54.67	18	45	16.81	0.000
σ Sagittarii			. .			. .	18	46	34.98	18	47	12.22	0.000
ζ Aquilæ	18	58	17.17	18	58	30.94	18	58	58.49	18	59	26.04	− 0.003
ω Aquilæ			. .			. .	19	11	14.65	19	11	42.84	+ 0.003
δ Aquilæ	19	17	40.95	19	17	56.07	19	18	26.32	19	18	56.57	+ 0.015
κ Aquilæ			. .			. .	19	29	21.46	19	29	53.77	0.000
γ Aquilæ	19	38	53.41	19	39	7.67	19	39	36.20	19	40	4.73	+ 0.001
α Aquilæ	19	43	13.17	19	43	27.81	19	43	57.10	19	44	26.38	+ 0.036
β Aquilæ	19	47	41.94	19	47	56.68	19	48	26.15	19	48	55.62	+ 0.002
α^2 Capricorni	20	9	27.01	20	9	43.68	20	10	17.03	20	10	50.37	+ 0.003
ρ Capricorni			. .			. .	20	20	52.26	20	21	26.52	− 0.006
ε Delphini			. .			. .	20	26	31.43	20	27	0.09	− 0.001
α Cygni	20	36	8.93	20	36	19.14	20	36	39.58	20	37	0.02	0.000
μ Aquarii			. .			. .	20	45	5.97	20	45	38.38	+ 0.001

TABLE I.—*Adopted Positions of Clock-Stars*—Continued.

Name of Star.	1845.0.			1850.0.			1860.0.			1870.0.			μ	
	h.	m.	s.	h.	m.	s.	h.	m.	s.	h.	m.	s.		s.
ζ Cygni	21	6	20.49	21	6	33.23	21	6	58.73	21	7	24.23	—	0.001
ι Pegasi			. .			. .	21	15	36.81	21	16	4.55	+	0.009
β Aquarii	21	23	23.70	21	23	39.53	21	24	11.18	21	24	42.83	+	0.002
ξ Aquarii			. .			. .	21	30	17.78	21	30	49.77	+	0.006
ε Pegasi	21	36	34.38	21	36	49.12	21	37	18.60	21	37	48.08	+	0.003
μ Capricorni			. .			. .	21	45	39.60	21	46	12.38	+	0.022
α Aquarii	21	57	49.25	21	58	4.68	21	58	35.52	21	59	6.36		0.000
θ Aquarii			. .			. .	22	9	26.63	22	9	58.34	+	0.007
π Aquarii			. .			. .	22	18	7.59	22	18	38.24		0.000
η Aquarii			. .			. .	22	28	9.68	22	28	40.52	+	0.004
ζ Pegasi	22	33	43.97	22	33	58.91	22	34	28.79	22	34	58.67	+	0.003
λ Aquarii			. .			. .	22	45	18.48	22	45	49.80	—	0.002
α Piscis Australis	22	49	4.42	22	49	21.09	22	49	54.42	22	50	27.73	+	0.024
α Pegasi	22	57	2.59	22	57	17.50	22	57	47.34	22	58	17.18	+	0.004
γ Piscium			. .			. .	23	9	54.48	23	10	25.54	+	0.047
κ Piscium			. .			. .	23	19	45.34	23	20	16.09	+	0.005
θ Piscium			. .			. .	23	20	52.01	23	21	22.42	—	0.009
ι Piscium	23	31	58.80	23	32	14.22	23	32	45.06	23	33	15.90	+	0.026
δ Sculptoris			. .			. .	23	41	37.69	23	42	9.08	+	0.009
ω Piscium			. .			. .	23	52	7.43	23	52	38.21	+	0.010

The Right Ascensions of α Canis Majoris and of α Canis Minoris, for this Table, were obtained by using the annual variations and value of P, given by Professor Newcomb in Appendix I, volume for 1870, of the Washington Observations; the place of α Canis Majoris differing $0^s.013$ from the place given by Professor Newcomb.

The Right Ascensions of the stars whose places are given for 1845, are, with two or three exceptions, those given in the British Nautical Almanac for January 1, 1845, and the observations were reduced to the beginning of that year. For the years 1846, 1847, 1848, 1849, and 1850, the stars whose places were used are given in the British Almanac for 1850, and all the observations were reduced to the beginning of 1850. The stars observed in 1858, 1859, 1860, and 1861, were reduced with the places given in the British Almanac for 1860, and the observations were reduced to 1860.0. The stars observed in 1862, 1863, 1864, and 1865, were reduced with the places in Table I for 1860, and the observations were reduced to 1860.0. The stars observed in 1868, 1869, 1870, and 1871, were reduced with the list of the American Ephemeris without the corrections of the volume for 1869; and for 1870 and 1871 these corrections have been eliminated for the stars to which they belong. The observations from 1865 to 1871 were reduced to 1870.0.

In order to correct the star lists used, I have, in the following Tables, given a comparison of the observations with the standard places in Table I, for the different years, and their values will be seen on inspection; for this purpose I have used all the observations of the stars in the Tables for the different epochs and instruments.

In order properly to compare the observations with the standard, it was necessary to correct them by a small quantity $= \Delta\mu \times y$. $\Delta\mu$ is the correction necessary to reduce the proper motion used in the different years to that of the standard published in Table I. The Almanac for 1845 gives only precessions for all the stars, except a few, marked with a *, whose proper motions are large, and for which I used as a correction the proper motions of the British Association Catalogue corrected by those of Table I. For the other stars the proper motions of Table I were used.

For 1850, the proper motions to be corrected were those published in the British Almanac for 1848; and for 1860, for the stars observed from the places of the British Almanac, the corrections are those of Reverend R. Main reduced to those of Table I.

All stars in the Catalogue are published without proper motions, and for the clock-stars, the quantity taken out is μ multiplied by y; y being the mean year of the observation. To restore these stars to the proper value, it will be necessary to use the proper motion given in Table I multiplied by the mean year.

For all miscellaneous stars, I have taken out exactly what had been added to or subtracted from the reduction to mean place, and my rule in reducing, where proper motions had been used, was to use the proper motions of the two tables of the Reverend R. Main, Volume XIX of the Royal Astronomical Society; and for other stars not given by Main, the proper motion found in the British Association's Catalogue. These remarks apply also to the observations in Declination.

After the year 1861 no proper motions have been used in the reductions, except in the places of the clock stars, and these have been taken out of all the places in the Catalogue.

TABLE II.—*Standard Stars Observed with the Transit Instrument*, 1845.

Name of Star.	Obs'd R. A.	C − O Δ *a*	No. of Obs'ns.	*n* × Δ *a*	Name of Star.	Obs'd R. A.	C − O Δ *a*	No. of Obs'ns.	*n* × Δ *a*
	s.	s.		s.		s.	s.		s.
α Andromedæ .	23.18	−0.02	38	−0.76	α Bootis . . .	35.47	+0.12	21	+2.52
γ Pegasi . . .	15.60	0.02	40	0.80	ε Bootis . . .	12.99	0.07	15	1.05
β Ceti	48.43	0.05	13	0.65	α Libræ . . .	18.77	+0.01	14	+0.14
θ^1 Ceti	16.63	−0.02	39	−0.78	β Libræ . . .	40.37	0.00	15	0.00
α Arietis . . .	26.78	+0.04	28	+1.12	α Cor. Borealis .	7.62	−0.04	11	−0.44
γ Ceti	16.45	0.00	26	0.00	α Serpentis . .	38.19	+0.01	16	+0.16
α Ceti	10.92	+0.04	28	+1.12	β Scorpii . . .	26.01	−0.06	15	−0.90
η Tauri . . .	16.80	0.00	19	0.00	δ Ophiuchi . .	13.64	+0.01	16	+0.16
γ Eridani . . .	47.98	+0.01	20	+0.20	α Scorpii . . .	54.85	−0.11	17	−1.87
α Tauri . . .	1.94	−0.01	17	−0.17	α Herculis . .	34.90	0.00	15	0.00
β Orionis . . .	5.48	−0.04	7	−0.28	α Ophiuchi . .	44.47	+0.01	10	+0.10
β Tauri . . .	29.85	0.00	11	0.00	μ Sagittarii . .	29.78	−0.08	19	−1.52
δ Orionis . . .	5.38	0.00	10	0.00	α Lyræ	41.56	0.13	32	4.16
α Leporis . . .	53.90	−0.17	1	−0.17	β Lyræ	21.52	0.06	22	1.32
ε Orionis . . .	20.99	+0.03	11	+0.33	ζ Aquilæ . . .	17.19	0.02	26	0.52
α Orionis . . .	46.89	+0.01	11	+0.11	δ Aquilæ . . .	40.98	−0.03	36	−1.08
μ Geminorum. .	35.00	−0.06	7	−0.42	γ Aquilæ . . .	53.37	+0.04	33	+1.32
ε Canis Majoris .	32.11	+0.02	2	+0.04	α Aquilæ . . .	13.19	−0.02	33	−0.66
δ Geminorum. .	51.67	+0.02	3	+0.06	β Aquilæ . . .	42.00	0.06	29	1.74
α Canis Minoris .	11.18	−0.07	5	−0.35	α^2 Capricorni . .	27.07	−0.06	29	−1.74
β Geminorum. .	49.47	−0.05	2	−0.10	ζ Cygni . . .	20.48	+0.01	15	+0.15
α Leonis . . .	6.95	0.23	1	0.23	β Aquarii . . .	23.75	−0.05	25	−1.25
δ Leonis . . .	51.58	0.13	2	0.26	ε Pegasi . . .	34.40	0.02	33	0.66
β Leonis . . .	9.09	0.12	1	0.12	α Aquarii . . .	49.28	0.03	21	0.63
β Corvi . . .	15.64	−0.36	4	−1.44	ζ Pegasi . . .	44.00	0.03	38	1.14
α Canum Venat. .	46.07	+0.05	6	+0.30	α Piscis Australis	4.49	−0.07	44	−3.08
α Virginis . . .	2.11	−0.06	20	−1.20	α Pegasi . . .	2.62	0.03	31	0.93
η Bootis . . .	18.29	−0.03	14	−0.42	ι Piscium . . .	58.81	−0.01	28	−0.28

$$\text{Correction for equinox} = \frac{\Sigma n \, \Delta a}{\Sigma n} = -\frac{23^{s}.19}{1045} = -0^{s}.022$$

TABLE III.—*Standard Stars Observed with the Transit Instrument*, 1846–'50.

Name of Star.	Obs'd R. A.	C − O Δα	No. of Obs'ns.	n × Δα	Name of Star.	Obs'd R. A.	C − O Δα	No. of Obs'ns.	n × Δα
	s.	s.		s.		s.	s.		s.
α Andromedæ	38.53	+0.05	46	+2.30	α Canum Venat.	0.14	+0.08	38	+3.04
γ Pegasi	30.93	0.05	60	3.00	α Virginis	17.75	0.05	103	5.15
β Ceti	3.43	0.03	26	0.78	η Bootis	32.48	0.07	108	7.56
θ Ceti	31.54	0.06	49	2.94	α Bootis	49.19	0.07	130	9.10
α Arietis	43.61	0.02	38	0.76	ε Bootis	26.12	0.04	95	3.80
γ Ceti	31.95	0.00	40	0.00	α Libræ	35.21	+0.09	82	+7.38
α Ceti	26.57	+0.02	38	+0.76	β Libræ	56.39	0.07	76	5.32
η Tauri	34.52	+0.03	37	+1.11	α Coronæ Borealis	20.21	0.06	80	4.80
γ Eridani	2.00	−0.04	31	−1.24	α Serpentis	52.91	0.04	81	3.24
α Tauri	19.03	+0.07	52	+3.64	β Scorpii	43.26	0.06	49	2.94
β Orionis	19.83	+0.02	34	+0.68	δ Ophiuchi	29.26	+0.07	64	+4.48
β Tauri	48.76	0.02	54	1.08	α Scorpii	12.99	0.08	58	4.64
δ Orionis	20.69	0.01	51	0.51	α Herculis	48.49	0.07	53	3.71
α Leporis	6.91	0.05	9	0.45	α Ophiuchi	58.31	0.06	66	3.96
ε Orionis	36.21	0.02	47	0.94	μ Sagittarii	47.54	0.08	60	4.80
α Columbæ	13.11	+0.05	13	+0.65	α Lyræ	51.51	+0.08	68	+5.44
α Orionis	3.10	0.04	60	2.40	β Lyræ	37.48	0.05	87	4.35
μ Geminorum	53.06	0.04	17	0.68	ζ Aquilæ	30.90	0.04	86	3.44
ε Canis Majoris	43.84	0.08	28	2.24	δ Aquilæ	56.02	0.05	107	5.35
δ Geminorum	9.60	0.05	39	1.95	γ Aquilæ	7.61	0.06	119	7.14
α² Geminorum	1.27	+0.06	58	+3.48	α Aquilæ	27.75	+0.06	119	+7.14
α Canis Minoris	26.82	0.07	54	3.78	β Aquilæ	56.63	0.05	115	5.75
β Geminorum	7.75	0.09	52	4.68	α² Capricorni	43.63	0.05	73	3.65
ρ Argus	9.39	0.03	26	0.78	ζ Cygni	33.17	0.06	94	5.64
ε Hydræ	49.72	0.04	33	1.32	β Aquarii	39.50	0.03	77	2.31
α Hydræ	12.92	+0.04	50	+2.00	ε Pegasi	49.05	+0.07	82	+5.74
ε Leonis	19.65	0.03	54	1.62	α Aquarii	4.60	0.08	59	4.72
α Leonis	22.65	0.10	62	6.20	ζ Pegasi	58.89	0.02	86	1.72
δ Leonis	7.43	0.05	58	2.90	α Piscis Australis	21.00	0.09	52	4.68
δ Crateris	50.62	0.05	55	2.75	α Pegasi	17.47	0.03	64	1.92
ρ Leonis	24.23	+0.08	56	+4.48	ι Piscium	14.19	+0.03	39	+1.17
β Corvi	30.90	0.05	69	3.45					

Correction for equinox $= \frac{\Sigma n \; \Delta a}{\Sigma n} = + \frac{207^{s}.15}{3866} = + 0^{s}.054$

TABLE IV.—*Standard Stars Observed with the Meridian Circle*, 1846–'50.

Name of Star.	Obs'd R. A.	C – O $\Delta\alpha$	No. of obs'ns.	$n \times \Delta\alpha$	Name of Star.	Obs'd R. A.	C – O $\Delta\alpha$	No. of obs'ns.	$n \times \Delta\alpha$
	s.	s.		s.		s.	s.		s.
α Andromedæ	38.56	+0.02	83	+1.66	α Canum Venat.	0.21	+0.01	23	+0.23
γ Pegasi	30.96	0.02	62	1.24	α Virginis	17.78	0.02	31	0.62
β Ceti	3.39	0.07	24	1.68	η Bootis	32.53	0.02	47	0.94
θ Ceti	31.56	0.04	12	0.48	α Bootis	49.22	0.04	107	4.28
α Arietis	43.59	+0.04	49	+1.96	ε Bootis	26.14	0.02	40	0.80
γ Ceti	31.95	0.00	43	0.00	α Libræ	35.23	+0.07	30	+2.10
α Ceti	26.60	–0.01	43	–0.43	β Libræ	56.40	0.06	43	2.58
η Tauri	34.55	0.00	52	0.00	α Coronæ Bor.	20.27	0.01	40	0.40
γ Eridani	1.91	+0.05	38	+1.90	α Serpentis	52.90	0.05	50	2.50
α Tauri	19.08	0.02	63	1.26	β Scorpii	43.26	0.06	35	2.10
β Orionis	19.81	+0.04	39	+1.56	δ Ophiuchi	29.28	+0.05	49	+2.45
β Tauri	48.80	–0.02	57	–1.14	α Scorpii	12.96	0.11	56	6.16
δ Orionis	20.67	+0.03	60	+1.80	α Herculis	48.54	0.02	35	0.70
α Leporis	6.97	–0.01	15	–0.15	α Ophiuchi	58.32	0.05	53	2.65
ε Orionis	36.19	+0.04	30	+1.20	μ Sagittarii	47.49	0.13	67	8.71
α Columbæ	13.10	+0.06	32	+1.92	α Lyræ	51.56	+0.03	135	+4.05
α Orionis	3.13	+0.01	71	+0.71	β Lyræ	32.48	0.05	72	3.60
μ Geminorum	53.11	–0.01	26	–0.26	ζ Aquilæ	30.90	0.04	52	2.08
ε Canis Majoris	43.82	+0.10	43	+4.30	δ Aquilæ	56.00	0.07	86	6.02
δ Geminorum	9.67	–0.02	41	–0.82	γ Aquilæ	7.63	0.04	59	2.36
α^2 Geminorum	1.33	0.00	44	0.00	α Aquilæ	27.77	+0.04	107	+4.28
α Canis Minoris	26.83	+0.05	65	+3.25	β Aquilæ	56.66	0.02	89	1.78
β Geminorum	7.81	0.03	43	1.29	α^2 Capricorni	43.59	0.09	74	6.66
ρ Argus	9.38	0.04	32	1.28	ζ Cygni	33.22	0.01	51	0.51
ε Hydræ	49.71	0.05	41	2.05	β Aquarii	39.48	0.05	55	2.75
α Hydræ	12.94	+0.02	40	+0.80	ε Pegasi	49.08	+0.04	78	+3.12
ε Leonis	19.67	0.01	48	0.48	α Aquarii	4.61	0.07	43	3.01
α Leonis	22.69	0.06	79	4.74	ζ Pegasi	58.86	0.05	55	2.75
δ Leonis	7.42	0.06	51	3.06	α Piscis Australis	20.94	0.15	65	9.75
δ Crateris	50.64	0.03	28	0.84	α Pegasi	17.48	0.02	68	1.36
β Leonis	24.30	+0.01	50	+0.50	ι Piscium	14.16	+0.06	23	+1.38
β Corvi	30.91	0.04	36	1.44					

$$\text{Correction for equinox} = \frac{\Sigma n \,\Delta \alpha}{\Sigma n} = +\frac{131^{s}.28}{3258} = +0^{s}.040$$

TABLE V.—*Standard Stars Observed with the Transit-Instrument,* 1858–'61.

Name of Star.	Obs'd R. A.	C – O $\Delta\alpha$	No. of Obs'ns.	$n \times \Delta\alpha$	Name of Star.	Obs'd R. A.	C – O $\Delta\alpha$	No. of Obs'ns.	$n \times \Delta\alpha$
	s.	s.		s.		s.	s.		s.
α Andromedæ .	9.35	+0.08	18	+1.44	ε Hydræ . . .	21.59	+0.02	31	+0.62
γ Pegasi . . .	1.74	0.05	25	1.25	83 Cancri . . .	9.71	0.09	28	2.52
12 Ceti	53.65	0.03	40	1.20	α Hydræ . . .	42.45	0.01	21	0.21
β Ceti	33.60	0.00	23	0.00	ε Leonis . . .	53.85	0.06	24	1.44
ε Piscium . . .	40.77	0.07	19	1.33	π Leonis . . .	48.75	0.05	21	1.05
δ Ceti	1.56	+0.01	59	+0.59	α Leonis . . .	54.75	+0.05	29	+1.45
η Piscium . . .	59.74	—0.01	24	—0.24	γ Leonis . . .	14.92	0.02	21	0.42
ν Piscium . . .	8.85	+0.04	34	+1.36	ρ Leonis . . .	26.22	0.04	22	0.88
β Arietis . . .	54.67	0.07	32	2.24	l Leonis . . .	53.72	0.02	23	0.46
α Arietis . . .	17.24	0.04	34	1.36	χ Leonis . . .	47.60	0.06	17	1.02
67 Ceti	0.10	+0.01	29	+0.29	δ Leonis . . .	39.44	+0.08	22	+1.76
ξ^2 Ceti	43.10	0.05	25	1.25	δ Crateris . . .	20.61	0.02	29	0.58
γ Ceti	2.92	0.04	36	1.44	υ Leonis . . .	46.86	0.03	21	0.63
α Ceti	57.80	0.06	22	1.32	β Leonis . . .	54.91	0.07	25	1.75
δ Arietis . . .	37.69	0.08	32	2.56	ε Corvi. . . .	55.73	0.04	15	0.60
η Tauri . . .	10.01	+0.05	34	+1.70	η Virginis . . .	44.62	+0.04	30	+1.20
γ Eridani . . .	29.94	—0.02	27	—0.54	β Corvi. . . .	2.26	0.05	10	0.50
o^1 Eridani . . .	2.00	+0.03	32	+0.96	α Canum Venat. .	28.29	0.13	2	0.26
ε Tauri. . . .	26.68	0.03	33	0.99	θ Virginis . . .	42.19	0.09	31	2.79
α Tauri. . . .	53.41	0.03	24	0.72	α Virginis . . .	49.26	0.05	45	2.25
ι Aurigæ . . .	52.76	+0.10	18	+1.80	ζ Virginis . . .	33.68	+0.03	26	+0.78
ε Leporis . . .	32.15	+0.01	25	+0.25	η Bootis . . .	1.06	0.08	23	1.84
β Orionis . . .	48.71	—0.06	20	—1.20	τ Virginis . . .	31.38	0.02	25	0.50
β Tauri. . . .	26.58	+0.06	26	+1.56	α Bootis . . .	16.56	0.04	18	0.72
δ Orionis . . .	51.33	0.00	27	0.00	ρ Bootis . . .	47.67	0.05	7	0.35
α Leporis . . .	33.45	—0.03	1	—0.03	ε Bootis . . .	52.33	+0.05	15	+0.75
ε Orionis . . .	6.63	+0.01	23	+0.23	α Libræ . . .	8.29	0.05	38	1.90
α Columbæ . .	34.88	0.00	19	0.00	ψ Bootis . . .	26.72	0.13	6	0.78
α Orionis . . .	35.58	0.02	10	0.20	β Libræ . . .	28.59	0.05	37	1.85
ι Orionis . . .	34.72	0.04	21	0.84	α Coronæ Borealis	45.57	0.09	30	2.70
μ Geminorum. .	29.40	+0.03	27	+0.81	α Serpentis . .	22.39	+0.05	37	+1.85
γ Geminorum. .	37.40	+0.02	13	+0.26	β Scorpii . . .	18.04	0.03	43	1.29
ε Canis Majoris .	7.50	0.00	38	0.00	δ Ophiuchi . .	0.64	0.05	41	2.05
γ Canis Majoris .	25.51	—0.01	36	—0.36	α Scorpii . . .	49.69	0.04	48	1.92
δ Geminorum. .	45.54	+0.03	32	+0.96	ζ Herculis. . .	0.46	0.10	15	1.50
α^2 Geminorum. .	39.70	+0.04	17	+0.68	κ Ophiuchi . .	2.52	+0.04	29	+1.16
β Geminorum. .	44.64	0.04	22	0.88	α Herculis. . .	15.82	0.07	33	2.31
6 Cancri . . .	54.82	0.07	19	1.33	θ Ophiuchi . .	24.80	0.04	40	1.60
ρ Argus . . .	34.97	0.01	23	0.23	α Ophiuchi . .	26.14	0.05	36	1.80
η Cancri . . .	36.45	0.07	29	2.03	μ Herculis. . .	58.77	0.07	16	1.12

TABLE V.—*Standard Stars Observed, &c.*—Continued.

Name of Star.	Obs'd R. A.	C − O $\Delta\alpha$	No. of Obs'ns.	$n \times \Delta\alpha$	Name of Star.	Obs'd R. A.	C − O $\Delta\alpha$	No. of Obs'ns.	$n \times \Delta\alpha$
	s.	s.		s.		s.	s.		s.
μ Sagittarii . .	23.39	+0.09	54	+4.86	β Aquarii . . .	11.15	+0.03	41	+1.23
α Lyræ	11.78	0.12	23	2.76	ε Pegasi . . .	18.54	0.06	35	2.10
β Lyræ	54.58	0.09	39	3.51	α Aquarii . . .	35.46	0.06	44	2.64
ζ Aquilæ . . .	58.46	0.03	34	1.02	θ Aquarii . . .	26.59	0.04	63	2.52
ω Aquilæ . . .	14.62	0.03	34	1.02	η Aquarii . . .	9.65	0.03	48	1.44
δ Aquilæ . . .	26.28	+0.04	48	+1.92	ζ Pegasi . . .	28.76	+0.03	37	+1.11
γ Aquilæ . . .	36.14	0.06	26	1.56	α Piscis Australis	54.38	0.04	46	1.84
α Aquilæ . . .	57.05	0.05	41	2.05	α Pegasi . . .	47.31	0.03	20	0.60
β Aquilæ . . .	26.08	0.07	44	3.08	γ Piscium . . .	54.46	0.02	39	0.78
α^2 Capricorni . .	16.98	0.05	38	1.90	κ Piscium . . .	45.31	0.03	41	1.23
ρ Capricorni . .	52.22	+0.04	28	+1.12	ι Piscium . . .	45.01	+0.05	28	+1.40
α Cygni . . .	39.53	0.05	12	0.60	δ Sculptoris . .	37.66	0.03	18	0.54
ζ Cygni . . .	58.66	0.07	36	2.52	ω Piscium . . .	7.39	0.04	34	1.36

$$\text{Correction for equinox} = \frac{\Sigma n \,\Delta\alpha}{\Sigma n} = + \frac{129^{s}.56}{3029} = + 0^{s}.043$$

DECLINATIONS.

The Declinations published in this Catalogue were observed with the Mural Circle, the Meridian Circle, and the Prime Vertical Transit-Instrument. Equal weight is given to the observations of the Mural Circle and Prime Vertical Transit-Instrument, and half weight to the observations of the Meridian Circle.

It is not considered necessary to describe here the method of observing, as that has been done at length in the volume for 1846 and those of subsequent years.

The observations having all been reduced with the Latitude $+ 38^\circ 53' 39''.25$, they have all been changed in value to correspond with the value of the Latitude $+ 38^\circ 53' 38''.78$ given by Professor Newcomb in the Appendix to the volume for 1864. In fact, I applied the correction $- 0''.5$ to the Declination of stars above the pole, and $+ 0''.5$ to the places of stars observed below the pole, multiplying the places above and below the pole, respectively, by the number of observations of each kind and dividing the result by the sum of these numbers. This gives the Declination which would have been obtained had a Latitude $+ 38^\circ 53' 38''.75$ been used; and this remark applies to all the observations, with the exception of a few observed in 1872 with the Latitude $+ 38^\circ 53' 38''.8$. This difference is not material, as we reduce the observations to tenths of a second only.

The observations with the Prime Vertical Transit Instrument were corrected by the formula

$$\text{Correction} = \Delta\delta = \frac{\sin\ 2\delta}{\sin\ 2\varphi}\Delta\varphi$$

For $\varphi = 38^\circ 53' 38''.33$, and $\Delta\varphi = 0''.45$, the formula becomes,

$$\Delta\delta = [9.66315]\ \sin\ 2\delta$$

For the sake of consistency, it became necessary to leave out from the observations some corrections of Professor Newcomb which were made from a comparison of observations direct and by reflection. This was readily done, as the list of mean places had not been corrected, the correction having been made in the Catalogue of the year.

A large majority of the declination observations were made with the Mural Circle, and it is a matter of regret that I was not able to re-observe many stars of which only one observation was made with the Prime Vertical Transit-Instrument.

The stars in the Pleiades were mostly observed by Mr. Ferguson with the Equatorial; and those in Præsepe are the same that were observed with the same instrument by Professor Hall, and which were published in Appendix IV of the volume for 1867 of the Washington observations. Many of these stars, both in the Pleiades and in Præsepe, have been observed with the Transit Instrument and Mural Circle, and the observations have been published separate from those of the Equatorial, but in juxtaposition, in some cases substituting those made with the Transit-Instrument or Mural Circle for those made with the Equatorial. The notation of the stars of the Pleiades is that of Mr. Ferguson.

REDUCTION OF THE OBSERVATIONS.

On page [35], volume for 1847, Washington Observations, is carefully described by Professor Coffin the manner of forming the tables of reduction to their mean place for 1850.0 for the observations from 1846 to 1854, inclusive. "The formulas are those of Bessel; the co-efficients are the same as have been adopted in the American Ephemeris and Nautical Almanac. These include Struve's constant of aberration,

$$a = 20''.4451$$

Struve's and Peters's constants for precession,

$$m = 3^{s}.0717,7 + 0^{s}.0000,19\ (y - 1850)$$

$$n = 20''.0564 - 0''.0000,86\ (y - 1850)$$

and Peters's co-efficients for the terms of nutation, of which the principal is

$$N = 9''.2236 + 0''.0000,09\ (y - 1850)\text{''}$$

The remaining formulas are not given here, as they are now familiar to all who use the Nautical Almanac. After 1854 the tables were prepared, as published in our subsequent volumes, from the constants A, B, C, and D of the American Ephemeris; and until 1865 it was necessary to apply a small correction to the Epoch of the star list of the Ephemeris to reduce it to the Epoch, sun's mean longtitude 280°. After 1864 the star places and constants were given for the fictitious year, and this correction was not necessary.

The observations made in 1845 to 1850, inclusive, were reduced to the Epoch sun's mean longitude 281°; and as our subsequent observations were reduced to the Epoch sun's mean longitude 280°, it was necessary to correct those observations for about a day's precession, which has been done.

As our observations were reduced to the beginning of years which might be five years, or less, distant from the time of the observation, it became necessary to apply to the observations a correction for secular variation. If

$$\Delta\alpha = \text{the annual variation of the star's Right Ascension;}$$

$$\Delta\delta = \text{the annual variation of the star's Declination;}$$

$$k = \frac{1}{15}\cos\alpha\tan\delta\,\Delta\alpha + \frac{1}{225}\sin\alpha\sec^2\delta\,\Delta\delta;$$

$$k' = -\sin\alpha\,\Delta\alpha;$$

$$P = \frac{15}{2}\,n\sin 1'' = .0007292\,t^2,$$

the correction is $= Pk$ for Right Ascension, and Pk' for Declination.

All the observations in Declination were corrected for the correction,

$$\Delta \text{☾}\,\delta = +\,0.0813\sin 2\text{☾}\cos\alpha - 0''.0886\cos 2\text{☾}\sin\alpha$$

for which a convenient table is given in the volume for 1847.

THE CATALOGUE.

The first column contains the ordinal numbers of the stars in the Catalogue.

The second column contains the star's name or number in the Catalogue from which it was taken. The number of the Catalogues is now so great that their names are not further stated than as given in this column.

The third column contains the magnitude of the star, given from our estimates of magnitude, except for a few stars marked with a *; and the magnitude thus distinguished is generally that of the British Association Catalogue, the Radcliffe Catalogue, or that of the Catalogue from which the star was taken.

The fourth column contains the star's mean Right Ascension, such as it would be if reduced without proper motion and referred to the Epoch 1860.0, when the sun's mean longitude was 280°.

The fifth column contains the mean year of observation, and is the mean of the several times of observation made upon the star in Right Ascension in the different years and parts of a year, and will be the point of time from which all subsequent corrections for proper motion will be dated.

The sixth column contains the number of observations in Right Ascension; and for the Pleiades and Præsepe for the observations of the Equatorial, the number of comparisons in Right Ascension.

The seventh column contains the annual precession in Right Ascension; for the year 1860, it was computed from the formula,

$$\text{Precession in Right Ascension} = 3^{s}.072 + [0.12614] \sin \alpha \tan \delta$$

The eighth column contains the mean Declinations of the stars, with their proper signs as they would be if reduced without proper motion and referred to the Epoch 1860.0.

The ninth column contains the mean year of the observation in Declination, and is a mean of the several times of observation made upon the star in Declination in the different years and parts of a year in which the observations were made.

The tenth column contains the number of observations in Declination; for the Pleiades and Præsepe for the observations of the Equatorial, the number of comparisons in Declination.

The eleventh column contains the annual precession in Declination for the year 1860, and was computed from the formula,

$$\text{Precession in Declination} = [1.30223] \cos \alpha.$$

In transferring the places, both in Right Ascension and Declination, from one epoch to another, I have corrected the precession for secular variation; and for the stars, where the change in the values of n was important or the secular variation not known, I have computed the precessions for the middle time between the observations with the value n and the Right Ascension and Declination of the middle instant.

I was assisted in the computation of the Precessions by Professor Lockwood and Mr. A. N. Skinner, assistant observer. I am indebted to Professors Coffin and Newcomb for valuable suggestions in the reduction of the observations, and to Professor Harkness for his arrangement of the form of the Catalogue, and to all the officers for their sympathy in my long and arduous labors.

The names of the observers, for the stars taken from the published volumes, is not given, as they are on record in those volumes.

Very respectfully, your obedient servant,

M. YARNALL,
Professor of Mathematics, United States Navy.

Rear-Admiral B. F. Sands, U. S. N.,
Superintendent United States Naval Observatory, Washington.

CATALOGUE OF STARS

OBSERVED AT THE

UNITED STATES NAVAL OBSERVATORY

DURING

THE YEARS 1845 TO 1871.

Number.	Name of Star.	Magnitude.	Mean Right Ascension, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.	Mean Declination, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.
			h. m. s.			″	° ′ ″			″
1	Lacaille 9726	7.5	0 0 0.56	62.8	2	+ 3.072	− 38 42 31.7	61.9	2	+ 20.06
2	Anonymous	8.8	0 2.43	64.8	1	3.072	− 23 53 35.6	67.4	2	20.06
3	Weisse XXIII, 1227	9.0*	0 14.	. .	.	3.072	− 11 48 45.0	57.8	2	20.06
4	4 Ceti	5.5	0 33.75	69.3	2	3.072	− 3 19 41.9	62.8	2	20.06
5	Weisse XXIII, 1240	8.5	0 35.42	69.8	1	3.072	− 2 7 38.2	68.4	2	20.06
6	Lacaille 9732	6.5	0 0 37.42	63.4	4	+ 3.070	− 23 17 10.1	61.9	2	+ 20.06
7	Lalande 47307	7.6	0 38.05	69.7	2	3.075	+ 37 56 36.1	48.4	2	20.06
8	Weisse XXIII, 1242	9.0	0 38.79	62.2	3	3.071	− 11 54 30.1	55.5	3	20.06
9	O. Arg. N. 26423	7.9	0 48.68	65.7	3	3.078	+ 53 1 8.1	65.7	3	20.06
10	Lalande 47310	9.0*	0 49.84	69.7	1	3.076	+ 36 29 35.0	48.9	1	20.06
11	Lacaille 9735	6.1	0 0 56.11	62.7	2	+ 3.068	− 34 18 33.3	68.4	2	+ 20.06
12	5 Ceti	5.5	1 1.98	68.8	2	3.072	− 3 13 38.0	65.4	2	20.06
13	α Andromedæ	2.0*	1 9.38	54.4	222	3.076	+ 28 19 3.9	51.9	114	20.06
14	O. Arg. S. 8.	8.5	1 10.31	67.3	2	3.070	− 19 59 25.8	70.2	3	20.06
15	Weisse XXIII, 1250	8.2	1 11.38	64.0	6	3.072	+ 2 39 45.8	66.0	5	20.06
16	Weisse XXIII, 1251	8.0	0 1 14.22	64.4	2	+ 3.073	+ 5 50 14.7	54.9	2	+ 20.07
17	O. Arg. S. 9.	9.2	1 14.43	67.4	2	3.069	− 20 0 11.5	69.8	4	20.06
18	O. Arg. N. 14	8.1	1 26.78	65.7	3	3.083	+ 53 2 3.2	65.7	2	20.06
19	Weisse XXIII, 1258	8.5	1 37.74	60.4	2	3.073	+ 4 19 3.6	55.8	2	20.06
20	Weisse XXIII, 1260	8.5	1 38.32	60.4	2	3.073	+ 4 21 40.7	55.8	2	20.06
21	Lacaille 9737	7.0	0 1 38.68	65.4	2	+ 3.065	− 35 34 27.7	65.9	2	+ 20.06
22	Weisse XXIII, 1267	7.5	1 41.81	62.1	4	3.072	− 0 5 12.5	61.5	7	20.06
23	β Cassiopeæ	2.5*	1 42.86	45.8	6	3.088	+ 58 22 38.8	63.9	3	20.06
24	Weisse XXII, 1269	8.0	1 45.03	61.0	6	3.074	+ 12 1 34.3	59.8	5	20.06
25	Lacaille 9738	7.0	1 45.40	62.6	3	3.068	− 22 57 30.3	66.2	2	20.06
26	Weisse O, 4.	8.0	0 1 57.88	60.7	7	+ 3.074	+ 12 1 54.8	60.0	5	+ 20.06
27	B. A. C. 10	5.8	2 12.57	62.4	2	3.065	− 28 46 2.9	59.8	3	20.06
28	Weisse O, 10	9.1	2 18.62	65.6	5	3.072	+ 1 31 34.1	67.9	2	20.06
29	Weisse O, 13	8.5	2 21.10	58.8	2	3.069	− 10 58 1.5	57.9	3	20.06
30	Weisse O, 24	8.0	2 41.22	61.7	2	3.075	+ 11 55 56.2	69.9	3	20.06

Number.	Name of Star.	Magnitude.	Mean Right Ascension, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860	Mean Declination, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.
			h. m. s.			"	° ′ "			"
31	B. A. C. 12	7.0	0 2 44.93	64.0	2	+ 3.071	− 3 20 24.0	62.8	8	+ 20.06
32	Weisse O, 24 . . .	8.5	2 46.51	64.9	2	3.073	+ 3 23 13.2	69.4	4	20.05
33	Lacaille 9747 . . .	7.2	2 50.93	66.4	2	3.064	− 26 39 14.1	67.9	1	20.05
34	Weisse O, 28 . . .	8.0*	2 53.21	63.8	2	3.069	− 9 45 14.7	57.9	2	20.05
35	B. A. C. 17	6.5*	3 8.84	67.3	2	3.070	− 6 1 36.7	67.9	2	20.05
36	B. A. C. 18	7.0*	0 3 14.79	59.4	2	+ 3.104	+ 58 53 40.0	53.8	2	+ 20.05
37	Weisse O, 41 . . .	8.7	3 19.36	62.9	2	3.069	− 10 4 11.4	61.9	4	20.05
38	O. Arg. S. 36 . . .	8.0	3 27.26	66.4	2	3.064	− 22 54 56.5	68.8	2	20.05
39	Weisse O, 44 . . .	8.3	3 28.82	66.4	2	3.073	+ 1 31 18.4	67.9	2	20.05
40	Lalande 17	6.8	3 31.56	68.8	2	3.087	+ 36 41 39.1	48.9	1	20.05
41	Lalande 26	8.0	0 3 39.10	69.2	3	+ 3.089	+ 38 59 8.7	48.8	1	+ 20.05
42	Lacaille 9753 . . .	5.8	3 39.72	68.9	2	3.057	− 35 38 25.4	61.9	2	20.05
43	Anonymous . . .	7.8	3 39.80	68.8	1	3.074	+ 4 18 38.9	55.8	2	20.05
44	Weisse O, 51 . . .	7.8	3 54.86	64.4	4	3.073	+ 3 21 16.9	67.8	2	20.05
45	Weisse O, 59 . . .	8.3	4 7.12	61.9	2	3.076	+ 3 18 34.4	66.9	2	20.05
46	Anonymous . . .	8.5	0 4 13.02	64.9	2	+ 3.056	− 33 34 47.2	68.8	2	+ 20.05
47	B. A. C. 23	5.5	4 27.52	65.3	2	3.058	− 28 34 45.0	65.9	2	20.05
48	Anonymous . . .	8.8	4 20.85	68.9	2	3.075	+ 6 5 13.1	62.9	2	20.05
49	Santini 8.	7.0	4 36.57	61.5	6	3.076	+ 8 21 42.2	61.1	7	20.05
50	θ Sculptoris	5.0	4 36.65	66.3	2	3.052	− 35 55 2.0	65.7	2	20.05
51	Weisse O, 71 . . .	9.0	0 4 49.06	65.4	2	+ 3.071	− 1 0 30.5	67.9	2	+ 20.05
52	Lalande 65	7.2	4 50.43	68.8	2	3.094	+ 38 15 40.1	48.8	1	20.05
53	B. A. C. 25	5.5	4 53.17	63.9	2	3.046	− 42 57 1.1	53.8	2	20.05
54	O. Arg. S. 47 . . .	5.2	5 1.51	68.9	2	3.062	− 18 42 58.5	66.9	2	20.05
55	O. Arg. S. 48 . . .	8.2	5 5.62	69.7	2	3.062	− 18 56 37.1	66.4	2	20.05
56	Lalande 81	6.0	0 5 22.35	69.8	2	+ 3.097	+ 38 30 31.5	48.7	1	+ 20.05
57	Lacaille 9766 . . .	7.0	5 29.74	65.8	2	3.056	− 27 38 10.7	68.8	2	20.05
58	O. Arg. S. 52 . . .	9.0*	5 31.58	67.8	2	3.060	− 19 58 27.9	69.4	2	20.05
59	Lalande 89	7.0	5 34.23	69.8	2	3.096	+ 36 54 54.0	46.8	1	20.05
60	Weisse O, 83 . . .	9.0	5 36.56	60.4	2	3.075	+ 5 23 52.1	54.9	2	20.05
61	Lacaille 1	7.2	0 5 36.66	68.8	2	+ 3.040	− 43 56 36.8	62.0	2	+ 20.05
62	Lalande 100. . . .	8.0*	5 48.48	69.7	1	3.097	+ 36 38 25.9	48.9	1	20.05
63	Weisse O, 88 . . .	8.8	5 49.52	64.6	3	3.073	+ 2 10 14.2	69.4	2	20.05
64	Weisse O, 89 . . .	8.8	5 50.60	69.1	3	3.076	+ 6 7 0.6	55.9	3	20.05
65	Weisse O, 90 . . .	8.7	5 54.64	64.7	4	3.074	+ 2 36 50.2	59.0	1	20.05
66	γ Pegasi	3.6	0 6 1.79	52.4	235	+ 3.081	+ 14 24 18.2	59.1	73	+ 20.05
67	Anonymous . . .	9.0	6 4.52	67.8	3	3.060	− 17 56 45.0	68.9	2	20.05
68	Anonymous . . .	7.6	6 5.84	66.8	4	3.060	− 17 57 48.6	68.9	2	20.05
69	Lacaille 4	7.8	6 6.20	68.9	2	3.038	− 43 50 41.3	62.0	2	20.05
70	Lacaille 5	6.9	6 9.07	69.2	3	3.054	− 27 6 14.6	65.4	2	20.05

Number.	Name of Star.	Magnitude.	Mean Right Ascension, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.	Mean Declination, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.
			h. m. s.			″	° ′ ″			″
71	B. A. C. 27	6.0	0 6 9.79	66.3	4	+ 3.043	− 38 36 5.7	63.9	4	+ 20.05
72	23 Andromedæ . . .	5.5	6 14.98	69.8	2	3.103	+ 40 15 44.5	53.8	2	20.05
73	Harvard Z., 97, 22 . .	9.2	6 21.67	67.7	2	3.072	+ 0 4 10.0	68.8	2	20.05
74	Lalande 130. . . .	8.5	6 29.12	65.6	2	3.076	+ 5 48 6.2	65.7	2	20.05
75	Weisse O, 97 . . .	8.5	6 32.03	61.0	1	3.076	+ 6 9 39.5	69.4	2	20.05
76	O. Arg. S. 65 . . .	7.5	0 6 37.55	64.9	3	+ 3.055	− 23 59 28.1	67.9	2	+ 20.05
77	Lacaille 9	6.6	6 38.26	69.6	3	3.052	− 27 3 50.3	65.4	2	20.05
78	Anonymous . . .	9.0	6 50.99	64.5	3	3.072	+ 0 5 29.1	68.9	2	20.05
79	Weisse O, 102 . . .	8.5	6 51.96	62.0	2	3.063	− 12 4 58.6	60.5	3	20.05
80	Lamont 21	8.1	6 53.70	65.9	2	3.071	− 0 48 42.9	68.4	2	20.05
81	Weisse O, 104 . . .	9.0*	0 6 54.54	59.9	3	+ 3.076	+ 6 6 0.9	55.9	4	+ 20.05
82	Weisse O, 110 . . .	8.8	7 18.44	61.9	3	3.074	+ 2 41 32.8	69.5	3	20.05
83	Weisse O, 112 . .	9.0*	7 30.97	59.8	2	3.074	+ 2 35 8.2	57.9	3	20.05
84	Weisse O, 115 . . .	8.2	7 38.22	65.3	2	3.074	+ 2 30 11.1	68.4	2	20.05
85	35 Piscium, (1st *). . .	6.0*	7 46.33	61.2	7	3.078	+ 8 2 35.7	59.2	7	20.04
86	35 Piscium, (2d *) . . .	7.0	0 7 46.72	61.8	3	+ 3.078	+ 8 2 26.4	59.5	6	+ 20.04
87	Lalande 181. . . .	7.5	7 46.93	68.9	2	3.107	+ 37 17 40.0	48.9	1	20.04
88	Lacaille 17	7.5	7 48.67	63.3	2	3.042	− 32 55 49.8	65.3	2	20.04
89	B. A. C. 37	5.8	7 53.65	68.8	2	3.039	− 35 40 58.9	61.9	2	20.04
90	Weisse O, 124 . . .	6.9	8 7.41	68.9	2	3.066	− 6 54 53.7	57.9	3	20.04
91	Anonymous . . .	8.2	0 8 17.62	68.9	2	+ 3.040	− 32 49 27.7	65.3	2	+ 20.04
92	B. A. C. 39	6.0*	8 20.86	59.4	2	3.270	+ 76 10 21.4	53.9	2	20.04
93	Lalande 201. . . .	7.8	8 26.41	68.8	2	3.111	+ 38 14 33.3	48.9	1	20.04
94	Santini 10	7.2	8 27.03	59.4	2	3.076	+ 5 3 55.3	55.9	2	20.04
95	B. A. C. 41	6.5	8 27.72	68.8	2	3.029	− 41 13 49.7	61.8	2	20.04
96	Lalande 202 . . .	8.0	0 8 40.08	69.8	2	+ 3.112	+ 37 58 51.2	48.9	1	+ 20.04
97	Lacaille 21	7.9	8 40.27	68.8	2	3.035	− 35 55 43.9	65.3	2	20.04
98	B. A. C. 42	7.0	8 46.26	64.2	7	3.075	+ 3 28 26.2	67.4	2	20.04
99	Weisse O, 138 . . .	7.6	8 53.44	67.3	2	3.079	+ 7 20 19.2	67.8	2	20.04
100	B. A. C. 43	5.6	9 3.51	63.5	5	3.039	− 32 13 28.1	67.4	2	20.04
101	O. Arg. S. 90 . . .	8.0	0 9 10.93	69.7	2	+ 3.057	− 15 15 1.9	68.3	2	+ 20.04
102	36 Piscium	6.0	9 22.62	67.3	2	3.079	+ 7 27 46.9	67.8	2	20.04
103	Lalande 221 . . .	7.5	9 25.26	70.0	6	3.112	+ 35 51 10.0	48.9	2	20.04
104	Lalande 220 . . .	7.5*	9 25.38	68.8	2	3.111	+ 35 42 40.0	48.9	2	20.04
105	Lacaille 26	7.0*	9 28.66	64.2	7	3.035	− 33 32 19.3	63.9	4	20.04
106	B. A. C. 47	7.5*	0 9 28.87	69.8	2	+ 3.073	+ 1 4 18.1	62.8	1	+ 20.04
107	Anonymous . . .	8.9	9 31.36	69.4	2	3.115	+ 37 26 35.0	48.9	1	20.04
108	Lalande 231 . . .	7.5	9 36.47	69.7	1	3.117	+ 39 1 19.7	48.7	1	20.04
109	B. A. C. 49	6.9	9 39.03	62.8	10	3.035	− 33 27 58.3	63.9	5	20.04
110	Anonymous . . .	. .	9 39.33	69.7	2	3.072	− 0 0 21.4	64.9	2	20.04

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			h. m. s.			″	° ′ ″			″
111	θ Andromedæ . . .	5.5	0 9 47.07	69.3	2	+ 3.116	+ 37 54 15.0	46.8	14	+ 20.04
112	Weisse (2) 256 . . .	8.6	9 48.38	70.2	6	3.113	+ 35 46 46.5	48.9	1	20.04
113	Lalande 251 . . .	7.8	10 14.20	70.3	7	3.115	+ 35 46 24.1	48.9	1	20.04
114	Weisse O, 164 . . .	7.9	10 18.40	66.4	2	3.072	− 0 27 37.7	67.4	2	20.04
115	Groombridge 34 . .	8.1	10 27.14	70.6	4	3.129	+ 43 13 49.0	69.5	5	20.04
116	B. A. C. 57	6.6	0 10 36.33	65.1	3	+ 3.073	+ 0 54.36.8	62.8	15	+ 20.03
117	Weisse O, 172 . . .	8.3	10 39.21	64.9	3	3.064	− 6 55 52.8	57.9	3	20.03
118	Anonymous . . .	9.0	10 39.40	65.4	2	3.064	− 6 57 55.6	69.8	2	20.03
119	Anonymous . . .	9.2	10 50.34	68.9	2	3.072	+ 0 9 40.4	64.8	3	20.03
120	σ Andromedæ . . .	4.8	11 1.28	68.8	2	3.119	+ 36 0 32.6	47.8	1	20.03
121	B. A. C. 59	5.7	0 11 16.92	64.4	5	+ 3.022	− 37 17 16.2	65.8	2	+ 20.03
122	Lacaille 37	7.6	11 37.92	62.8	4	3.032	− 30 44 2.7	61.9	2	20.03
123	Weisse O, 189 . . .	8.0	11 39.94	58.8	2	3.058	− 11 43 34.2	57.9	2	20.03
124	Weisse O, 192 . . .	8.8	11 55.52	60.4	2	3.080	+ 6 30 15.5	55.4	2	20.03
125	Weisse O, 196 . . .	8.8	12 8.32	62.3	5	3.075	+ 2 17 48.8	65.8	2	20.03
126	ι Ceti	3.4*	0 12 17.71	49.7	10	+ 3.060	− 9 36 0.8	60.1	6	+ 20.03
127	O. Arg. S. 117 . . .	7.7	12 22.52	64.5	3	3.048	− 18 27 26.9	66.9	2	20.03
128	Lalande 330. . . .	6.8	12 27.12	68.8	2	3.125	+ 36 11 10.2	48.9	1	20.03
129	Weisse O, 199 . . .	7.5	12 27.72	59.4	2	3.062	− 7 59 48.1	57.9	2	20.03
130	Weisse O, 202 . . .	9.0	12 39.51	60.0	5	3.088	+ 12 36 56.4	56.4	2	20.03
131	Lalande 335 . . .	6.2	0 12 41.27	68.8	2	+ 3.129	+ 37 27 42.2	48.9	1	+ 20.03
132	Weisse O, 210 . . .	7.2	12 53.40	58.8	2	3.079	+ 5 30 52.4	56.4	2	20.02
133	Lalande 344 . . .	7.4	12 53.92	63.8	3	3.036	− 25 53 43.0	67.8	2	20.02
134	O. Arg. S. 122 . . .	7.0	12 56.70	64.5	3	3.047	− 18 28 39.7	65.4	2	20.02
135	Weisse O, 212 . . .	7.6	12 58.57	62.1	5	3.075	+ 2 15 24.2	66.9	3	20.02
136	Radcliffe 65	8.0	0 13 4.62	69.7	2	+ 3.146	+ 44 9 41.9	67.9	2	+ 20.02
137	Lacaille 46	7.0	13 9.58	63.6	3	3.015	− 36 40 46.7	66.4	2	20.02
138	Anonymous . . .	7.9	13 14.31	65.2	3	3.021	− 33 32 40.0	68.3	2	20.02
139	d Piscium	5.0	13 23.75	61.8	28	3.083	+ 7 24 44.7	59.1	8	20.02
140	Lacaille 48	6.9	13 44.60	62.9	2	3.036	− 24 24 26.3	64.9	2	20.02
141	ρ Andromedæ . . .	4.8	0 13 45.28	69.2	3	+ 3.133	+ 37 11 34.2	47.8	4	+ 20.02
142	Radcliffe 73. . . .	7.0	13 46.38	69.7	2	3.150	+ 44 9 37.5	67.9	2	20.02
143	Lalande 380 . . .	8.0	13 48.24	68.8	2	3.134	+ 37 37 41.7	48.9	1	20.02
144	Weisse O, 229 . . .	7.5	13 48.89	61.7	5	3.089	+ 11 59 40.4	55.6	3	20.02
145	Lalande 383 . . .	6.8	13 48.95	68.8	2	3.129	+ 35 6 9.8	48.9	1	20.02
146	Lacaille 49	7.6	0 13 53.12	63.3	4	+ 3.024	− 30 27 49.2	65.9	2	+ 20.02
147	Lacaille 50	6.8	13 55.68	69.7	2	3.004	− 40 0 58.8	67.9	2	20.02
148	Weisse O, 233 . . .	8.5	13 57.97	61.4	4	3.089	+ 11 56 11.6	55.9	2	20.02
149	Weisse O, 239 . . .	9.0	14 14.22	60.2	3	3.055	− 11 27 39.9	57.9	2	20.02
150	Lacaille 52	6.4	14 14.99	63.8	4	3.010	− 36 34 30.3	67.4	2	20.02

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			h. m. s.			″	° ′ ″			″
151	ι Sculptoris	5.0	0 14 28.82	66.5	3	+ 3.024	− 29 45 21.9	57.6	4	+ 20.02
152	Weisse O, 245 . . .	8.4	14 39.69	68.9	2	3.080	+ 5 6 45.6	57.0	2	20.02
153	O. Arg. S. 136 . . .	5.6	14 40.89	64.8	4	3.039	− 20 50 6.9	67.8	2	20.02
154	Weisse O, 246 . . .	9.0*	14 40.92	46.9	3	3.071	− 0 46 52.0	46.8	4	20.02
155	Lacaille 55	7.7	14 47.30	64.6	4	3.034	− 23 46 50.6	68.2	5	20.01
156	Weisse O, 247 . . .	8.2	0 14 47.76	65.6	6	+ 3.081	+ 6 14 7.2	65.5	3	+ 20.01
157	Lalande 409. . . .	8.0*	14 54.85	68.9	1	3.137	+ 36 59 10.5	48.9	1	20.01
158	Weisse O, 236 . . .	7.5	15 5.66	64.7	5	3.063	− 5 58 6.4	61.7	5	20.01
159	Radcliffe 79. . . .	8.5	15 7.20	65.4	2	3.158	+ 44 9 2.2	67.9	2	20.01
160	Weisse O, 255 . . .	8.9	15 12.67	62.4	4	3.079	+ 4 27 14.2	68.4	2	20.01
161	Lalande 421. . . .	6.2	0 15 34.66	68.8	2	+ 3.143	+ 37 58 38.5	47.6	3	+ 20.01
162	9 Ceti	6.0*	15 41.25	61.4	2	3.051	− 12 59 19.7	59.4	5	20.01
163	Lacaille 60	7.0	15 46.01	63.5	3	3.005	− 36 9 53.5	67.8	2	20.01
164	Lacaille 61	6.0	15 49.63	69.7	2	2.996	− 40 2 20.7	67.9	2	20.01
165	Lacaille 62	6.2	15 53.92	63.8	2	2.999	− 38 10 48.7	68.4	2	20.01
166	Anonymous . . .	8.8	0 16 9.43	68.8	2	+ 3.145	+ 37 48 43.6	48.9	1	+ 20.01
167	B. A. C. 77	6.4	16 11.81	62.4	3	3.013	− 31 48 44.7	69.6	4	20.01
168	Lacaille 66	7.3	16 20.95	64.4	3	3.017	− 30 37 22.4	68.3	2	20.01
169	Lacaille 72	7.0	17 6.46	63.8	2	2.994	− 38 11 10.9	68.4	2	20.00
170	O. Arg. S. 160 . . .	8.2	17 10.25	67.4	2	3.027	− 24 10 43.0	67.8	2	20.00
171	O. Arg. S. 163 . . .	7.2	0 17 17.64	68.8	2	+ 3.014	− 29 45 27.2	54.9	2	+ 20.00
172	B. A. C. 81	5.5	17 20.53	53.4	5	3.067	− 2 59 35.3	68.3	2	20.00
173	Weisse O, 287 . . .	8.0	17 22.43	60.8	4	3.077	+ 2 35 56.5	62.4	4	20.00
174	B. A. C. 83	6.0*	17 33.15	58.7	2	3.204	+ 52 16 14.8	53.8	3	20.00
175	Anonymous . . .	9.2	17 39.99	67.3	2	3.085	+ 6 57 50.2	68.9	2	20.00
176	Lalande 489. . . .	8.5*	0 17 42.15	68.9	1	+ 3.153	+ 38 15 38.1	48.8	1	+ 20.00
177	O. Arg. S. 169 . . .	7.5	17 46.30	67.8	2	3.025	− 24 13 43.6	67.8	2	20.00
178	Lacaille 78	6.9	18 3.54	63.4	5	3.008	− 31 27 45.9	62.0	2	19.99
179	44 Piscium	5.7	18 13.62	64.3	12	3.074	+ 1 9 51.2	61.2	19	19.99
180	Lalande 508. . . .	7.6	18 14.00	69.1	4	3.149	+ 35 42 31.4	48.9	1	19.99
181	Lalande 509. . . .	8.2	0 18 14.42	68.9	2	+ 3.149	+ 36 0 5.7	48.9	1	+ 19.99
182	Lacaille 81	6.0	18 26.29	66.9	2	2.982	− 40 2 1.2	67.9	2	19.99
183	45 Piscium	6.6	18 29.01	62.7	25	3.085	+ 6 55 1.9	62.5	7	19.99
184	Lacaille 82	7.0	18 39.35	62.9	3	3.027	− 22 24 25.4	59.5	3	19.99
185	Lacaille 83	6.3	18 44.60	63.9	3	3.013	− 28 29 4.6	67.9	2	19.99
186	Weisse O, 305 . . .	7.0	0 18 44.85	70 3	2	+ 3.078	+ 3 8 59.2	69.9	2	+ 19.99
187	Weisse O, 306 . . .	8.0*	18 45.18	70.9	2	3.054	− 9 7 38.2	70.9	2	19.99
188	B. A. C. 91	7.0*	18 46.92	58.8	2	3.110	+ 19 22 15.3	53.9	2	19.99
189	Weisse O, 308 . . .	8.2	18 50.34	70.3	2	3.078	+ 3 6 45.9	69.9	2	19.99
190	Lacaille 84	6.8	18 56.83	63.1	4	3.004	− 31 31 26.0	62.0	2	19.99

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191	B. A. C. 92	7.0*	0 19 0.60	58.9	2	+ 3.236	+ 55 51 56.6	53.8	3	+ 19.99
192	Anonymous	8.0	19 1.60	63.8	1	3.073	+ 0 23 20.2	66.9	2	19.99
193	Weisse O, 312	7.0	19 4.95	58.8	2	3.078	+ 3 2 59.6	57.6	4	19.99
194	Santini 23	7.2	19 6.61	62.1	5	3.082	+ 5 19 8.9	66.9	2	19.99
195	Lacaille 86	7.3	19 13.16	62.9	3	3.026	− 22 26 52.3	67.4	2	19.99
196	α Phenicis	3.0	0 19 21.50	63.0	2	+ 2.966	− 43 4 2.6	67.9	2	+ 19.99
197	Anonymous	7.0	19 26.67	61.9	1	3.078	+ 3 9	. .	.	19.98
198	Groombridge 64, (1st *)	7.3	19 38.01	70.3	2	3.205	+ 49 12 36.8	68.8	2	19.98
199	Groombridge 64, (2d *)	8.3	19 39.81	70.3	2	3.205	+ 49 12 46.7	68.8	2	19.98
200	Weisse O, 321	9.0*	19 48.10	69.7	1	3.062	− 4 44 17.5	70.9	1	19.98
201	B. A. C. 96	7.0*	0 19 56.98	63.5	3	+ 3.060	− 5 46 42.3	54.9	3	+ 19.98
202	Lacaille 90	6.0	20 13.54	66.3	2	3.014	− 26 19 19.8	67.8	2	19.98
203	Anonymous	9.0	20 17.59	68.8	3	3.074	+ 1 7 30.9	67.9	2	19.98
204	Lacaille 92	7.0	20 31.24	64.0	3	2.996	− 32 36 15.7	68.8	2	19.98
205	Weisse O, 337	7.8	20 31.75	70.3	4	3.080	+ 3 49 57.8	67.9	2	19.98
206	O. Arg. S. 202	6.4	0 20 34.09	63.8	4	+ 3.026	− 20 54 35.6	69.5	2	+ 19.98
207	48 Piscium	5.5	20 56.46	68.8	2	3.106	+ 15 40 14.8	70.6	3	19.98
208	B. A. C. 103	5.2	20 58.75	63.5	3	2.989	− 33 46 49.8	70.9	2	19.97
209	Anonymous	9.5	21 15.38	67.3	2	3.088	+ 7 20 36.7	67.9	1	19.97
210	Weisse O, 341	8.8	21 18.20	69.9	2	3.086	− 6 18 58.5	69.9	2	19.97
211	O. Arg. S. 210	6.5	0 21 19.68	67.3	2	+ 3.120	− 21 6 17.0	70.9	2	+ 19.97
212	Lacaille 98	6.5	21 27.28	64.4	2	3.000	− 30 3 29.8	70.4	2	19.97
213	Lalande 631	6.0	21 31.16	69.2	3	3.163	+ 36 7 30.3	47.8	1	19.97
214	Anonymous	7.8	21 32.19	65.8	2	2.979	− 36 29 37.2	70.0	2	19.97
215	Lacaille 100	6.7	21 49.98	64.2	3	3.012	− 25 24 40.8	68.4	2	19.97
216	Weisse O, 358	9.0*	0 22 10.21	64.8	6	+ 3.089	+ 7 20 36.6	65.8	2	+ 19.96
217	Lalande 656	6.7	22 25.24	68.8	3	3.172	+ 37 33 11.7	47.8	1	19.96
218	Anonymous	8.0	22 27.34	65.8	1	2.975	− 36 29 51.4	70.0	2	19.96
219	Lalande 658	8.2	22 29.52	67.3	2	3.061	− 4 47 15.9	69.0	2	19.96
220	Weisse O, 368	8.0*	22 40.66	46.9	3	3.070	− 1 5 46.4	50.3	6	19.96
221	28 Andromedæ	6.0*	0 22 44.46	50.4	6	+ 3.145	+ 28 58 45.5	53.8	3	+ 19.96
222	Groombridge 67	7.5	22 52.24	61.8	6	4.781	+ 85 32 43.7	65.8	2	19.96
223	12 Ceti	5.7	22 53.67	62.6	86	3.061	− 4 43 53.8	59.5	13	19.96
224	B. A. C. 113	6.8	22 56.94	62.5	5	3.081	+ 4 5 7.7	62.1	22	19.96
225	Weisse O, 375	8.0	23 17.72	64.8	5	3.090	+ 7 44 17.8	67.4	2	19.95
226	Weisse O, 376	9.0*	0 23 19.72	58.8	2	+ 3.078	+ 2 29 34.0	58.8	2	+ 19.95
227	Weisse O, 377	8.6	23 21.25	70.4	2	3.069	− 1 8 46.4	68.9	3	19.95
228	B. A. C. 115	5.0	23 22.30	67.3	2	3.010	− 24 33 44.2	67.8	2	19.95
229	49 Piscium	7.2	23 31.02	68.8	2	3.109	+ 15 15 50.7	69.2	3	19.95
230	Groombridge 73	8.0	23 31.41	62.0	1	3.198	+ 42 36 12.7	67.9	1	19.95

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231	Lalande 713 . . .	6.0	0 23 56.75	68.8	2	+ 3.184	+ 38 12 24.7	47.8	1	+ 19.95
232	Weisse O, 393 . . .	8.9	24 17.86	62.9	2	3.075	+ 1 21 48.1	62.9	6	19.94
233	B. A. C. 122 . . .	7.2	24 19.62	58.8	2	3.111	+ 15 14 56.0	69.4	4	19.94
234	Lalande 736. . . .	7.7	24 22.39	69.2	3	3.176	+ 36 11 36.0	48.9	1	19.94
235	κ Cassiopeæ	4.0*	25 4.16	62.0	2	3.348	+ 62 9 30.2	61.4	5	19.94
236	51 Piscium	6.5*	0 25 10.59	56.0	4	+ 3.088	+ 6 10 53.9	54.9	5	+ 19.94
237	Lalande 762 . . .	6.0	25 14.34	68.8	2	3.187	+ 38 4 17.0	47.3	2	19.93
238	52 Piscium	6.0	25 15.31	60.7	2	3.124	+ 19 31 21.6	54.8	3	19.93
239	Lacaille 118. . . .	6.7	25 21.57	63.8	4	3.002	− 25 25 12.6	66.0	2	19.93
240	Lalande 767. . . .	8.0*	25 23.	. .	.	3.176	+ 35 5 7.7	48.9	1	19.93
241	Weisse O, 421 . . .	8.4	0 25 30.34	68.8	3	+ 3.046	− 9 48 25.9	57.9	2	+ 19.93
242	Weisse O, 420 . . .	8.7	25 31.18	62.9	2	3.076	+ 1 23 11.5	62.9	6	19.93
243	Weisse O, 425 . . .	9.0*	25 39.49	46.9	3	3.069	− 1 13 4.2	46.9	1	19.93
244	Lacaille 121. . . .	5.7	25 40.68	61.9	2	2.999	− 26 7 50.3	65.8	2	19.93
245	Weisse O, 434 . . .	6.6	26 3.05	65.8	2	3.060	− 4 37 15.9	63.9	3	19.93
246	Weisse O, 436 . . .	9.0	0 26 14.48	59.4	2	+ 3.096	+ 8 58 52.2	58.4	4	+ 19.93
247	Weisse O, 437 . . .	8.0	26 16.50	65.9	2	3.059	− 4 48 53.0	64.2	3	19.92
248	16 Cassiopeæ	6.5	26 17.38	62.0	1	3.415	+ 65 58 42.0	67.8	2	19.92
249	Weisse O, 439 . . .	7.6	26 19.40	67.4	2	3.068	− 1 22 52.9	67.8	2	19.92
250	B. A. C. 133. . . .	7.5	26 20.32	59.8	2	3.127	+ 19 39 38.3	53.8	3	19.92
251	O. Arg. S. 264 . . .	7.5*	0 26 38.36	63.9	4	+ 2.994	− 26 48 51.2	65.8	2	+ 19.92
252	Santini 30	7.7	26 42.79	64.0	11	3.079	+ 2 32 51.7	58.8	2	19.92
253	B. A. C. 135 . . .	6.2	26 45.26	63.1	5	2.981	− 30 19 50.3	67.5	2	19.92
254	Lacaille 126. . . .	7.2	26 46.52	68.8	2	2.944	− 39 27 24.4	64.2	3	19.92
255	Weisse O, 444 . . .	9.2	26 51.09	61.9	2	3.046	− 9 29 30.2	57.9	2	19.92
256	B. A. C. 136, (1st *) .	6.5	0 26 51.64	63.5	5	+ 2.959	− 35 45 23.5	68.2	3	+ 19.92
257	B. A. C. 136, (2d *) .	8.0	26 51.67	66.7	2	2.959	− 35 45 28.1	69.4	2	19.92
258	Weisse O, 450 . . .	8.0	26 55.46	59.6	4	3.086	+ 5 11 3.2	56.9	3	19.92
259	B. A. C. 137 . . .	7.3	26 55.54	61.4	6	3.098	+ 9 31 57.0	58.4	4	19.92
260	Weisse O, 453 . . .	9.2	27 5.36	65.0	5	3.094	+ 7 54 51.2	69.8	1	19.92
261	Lacaille 131. . . .	7.6	0 27 10.97	63.2	3	+ 2.969	− 33 4 33.8	69.9	1	+ 19.92
262	B. A. C. 138, (1st *) .	7.4	27 20.88	65.8	8	3.057	− 5 19 8.3	65.7	4	19.91
263	B. A. C. 138, (2d *) .	9.2	27 21.89	65.8	6	3.057	− 5 18 54.0	69.6	3	19.91
264	Lalande 849. . . .	6.5	27 40.65	69.2	3	3.189	+ 36 3 38.2	47.4	2	19.91
265	Anonymous . . .	9.5	27 44.53	62.9	2	3.075	+ 1 2 39.1	68.9	2	19.91
266	Weisse O, 446. . . .	8.3	0 27 44.62	67.3	2	+ 3.082	+ 3 36 56.0	68.9	2	+ 19.91
267	Rumker 138 . . .	6.0	28 1.62	68.9	2	3.186	+ 34 53 13.7	58.2	3	19.91
268	13 Ceti	6.0	28 2.58	61.8	10	3.060	− 4 21 50.8	63.8	2	19.91
269	Lacaille 138. . . .	7.0	28 4.60	64.3	4	2.989	− 26 53 51.7	67.8	2	19.91
270	Lalande 863 . . .	8.0	28 5.09	68.8	2	3.190	+ 35 48 28.0	48.9	1	19.90

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			h. m. s.			"	° ' "			"
271	Weisse O, 476 . . .	8.5	0 28 16.15	61.2	4	+ 3.093	+ 7 22 32.7	59.9	3	+ 19.90
272	Weisse O, 477 . . .	7.6	28 16.64	65.5	4	3.082	+ 3 31 22.3	69.9	3	19.90
273	14 Ceti	7.0	28 21.72	61.7	7	3.068	− 1 16 30.4	54.0	10	19.90
274	Lalande 884 . . .	6.2	28 35.56	68.8	2	3.200	+ 37 28 50.8	47.8	1	19.90
275	B. A. C. 149 . . .	6.0*	28 39.85	60.2	5	3.109	+ 12 26 33.2	53.9	2	19.90
276	O. Arg. S. 284 . . .	8.2	0 28 41.12	64.6	4	+ 2.985	− 27 37 43.2	69.3	2	+ 19.90
277	(* 127) Washington .	. .	28 44.	. .	.	3.079	+ 2 33 5.5	69.9	2	19.90
278	Rumker, N. F., 235 .	7.0	28 49.75	65.9	2	3.091	+ 6 23 5.3	67.9	2	19.90
279	Lacaille 142. . . .	6.3	29 8.74	63.9	8	2.998	− 23 36 45.9	67.9	2	19.89
280	Weisse O, 491 . . .	8.0	29 10.11	60.2	2	3.096	+ 8 6 13.5	58.4	4	19.89
281	ζ Cassiopeæ	5.0	0 29 11.47	69.4	2	+ 3.299	+ 53 7 32.2	69.9	2	+ 19.89
282	Weisse (2) O, 746 . .	7.5	29 20.11	68.9	1	3.156	+ 26 16 54.8	63.4	2	19.89
283	π Andromedæ . . .	4.0	29 24.69	54.3	5	3.183	+ 32 56 51.7	58.0	2	19.89
284	Anonymous. . . .	7.2	29 25.92	68.8	2	2.933	− 39 3 50.9	64.9	2	19.89
285	53 Piscium	5.5	29 29.93	61.2	3	3.116	+ 14 27 39.1	63.4	4	19.89
286	Anonymous . . .	9.0	0 29 37.05	62.9	2	+ 3.075	+ 1 5 5.5	67.9	2	+ 19.89
287	Weisse O, 496 . . .	8.2	29 43.90	60.4	2	3.086	+ 4 38 28.1	56.9	2	19.89
288	O. Arg. S. 303 . . .	7.2	29 48.94	68.9	2	2.990	− 25 16 12.3	67.2	3	19.89
289	B. A. C. 158. . . .	6.0*	29 51.97	58.7	2	3.192	+ 34 37 42.5	60.6	5	19.89
290	O. Arg. S. 304 . . .	7.5	29 53.18	68.9	2	2.990	− 25 15 33.4	66.9	2	19.89
291	Weisse O, 503 . . .	8.5	0 30 0.23	69.3	2	+ 3.067	− 1 38 9.1	64.4	2	+ 19.89
292	Weisse O, 506 . . .	9.5	30 8.27	65.7	2	3.085	+ 4 15 41.2	69.4	2	19.88
293	B. A. C. 160 . . .	5.2	30 9.27	62.4	8	2.988	− 25 32 17.1	69.8	4	19.88
294	B. A. C. 161 . . .	7.0	30 18.11	61.1	4	3.079	+ 2 22 1.1	68.9	2	19.88
295	Weisse O, 510 . . .	7.5	30 28.22	68.9	1	3.095	+ 7 15 4.5	65.8	2	19.88
296	Lalande 963. . . .	8.3	0 30 46.56	68.8	3	+ 3.203	+ 36 17 54.6	48.9	1	+ 19.88
297	Lalande 967. . . .	8.0	30 48.96	58.8	2	3.078	+ 1 59 34.2	59.1	4	19.88
298	Weisse O, 511 . . .	8.5	30 50.00	67.7	2	3.086	+ 4 21 31.7	70.8	2	19.88
299	15 Ceti	6.5	30 55.15	55.2	11	3.068	− 1 16 25.6	59.4	16	19.87
300	Lalande 966. . . .	6.9	30 57.78	68.9	2	3.209	+ 37 14 58.5	48.9	1	19.87
301	O. Arg. S. 312 . . .	8.1	0 31 7.64	67.3	2	+ 2.966	− 30 16 57.0	69.9	3	+ 19.87
302	ε Andromedæ. . . .	4.0*	31 9.99	46.4	3	3.171	+ 28 33 0.4	70.3	3	19.87
303	Lalande 975. . . .	8.2	31 11.85	69.5	3	3.203	+ 35 49 26.5	48.9	1	19.87
304	Lacaille 155. . . .	6.5	31 21.18	69.7	2	2.906	− 42 21 45.9	62.0	2	19.87
305	Anonymous. . . .	. .	31 27.50	68.9	2	2.985	− 25 26 1.0	66.9	3	19.87
306	Anonymous. . . .	. .	0 31 28.18	69.8	2	+ 2.954	− 32 48 14.9	64.9	2	+ 19.87
307	δ Andromedæ. . . .	3.0*	31 50.93	59.7	3	3.179	+ 30 5 40.4	57.0	4	19.86
308	Lacaille 157. . . .	6.0	31 51.63	63.9	7	2.982	− 25 52 38.7	66.3	2	19.86
309	B. A. C. 167. . . .	7.0	31 54.62	66.4	8	3.080	+ 2 21 10.6	68.4	4	19.86
310	Lalande 1003 . . .	7.4	32 3.65	69.4	2	3.207	+ 36 1 18.8	48.9	1	19.86

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			h. m. s.			″	° ′ ″			″
311	Weisse (2) O, 832	8.0	0 32 4.00	68.9	2	+ 3.164	+ 25 58 9.6	57.5	3	+ 19.86
312	O. Arg. N. 599	9.0	32 27.83	62.6	3	3.350	+ 55 46 17.5	68.4	2	19.86
313	55 Piscium	6.0	32 33.79	65.9	2	3.143	+ 20 40 11.9	64.8	2	19.85
314	Weisse O, 544	7.5	32 34.79	65.7	2	3.082	+ 2 52 54.1	68.4	2	19.85
315	*a* Cassiopeæ	Var.*	32 35.00	49.5	123	3.350	+ 55 46 8.1	50.9	95	19.85
316	Anonymous	7.8	0 32 54.79	68.9	2	+ 2.980	− 25 47 56.3	66.9	2	+ 19.85
317	Anonymous	9.5	32 57.97	64.3	2	3.008	− 18 25 48.9	68.3	2	19.85
318	Lacaille 164.	8.0	33 2.04	68.8	2	2.896	− 42 25 36.1	62.0	2	19.85
319	Lacaille 162.	7.0	33 4.36	65.8	2	2.939	− 34 43 41.2	68.3	2	19.85
320	Weisse O, 556	9.0	33 5.87	64.5	2	3.087	+ 4 30 43.4	68.3	2	19.85
321	Anonymous	9.0	0 33 10.84	64.4	2	+ 3.008	− 18 21 41.0	69.3	2	+ 19.85
322	Weisse O, 560	8.0	33 17.20	58.8	2	3.043	− 8 25 20.3	57.9	3	19.85
323	Lacaille 167.	6.3	33 29.75	62.5	3	2.983	− 24 33 40.5	67.8	2	19.84
324	Weisse O, 563	9.0*	33 30.69	69.8	2	3.055	− 5 6 50.8	68.8	2	19.84
325	32 Andromedæ	5.2	33 32.51	68.8	2	3.228	+ 38 41 22.7	46.6	4	19.84
326	B. A. C. 174.	6.0*	0 33 34.81	62.8	3	+ 3.054	− 5 7 13.7	68.8	2	+ 19.84
327	Lacaille 169.	6.0	33 40.20	64.9	2	2.958	− 30 11 26.2	69.9	2	19.84
328	Weisse O, 571	9.0	33 45.56	65.7	5	3.086	+ 3 59 55.4	70.8	2	19.84
329	Weisse O, 572	8.8	33 46.31	69.8	2	3.094	+ 6 29 47.1	54.8	2	19.84
330	B. A. C. 177.	7.0	33 57.94	59.6	3	3.102	+ 8 35 24.4	54.9	3	19.84
331	Weisse O, 583	7.9	0 34 9.28	65.7	3	+ 3.082	+ 2 49 50.5	66.0	3	+ 19.83
332	Lalande 1097	8.1	34 23.57	63.4	6	3.075	+ 0 58 46.6	64.7	9	19.83
333	Anonymous	9.4	34 28.63	70.0	2	3.047	− 7 10 23.9	68.8	1	19.83
334	Weisse O, 588	8.1	34 34.12	67.3	2	3.082	+ 2 52 28.1	68.4	2	19.83
335	O. Arg. S. 358	6.0	34 39.10	68.8	2	2.974	− 25 57 50.6	66.3	2	19.83
336	Anonymous	9.0	0 34 42.92	64.3	2	+ 3.075	+ 0 57	. .	.	+ 19.83
337	Anonymous	. .	34 45.	. . .	.	3.076	+ 1 1 47.2	70.9	2	19.83
338	Anonymous	9.0	34 47.42	68.2	3	3.079	+ 1 57 40.6	68.4	2	19.83
339	Weisse O, 595	9.0	34 49.67	60.2	3	3.083	+ 3 0 49.6	58.8	2	19.83
340	Anonymous	. .	34 51.	. . .	.	3.079	+ 2 4 33.3	69.5	2	19.82
341	Anonymous	9.0	0 34 53.04	65.7	1	+ 3.082	+ 2 52	. .	.	+ 19.82
342	Anonymous	9.2	34 53.62	68.7	5	3.080	+ 2 10 0.4	68.9	2	19.82
343	Anonymous	8.8	34 55.34	69.9	2	3.108	+ 10 3 3.6	69.9	2	19.82
344	Weisse O, 601	9.0*	35 0.15	58.8	2	3.058	− 3 49 9.7	57.8	2	19.82
345	Anonymous	8.8	35 7.22	69.8	2	3.086	+ 3 58 48.8	70.8	3	19.82
346	Anonymous	8.5	0 35 7.78	65.3	2	+ 3.049	− 6 23 53.9	66.9	2	+ 19.82
347	Lalande 1123	8.6	35 29.69	62.9	7	3.076	+ 0 55 41.8	63.5	6	19.82
348	Weisse O, 608	8.5	35 31.62	60.2	4	3.083	+ 3 1 24.5	58.8	3	19.82
349	O. Arg. S. 369	7.6	35 42.21	64.9	3	2.992	− 20 57 43.0	66.8	2	19.81
350	Lacaille 181.	6.4	35 50.66	63.2	4	2.916	− 36 47 26.0	68.2	3	19.81

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			h. m. s.			″	° ′ ″			″
351	λ^1 Sculptoris	5.0*	0 35 58.	. .	.	+ 2.901	− 39 13 53.1	64.8	2	+ 19.81
352	Weisse O, 616	8.0	36 2.54	65.3	2	3.093	+ 5 48 9.7	67.8	2	19.81
353	Weisse O, 620	8.4	36 17.58	65.2	2	3.092	+ 5 23 14.8	67.9	2	19.81
354	21 Cassiopeæ	4.7	36 28.10	63.3	5	3.822	+ 74 13 18.8	62.3	6	19.80
355	β Ceti	2.0*	36 33.59	60.2	138	3.000	− 18 45 20.7	53.1	37	19.80
356	B. A. C. 197.	6.5*	0 36 40.57	60.7	2	+ 3.301	+ 47 5 45.9	53.8	3	+ 19.80
357	Weisse O, 635	8.2	37 5.29	60.5	3	3.098	+ 7 0 21.6	55.6	3	19.79
358	Weisse O, 638	9.0	37 11.72	60.4	2	3.099	+ 7 3 33.8	55.9	2	19.79
359	Weisse O, 641	8.1	37 23.42	65.3	2	3.048	− 6 23 35.4	60.9	3	19.79
360	Weisse O, 642	7.0	37 25.04	68.8	2	3.017	− 14 10 54.0	64.4	2	19.79
361	λ^2 Sculptoris	5.2	0 37 25.69	68.8	2	+ 2.895	− 39 11 36.6	64.8	2	+ 19.79
362	O. Arg. S. 388	7.7	37 30.01	63.8	3	2.960	− 27 17 15.6	69.9	2	19.79
363	Anonymous	7.7	37 43.17	65.8	50	3.081	+ 2 26 3.5	65.8	46	19.79
364	B. A. C. 203.	6.2	37 48.57	63.6	4	2.980	− 22 46 35.5	68.4	2	19.78
365	Weisse O, 647	8.0	37 51.52	59.3	2	3.089	+ 4 24 53.0	55.5	3	19.78
366	Weisse O, 649	8.0*	0 37 54.30	70.9	2	+ 3.076	+ 1 2 22.7	70.9	2	+ 19.78
367	Lacaille 194.	6.7	37 55.88	63.7	4	2.934	− 32 9 21.1	68.4	2	19.78
368	Weisse O, 658	8.8	38 25.65	63.2	3	3.076	+ 0 56 32.8	67.0	2	19.78
369	Weisse O, 657	8.0	38 25.66	59.9	2	3.100	+ 7 4 41.5	55.6	3	19.78
370	18 Ceti	5.2	38 26.77	62.1	3	3.018	− 13 38 24.2	68.9	2	19.78
371	23 Cassiopeæ	5.5	0 38 29.30	66.9	3	+ 3.855	+ 74 4 54.0	66.9	2	+ 19.77
372	Anonymous	. .	38 35.	. .	.	3.064	− 1 57 7.5	57.4	2	19.77
373	Weisse O, 664	9.0*	38 45.96	46.8	1	3.066	− 1 34 10.3	68.4	2	19.77
374	Weisse O, 665	8.3	38 50.04	66.9	2	3.090	+ 4 30 50.5	68.8	2	19.77
375	Anonymous	8.2	38 59.08	68.9	2	3.047	− 6 24 39.1	67.9	2	19.77
376	Lacaille 203.	6.5	0 39 14.24	63.1	3	+ 2.974	− 23 17 17.6	67.4	2	+ 19.76
377	Weisse O, 674	9.0*	39 24.41	46.8	2	3.066	− 1 36 4.1	68.4	2	19.76
378	Anonymous	. .	39 26.12	65.7	1	3.081	+ 2 16	. .	.	19.76
379	Anonymous	9.0	39 30.86	69.8	2	3.112	+ 9 48 35.5	69.8	2	19.76
380	Weisse O, 677	8.0*	39 33.05	70.9	2	3.051	− 5 10 59.0	70.9	2	19.76
381	Weisse O, 678	8.2	0 39 34.66	68.8	2	+ 3.078	+ 1 35 30.1	57.9	3	+ 19.76
382	Weisse O, 680	9.0*	39 38.40	58.8	2	3.102	+ 7 32 30.3	56.4	2	19.76
383	58 Piscium	5.5	39 43.47	65.0	2	3.118	+ 11 12 35.8	68.9	1	19.76
384	Lacaille 210.	6.6	39 48.00	64.1	3	2.933	− 30 57 23.4	67.8	2	19.75
385	ζ Andromedæ	4.0*	39 55.38	62.0	2	3.173	+ 23 30 17.0	58.0	2	19.75
386	Weisse O, 687	9.0*	0 40 2.24	58.8	2	+ 3.064	− 1 55 15.4	65.6	3	+ 19.75
387	60 Piscium	6.1	40 9.34	62.9	7	3.096	+ 5 58 34.4	61.3	8	19.75
388	Weisse O, 694	9.0	40 27.14	65.8	5	3.081	+ 2 13 44.9	68.3	2	19.74
389	61 Piscium	6.0	40 29.63	65.3	2	3.158	+ 20 9 34.7	70.9	3	19.74
390	Lalande 1281	8.0	40 33.31	68.8	2	3.236	+ 34 58 24.1	48.9	1	19.74

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			h. m. s.			"	° ' "			"
391	Anonymous	9.1	0 40 34.48	65.7	4	+ 3.081	+ 2 8 19.7	68.3	2	+ 19.74
392	η^1 Cassiopeæ	3.7	40 38.26	54.5	4	3.436	+ 57 4 15.2	67.9	2	19.74
393	O. Arg. S. 423	6.0	40 44.47	65.8	4	2.991	— 18 49 39.4	65.8	3	19.74
394	Lacaille 216	7.0	40 49.72	66.8	2	2.889	— 37 41 33.7	68.3	2	19.74
395	Lacaille 217	6.4	40 53.10	63.7	3	2.923	— 32 7 4.1	67.5	2	19.74
396	ν Cassiopeæ	5.0*	0 40 55.03	60.4	2	+ 3.358	+ 50 12 13.1	53.8	3	+ 19.74
397	Weisse O, 704	8.0	40 55.15	65.3	2	3.107	+ 8 27 24.8	67.4	2	19.74
398	Weisse O, 706	9.0	40 58.26	65.4	2	3.086	+ 3 18 56.9	64.4	2	19.74
399	B. A. C. 221	6.4	41 2.59	62.5	5	3.091	+ 4 33 35.1	61.6	12	19.74
400	Lacaille 218.	5.8	41 5.23	62.9	7	2.973	— 22 29 13.8	69.3	2	19.73
401	Lacaille 219.	7.1	0 41 6.40	63.8	3	+ 2.934	— 30 6 34.8	68.4	2	+ 19.73
402	Groombridge 148	7.0*	41 7.63	65.4	2	3.728	+ 70 0 37.9	70.8	2	19.73
403	Weisse O, 711	9.0	41 8.68	59.2	3	3.086	+ 3 22 43.1	57.0	2	19.73
404	Weisse O, 712	8.0	41 10.44	55.2	3	3.067	— 1 15 10.5	51.2	6	19.73
405	δ Piscium	4.5	41 25.29	63.4	25	3.101	+ 6 49 21.5	62.4	22	19.73
406	O. Arg. S. 428	8.0	0 41 32.84	67.3	2	+ 3.005	— 15 30 53.2	69.3	2	+ 19.73
407	B. A. C. 224.	6.0*	41 39.54	58.8	2	3.200	+ 27 57 20.7	53.9	2	19.73
408	Lacaille 220.	7.0*	41 50.	. .	.	2.936	— 29 15 29.8	64.2	3	19.72
409	O. Arg. S. 435	8.5*	41 51.	. .	.	2.959	— 24 54 26.1	68.4	2	19.72
410	Anonymous	9.0	42 2.17	68.8	2	3.079	+ 1 31 18.1	57.9	2	19.72
411	ν Andromedæ	4.0*	0 42 6.09	45.7	1	+ 3.279	+ 40 18 56.4	70.3	3	+ 19.72
412	Anonymous.	8.9	42 14.31	65.7	7	3.085	+ 2 57 44.7	67.8	1	19.72
413	Weisse O, 724	9.0*	42 19.12	65.8	1	3.103	+ 7 11 27.4	68.8	2	19.72
414	Lamont 223.	6.0	42 19.80	66.4	2	2.958	— 24 53 55.4	66.9	2	19.72
415	Weisse O, 726	9.0	42 20.15	63.7	4	3.090	+ 4 9 49.2	61.4	2	19.72
416	*i* Piscium, (1st *).	6.5	0 42 22.38	69.8	5	+ 3.197	+ 26 56 51.1	70.6	3	+ 19.71
417	*i* Piscium, (2d *)	6.5	42 22.68	69.8	5	3.197	+ 26 56 49.1	70.6	3	19.71
418	B. A. C. 230.	6.0	42 23.64	62.4	2	3.009	— 14 19 17.3	64.9	2	19.71
419	O. Arg. S. 442	7.3	42 27.60	64.8	2	2.962	— 23 58 51.2	67.3	2	19.71
420	O. Arg. S. 443	8.5*	42 28.	. .	.	2.962	— 24 5 33.4	66.8	2	19.71
421	(* 138) Washington	8.8	0 42 31.23	68.9	2	+ 3.087	+ 3 31 15.5	65.9	4	+ 19.71
422	Rumker, N. F., 329	8.8	42 36.45	65.7	3	3.116	+ 9 59 29.9	67.7	2	19.71
423	Lacaille 224	6.1	42 39.70	63.5	9	2.961	— 24 7 31.2	66.8	2	19.71
424	Weisse O. 732	7.0	42 44.85	59.9	2	3.068	— 0 59 15.8	55.9	3	19.71
425	Weisse O, 233	8.0	42 48.67	65.0	5	3.102	+ 6 54 15.5	69.4	2	19.71
426	O. Arg. S. 452	7.3	0 43 7.06	67.4	3	+ 2.956	— 24 52 58.1	66.9	2	+ 19.70
427	ϕ^2 Ceti	5.5*	43 7.23	45.7	2	3.022	— 11 23 55.3	54.8	3	19.70
428	Weisse O, 742	8.2	43 14.27	63.8	6	3.100	+ 6 20 43.3	57.3	3	19.70
429	Weisse O, 749	7.9	43 39.72	64.5	3	3.104	+ 7 17 4.2	67.9	2	19.70
430	Lalande 1390	7.6	43 41.09	68.8	2	3.258	+ 36 16 14.0	48.9	1	19.70

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431	Rumker, N. F., 340	7.3	0 43 52.73	65.8	2	+ 3.081	+ 1 59 0.2	57.9	3	+ 19.70
432	B. A. C. 237.	6.0	44 5.89	63.7	2	3.084	+ 2 37 30.1	60.0	6	19.69
433	Weisse O, 762	8.1	44 6.97	61.9	3	3.066	— 1 17 52.1	69.0	2	19.69
434	Anonymous.	9.0	44 16.49	62.9	1	3.079	+ 1 37 49.1	67.9	1	19.68
435	Weisse O, 770	9.2	44 24.72	64.2	6	3.087	+ 3 15 37.4	67.9	2	19.68
436	Weisse O, 772	7.7	0 44 28.62	69.3	2	+ 3.066	— 1 14 56.7	57.8	2	+ 19.68
437	Weisse O, 775	8.1	44 43.03	62.9	12	3.087	+ 3 17 53.5	61.5	5	19.68
438	Lacaille 234.	6.8	44 43.10	66.3	2	2.860	— 39 17 26.9	68.5	3	19.68
439	B. A. C. 239.	5.5*	44 44.49	60.4	2	3.528	+ 60 21 18.8	53.9	2	19.68
440	Rumker, N. F., 354	8.6	44 49.82	65.7	3	3.117	+ 9 50 24.7	66.8	2	19.67
441	Lalande 1443	5.8	0 45 11.54	68.8	2	+ 3.275	+ 37 47 15.6	48.9	1	+ 19.67
442	Lalande 1444	7.5	45 16.56	69.9	2	3.279	+ 38 16 31.1	47.9	1	19.66
443	Weisse O, 786	9.0	45 24.26	65.6	2	3.119	+ 10 9 10.2	68.3	2	19.66
444	Weisse O, 787	9.0	45 26.00	65.9	3	3.099	+ 5 54 15.0	67.9	2	19.66
445	Weisse O, 788	8.6	45 27.86	64.0	4	3.104	+ 6 56 26.6	69.4	2	19.66
446	Weisse (2) 1167.	6.5	0 45 34.24	68.8	2	+ 3.222	+ 29 35 15.5	57.3	2	+ 19.66
447	Weisse (2) 1172.	6.2	45 47.60	68.8	2	3.270	+ 36 39 31.8	46.9	2	19.66
448	Lacaille 238.	6.5*	45 48.20	61.9	2	2.950	— 24 46 7.0	70.8	2	19.66
449	20 Ceti	4.9	45 51.20	58.9	10	3.063	— 1 54 18.6	62.2	38	19.66
450	Weisse 800, (1st *)	9.0	46 5.71	65.9	3	3.092	+ 4 14 39.2	67.5	3	19.65
451	Weisse 800, (2d *)	9.5	0 46 5.83	65.9	1	+ 3.092	+ 4 14 39.2	67.5	3	+ 19.65
452	B. A. C. 243	7.0	46 7.01	61.3	6	3.088	+ 3 19 34.2	58.8	3	19.65
453	Lacaille 239.	6.1	46 8.15	63.6	3	2.911	— 31 7 13.9	67.4	2	19.65
454	Weisse O, 801	8.7	46 13.07	68.9	2	3.112	+ 8 33 1.0	63.3	2	19.65
455	Anonymous	9.0	46 13.52	65.4	2	3.065	— 1 32 8.5	68.4	2	19.65
456	Weisse O, 802	8.2	0 46 16.00	68.9	2	+ 3.084	+ 2 32 31.5	57.8	2	+ 19.65
457	Lacaille 241, (1st *)	6.4	46 20.11	64.2	8	2.944	— 25 32 22.0	66.6	6	19.65
458	Lacaille 241, (2d *)	8.5	46 20.31	64.6	1	2.944	— 25 32 16.5	70.0	1	19.65
459	Weisse O, 804	8.8	46 21.17	65.9	4	3.097	+ 5 13 32.5	67.9	3	19.65
460	Weisse O, 806	8.8	46 27.57	63.4	5	3.077	+ 1 8 56.9	60.0	5	19.65
461	B. A. C. 240	6.0*	0 46 29.45	62.0	16	+11.993	+ 88 16 12.1	68.4	2	+ 19.65
462	Weisse O, 807	8.5	46 32.36	65.3	4	3.121	+ 10 21 43.7	65.8	2	19.64
463	Lalande 1492	7.2	46 33.50	69.5	3	3.285	+ 38 18 26.0	47.9	3	19.64
464	Weisse O, 808	8.0	46 34.14	66.3	2	3.103	+ 6 30 54.4	56.3	3	19.64
465	ν^1 Cassiopeæ	5.5*	46 43.00	59.8	3	3.509	+ 58 12 49.5	54.4	5	19.64
466	Anonymous	9.0	0 46 48.26	64.8	4	+ 3.078	+ 1 16 19.9	70.8	2	+ 19.64
467	Lalande 1504	8.5	46 54.11	69.8	1	3.288	+ 38 24 33.7	47.9	1	19.65
468	O. Arg. S. 492	9.1	47 2.14	65.8	5	2.979	— 18 45 44.1	65.8	2	19.63
469	Weisse O, 815	8.7	47 4.42	59.9	3	3.061	— 2 15 45.8	55.9	5	19.63
470	O. Arg. S. 498	8.8	47 11.22	65.8	5	2.979	— 18 47 18.0	65.8	2	19.63

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471	21 Ceti	5.5	0 47 13.83	64.9	2	+ 3.026	− 9 29 56.9	67.8	2	+ 19.63
472	B. A. C. 249.	7.5	47 19.70	66.7	2	2.893	− 33 5 42.9	67.4	2	19.63
473	Anonymous	8.8	47 40.48	68.8	2	3.061	− 2 18 59.9	57.4	2	19.62
474	Weisse O, 829	8.0	48 4.16	55.9	4	3.102	+ 6 5 39.6	66.3	4	19.62
475	Anonymous	9.5	48 7.97	66.3	2	3.080	+ 1 32	. .	.	19.62
476	O. Arg. S. 506	7.4	0 48 15.75	64.4	4	+ 2.983	− 17 43 26.5	67.8	2	+ 19.61
477	γ Cassiopeæ	3.0*	48 17.29	62.5	1	3.556	+ 59 57 27.0	67.0	2	19.61
478	Anonymous	9.0	48 18.10	66.3	2	3.080	+ 1 32 12.6	62.4	4	19.61
479	Anonymous	9.5	48 23.96	65.4	2	3.064	− 1 33 12.2	70.8	1	19.61
480	Lacaille 252.	6.5	48 31.62	62.4	5	2.938	− 25 25 9.7	65.4	2	19.61
481	Weisse O, 836	8.0	0 48 34.79	65.8	4	+ 3.049	− 4 45 8.6	65.8	3	+ 19.61
482	Weisse O, 820	8.7	48 37.16	61.9	3	3.064	− 1 33 13.7	64.6	4	19.61
483	Weisse O, 845	7.3	48 54.74	65.5	4	3.060	− 4 29 48.0	65.8	3	19.60
484	μ Andromedæ	4.0*	48 59.64	69.2	3	3.292	+ 37 44 20.5	46.1	17	19.60
485	ϕ^3 Ceti	6.0*	49 0.28	60.4	2	3.012	− 12 1 31.8	60.9	2	19.60
486	Lacaille 256.	6.8	0 49 8.00	63.2	3	+ 2.917	− 28 32 6.8	64.8	2	+ 19.60
487	Anonymous	8.2	49 17.06	68.8	2	2.926	− 27 6 26.9	67.0	2	19.60
488	B. A. C. 263.	6.5	49 43.03	68.9	2	3.214	+ 26 14 28.3	53.9	3	19.59
489	η Andromedæ	5.0*	49 44.17	46.0	4	3.192	+ 22 39 37.6	68.4	2	19.59
490	Anonymous	9.0	49 58.53	61.4	2	3.082	+ 2 1 5.9	69.0	2	19.58
491	Lacaille 257.	6.7	0 49 59.34	64.0	4	+ 2.931	− 26 7 20.8	68.3	2	+ 19.58
492	2 Ursæ Minoris	5.0*	50 16.65	62.3	3	6.772	+ 85 30 12.7	67.9	2	19.58
493	Lalande 1627	7.4	50 19.13	68.8	2	3.289	+ 36 44 30.9	47.8	4	19.58
494	Lalande 1629	6.0	50 23.91	68.9	2	3.306	+ 38 43 8.7	48.8	1	19.58
495	Weisse O, 871	8.0	50 30.10	63.5	10	3.077	+ 1 20 8.9	62.8	6	19.57
496	B. A. C. 269.	6.5*	0 50 34.03	55.1	7	+ 3.139	+ 12 56 17.8	69.4	2	+ 19.57
497	Weisse O, 878	8.5*	50 42.05	68.4	4	3.107	+ 6 51 13.8	66.8	3	19.57
498	Anonymous	7.8	50 46.91	68.9	2	3.081	+ 1 43 44.5	57.9	2	19.58
499	Anonymous	9.5	51 11.98	61.0	1	3.082	+ 1 50 45.6	68.9	2	19.56
500	O. Arg. S. 542	7.8	51 29.61	64.4	7	2.915	− 27 50 57.2	68.9	2	19.55
501	Weisse O, 891	9.0	0 51 42.82	65.9	6	+ 3.108	+ 6 57 46.8	66.6	4	+ 19.55
502	ϕ^4 Ceti	6.0*	51 43.22	59.9	1	3.008	− 12 8 11.4	54.8	3	19.55
503	O. Arg. S. 544	7.2	51 49.41	64.9	4	2.961	− 20 23 21.2	67.3	2	19.55
504	Weisse O, 893	8.8	51 50.08	63.7	6	3.082	+ 1 54 9.3	56.4	4	19.55
505	α Sculptoris	4.6	51 51.44	63.3	10	2.898	− 30 6 53.2	68.4	2	19.54
506	Weisse O, 902	8.6	0 52 12.54	68.9	2	+ 3.084	+ 2 19 38.4	58.0	2	+ 19.54
507	Rumker, N. F., 451	8.2	52 25.44	68.9	2	3.089	+ 3 13 17.6	57.8	2	19.53
508	Weisse O, 908	8.7	52 26.42	59.9	2	3.061	− 2 4 58.2	54.9	2	19.53
509	B. A. C. 274.	6.5*	52 34.40	45.8	2	3.102	+ 5 43 40.3	68.5	2	19.53
510	Lalande 1702	6.5	52 36.93	69.2	3	3.284	+ 34 56 6.3	47.9	1	19.53

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511	Weisse O, 912	7.7	0 52 40.68	68.8	3	+ 3.086	+ 2 32 49.4	58.0	2	+ 19.53
512	B. A. C. 277	7.0*	52 46.91	62.9	2	2.855	− 35 23 36.0	61.8	3	19.53
513	Weisse O, 918	8.0	52 53.77	66.3	3	3.082	+ 1 52 38.1	56.0	2	19.52
514	Weisse O, 917	9.0	52 53.96	67.7	2	3.094	+ 4 8 21.1	68.4	2	19.52
515	Lalande 1737	8.0	53 23.98	64.4	5	3.119	+ 8 43 52.7	67.4	2	19.51
516	Weisse O, 925	9.0	0 53 26.01	65.9	4	+ 3.115	+ 7 56 48.3	61.6	6	+ 19.51
517	Weisse O, 928	7.3	53 36.50	65.7	7	3.094	+ 4 4 44.9	60.2	3	19.51
518	O. Arg. S. 569	6.9	53 45.27	68.8	2	2.917	− 26 30 10.2	63.9	2	19.51
519	Weisse O, 931	8.7	53 47.47	65.9	4	3.116	+ 8 1 3.5	61.9	2	19.51
520	Piazzi O, 256	8.0	53 55.51	65.9	2	3.112	+ 7 16 49.0	65.8	2	19.51
521	Weisse O, 935	8.0	0 53 55.59	65.8	4	+ 3.042	− 5 24 4.0	65.8	3	+ 19.51
522	Weisse O, 944	7.8	54 24.73	64.4	3	3.122	+ 8 59 23.4	56.9	2	19.49
523	Weisse O, 946	9.1	54 29.84	64.5	3	3.121	+ 8 51 1.5	62.9	2	19.49
524	Weisse O, 950	7.8	54 38.37	68.9	2	3.124	+ 9 20 8.3	55.9	2	19.49
525	Lacaille 276	7.2	54 43.06	63.8	2	2.858	34 6 57.4	66.9	2	19.49
326	Lacaille 277	5.3	0 54 45.55	69.3	2	+ 2.810	− 39 40 23.7	65.9	2	+ 19.49
527	70 Piscium	7.1	54 50.22	64.4	9	3.112	+ 7 11 5.6	57.9	5	19.49
528	B. A. C. 284	5.5	55 1.97	68.8	2	2.815	− 38 57 57.4	53.9	2	19.48
529	B. A. C. 286	6.5	55 12.52	64.8	4	3.117	+ 8 4 5.8	60.9	3	19.48
530	Santini 58	6.8	55 24.38	64.7	6	3.119	+ 8 22 50.3	58.6	10	19.47
531	Anonymous	8.0	0 55 25.84	69.4	2	+ 3.092	+ 3 39 45.0	57.8	2	+ 19.47
532	Weisse O, 969	8.8	55 32.46	69.3	2	3.080	+ 1 28 29.3	67.8	2	19.47
533	ε Piscium	4.4	55 40.77	64.9	111	3.112	+ 7 8 8.0	60.8	18	19.47
534	Weisse O, 973	9.0	55 43.46	63.2	3	3.081	+ 1 35 32.5	67.0	1	19.47
535	Weisse O, 972	9.0	55 45.01	68.9	2	3.125	+ 9 20 9.1	55.9	2	19.47
536	σ Sculptoris	5.3	0 55 45.36	63.0	2	+ 2.868	− 32 18 24.2	67.8	3	+ 19.47
537	25 Ceti	5.5	55 57.70	67.3	2	3.040	− 5 35 8.9	65.8	3	19.46
538	Radcliffe 316	8.0	55 57.79	65.9	2	3.574	+ 57 13 41.8	67.6	3	19.46
539	Radcliffe 317	9.0	56 0.48	65.9	2	3.574	+ 57 11 14.5	67.6	3	19.46
540	B. A. C. 290	6.0	56 1.91	68.8	2	3.509	+ 53 27 14.7	53.9	3	19.46
541	Radcliffe 319	8.5	0 56 6.80	65.8	2	+ 3.577	+ 57 17 9.7	68.9	2	+ 19.46
542	Anonymous	9.0	56 8.16	69.9	4	2.923	− 24 38 9.0	69.0	1	19.46
543	Weisse O, 979	7.0	56 13.08	68.8	2	3.086	+ 2 30 10.5	58.0	3	19.46
544	Weisse O, 980	9.0	56 14.85	68.9	1	3.126	+ 9 21 25.1	55.9	4	19.46
545	O. Arg. S. 592	8.0	56 23.53	64.8	2	2.927	− 23 55 56.5	68.8	2	19.46
546	O. Arg. S. 596	8.0*	0 56 34.03	69.8	2	+ 2.894	− 28 37 58.7	66.3	2	+ 19.45
547	B. A. C. 296	6.5*	56 36.56	65.3	2	2.881	− 30 16 40.7	67.9	2	19.45
548	26 Ceti	6.0	56 36.84	63.6	3	3.076	+ 0 36 56.9	62.9	34	19.45
549	Anonymous	. .	56 43.	. .	.	2.923	− 24 33 48.9	63.9	1	19.44
550	Weisse O, 989	8.2	56 43.43	70.0	2	3.157	+ 14 28 31.3	70.0	2	19.44

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551	Lacaille 290. . . .	6.8	0 56 44.50	69.7	2	+ 2.861	− 32 49 53.5	64.4	2	+ 19.44
552	Weisse O, 997 . . .	8.0	57 20.12	65.9	4	3.123	+ 8 50 3.4	62.0	4	19.43
553	Weisse O, 1002. . .	6.0	57 31.63	68.9	2	3.081	+ 1 33 48.1	66.8	3	19.43
554	Anonymous . . .	7.6	57 42.10	68.9	2	3.114	+ 7 8 39.8	65.9	3	19.43
555	B. A. C. 306. . . .	6.2	57 55.98	63.2	3	2.844	− 34 17 3.5	69.9	4	19.42
556	Weisse O, 1013. . .	8.0*	0 58 6.80	59.3	2	+ 3.117	+ 7 34 54.2	56.9	2	+ 19.41
557	Anonymous . . .	8.5	58 15.65	67.8	2	3.130	+ 9 47 8.8	67.9	2	19.41
558	Weisse O, 1023. . .	8.8	58 31.26	63.1	5	3.082	+ 1 43 34.4	62.9	5	19.41
559	77 Piscium	5.5	58 34.74	59.3	3	3.097	+ 4 9 43.3	57.8	3	19.40
560	B. A. C. 312. . . .	6.0	58 36.94	59.3	3	3.097	+ 4 9 47.3	57.8	3	19.40
561	O. Arg. S. 613 . . .	7.2	0 58 43.12	68.8	2	+ 2.884	− 29 4 19.3	64.4	2	+ 19.40
562	Lacaille 301. . . .	7.7	58 50.28	63.5	3	2.894	− 27 42 12.9	66.9	2	19.40
563	Weisse O, 1028. . .	7.2	58 52.69	68.8	2	3.087	+ 2 31 30.6	66.4	4	19.40
564	Weisse O, 1031. . .	8.8	58 55.64	63.8	8	3.083	+ 1 52 55.7	62.9	5	19.40
565	μ Cassiopeæ	5.5*	59 2.80	69.9	2	3.545	+ 54 13 40.2	69.4	2	19.40
566	28 Ceti	5.0	0 59 3.64	57.2	4	+ 3.008	− 10 35 24.8	68.0	2	+ 19.39
567	O. Arg. S. 621 . . .	9.0	59 4.40	63.8	1	2.895	− 27 24 44.2	67.9	2	19.39
568	Weisse O, 1033. . .	9.0	59 5.46	60.2	3	3.066	− 1 0 57.4	54.9	3	19.39
569	Weisse O, 1034. . .	9.5	59 7.81	65.9	5	3.127	+ 9 9 56.1	65.8	2	19.39
570	O. Arg. S. 623 . . .	8.5*	59 11.63	64.3	4	2.894	− 27 28 44.5	67.9	2	19.39
571	Weisse O, 1041. . .	8.5	0 59 15.82	65.6	5	+ 3.063	− 1 29 52.7	65.8	2	+ 19.39
572	Lacaille 303. . . .	6.0	59 20.67	66.5	3	2.914	− 24 44 30.1	66.5	3	19.39
573	Weisse O, 1043. . .	6.8	59 20.78	64.3	2	3.118	+ 7 36 40.5	56.9	2	19.39
574	Lacaille 310. . . .	6.0	59 25.16	70.3	4	2.914	− 24 44 41.5	67.2	3	19.39
575	Weisse (2) O, 1490. .	7.3	59 32.84	69.0	2	3.333	+ 37 16 45.0	46.9	1	19.38
576	Weisse O, 1048. . .	9.0	0 59 39.39	68.8	2	+ 3.090	+ 3 3 42.0	58.0	3	+ 19.38
577	B. A. C. 319. . . .	6.0	59 52.58	64.1	3	2.817	− 36 24 37.4	69.1	3	19.38
578	Weisse O, 1054. . .	8.9	0 59 55.42	65.7	3	3.064	− 1 20 23.8	65.8	2	19.37
579	O. Arg. S. 636 . . .	7.0	1 0 25.14	64.3	4	2.905	− 25 36 16.3	67.4	2	19.36
580	O. Arg. S. 635 . . .	6.0	0 25.17	68.3	6	2.912	− 24 44 40.6	69.5	5	19.36
581	ψ^2 Piscium	7.3	1 0 26.92	57.5	4	+ 3.199	+ 19 59 34.5	68.4	2	+ 19.36
582	Lalande 1966 . . .	9.0*	0 46.19	70.9	2	3.697	+ 60 47 47.4	70.9	3	19.36
583	29 Ceti	7.0	0 46.66	63.0	2	3.080	+ 1 15 37.1	62.8	10	19.36
584	O. Arg. S. 644 . . .	7.0	0 55.09	68.8	2	2.883	− 28 28 17.1	66.8	2	19.35
585	Santini 64	6.3	1 2.76	65.9	3	3.129	+ 9 9 36.1	65.8	2	19.35
586	Weisse O, 1076. . .	8.5	1 1 3.49	61.5	3	+ 3.135	+ 10 6 35.3	59.9	3	+ 19.35
587	Weisse O, 1078. . .	9.0	1 8.36	64.3	2	3.126	+ 8 38 8.0	65.6	3	19.35
588	e Piscium	5.3	1 9.56	61.2	33	3.102	+ 4 54 29.5	62.2	22	19.35
589	Weisse O, 1079. . .	9.2	1 11.05	61.5	3	3.135	+ 10 8 41.3	59.9	3	19.35
590	Rumker, N. F., 538 .	8.5	1 32.59	69.8	2	3.094	+ 3 41 1.5	58.5	2	19.33

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			h. m. s.			"	° ' "			"
591	η Ceti	4.0	1 1 32.86	60.2	5	+ 3.004	− 10 55 31.3	69.9	2	+ 19.34
592	Weisse O, 1085	6.5	1 36.73	64.3	2	3.128	+ 8 58 58.9	59.9	3	19.34
593	Anonymous	9.0	1 49.39	65.7	2	3.147	+ 11 56 40.6	67.9	2	19.33
594	Lalande 2027	6.5	1 53.55	68.9	2	3.344	+ 37 22 38.2	47.7	1	19.33
595	β Andromedæ	2.0*	1 54.24	59.0	3	3.321	+ 34 52 38.6	56.4	4	19.33
596	Anonymous	9.5	1 1 59.75	64.3	5	+ 3.085	+ 2 1 40.1	68.3	2	+ 19.33
597	θ Cassiopeæ	4.5*	2 35.65	45.8	2	3.576	+ 54 24 15.5	69.4	2	19.31
598	Weisse I, 13	9.0	2 38.82	65.7	4	3.148	+ 11 55 35.7	67.8	3	19.31
599	B. A. C. 341	7.0	2 46.45	45.7	2	3.168	+ 14 55 39.5	69.9	2	19.31
600	Weisse I, 15	8.5	2 49.67	68.8	2	3.087	+ 2 20 3.0	65.8	2	19.31
601	Weisse I, 20	9.3	1 3 1.06	64.6	8	+ 3.086	+ 2 15 15.4	66.4	2	+ 19.30
602	Weisse I, 22	8.3	3 14.88	65.8	2	3.139	+ 10 24 4.9	65.9	3	19.30
603	45 Andromedæ	4.8	3 18.76	69.2	3	3.346	+ 36 58 41.4	47.9	2	19.30
604	O. Arg. S. 665	7.5	3 20.21	62.3	6	2.887	− 26 56 24.3	66.6	3	19.29
605	Lamont 187	9.0	3 47.53	65.4	2	3.061	− 1 44 19.3	54.9	2	19.28
606	χ Piscium	4.8	1 3 56.01	63.0	4	+ 3.208	+ 20 17 20.9	69.4	2	+ 19.28
607	Weisse I, 40	9.0*	4 6.82	47.0	4	3.054	− 2 43 54.2	47.3	4	19.28
608	Weisse I, 39	6.7	4 9.06	65.9	6	3.134	+ 9 32 47.7	65.8	3	19.28
609	Weisse I, 42	8.4	4 13.68	65.6	2	3.148	+ 11 36 9.0	67.8	2	19.27
610	Weisse I, 55	7.1	4 58.05	65.8	4	3.148	+ 11 32 21.3	65.8	2	19.26
611	Anonymous	8.5	1 5 4.28	65.6	3	+ 3.154	+ 12 17 40.3	67.3	2	+ 19.25
612	35 Ceti	6.5*	5 20.03	61.9	3	3.083	+ 1 43 51.1	65.9	2	19.25
613	Weisse I, 62	9.0	5 24.39	65.9	3	3.147	+ 11 14 52.7	65.8	2	19.25
614	Radcliffe 371	8.5	5 35.00	66.6	3	3.492	+ 48 2 37.5	67.9	2	19.24
615	Weisse I, 65	8.3	5 44.64	67.3	2	3.146	+ 11 0 19.2	68.4	2	19.24
616	Weisse I, 66	7.8	1 5 47.03	65.8	2	+ 3.145	+ 10 56 19.3	65.8	2	+ 19.24
617	Anonymous	9.4	5 50.47	63.8	7	3.086	+ 2 11 5.3	62.8	5	19.23
618	Weisse I, 72	8.3	6 12.73	58.0	2	3.055	− 2 36 8.0	47.0	3	19.22
619	ζ Piscium, (1st *)	5.6	6 25.18	63.1	10	3.118	+ 6 50 3.4	58.1	5	19.22
620	Lacaille 329	7.0	6 25.83	62.7	3	2.789	− 36 29 25.0	67.9	2	19.22
621	Weisse I, 76	8.0	1 6 26.25	67.4	2	+ 3.139	+ 10 4 12.7	69.5	2	+ 19.22
622	ζ Piscium, (2d *)	6.7	6 26.60	64.3	6	3.118	+ 6 50 13.8	58.9	3	19.22
623	Weisse I, 88	7.0	6 56.82	47.0	1	3.053	− 2 51 25.7	68.4	2	19.21
624	Weisse I, 89	9.0	6 58.98	61.9	1	3.077	+ 0 45	. .	.	19.21
625	Weisse I, 91	8.0	7 6.55	47.0	1	3.052	− 2 55 20.0	67.9	2	19.20
626	88 Piscium	6.0	1 7 25.57	69.2	3	+ 3.114	+ 6 15 13.8	55.9	2	+ 19.19
627	Rumker, N. F., 558	8.2	7 29.91	68.8	2	3.098	+ 3 51 15.5	59.0	3	19.19
628	Weisse I, 100	7.8	7 31.56	61.9	4	3.133	+ 8 59 59.5	59.9	7	19.19
629	O. Arg. S. 704	8.8	7 35.56	68.8	3	2.890	− 25 2 37.0	66.7	4	19.19
630	a^1 Ursæ Minoris	9.5	7 36.48	63.2	3	18.523	+ 83 33 31.0	70.0	7	19.19

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631	38 Ceti	7.0	1 7 40.45	55.4	5	+ 3.060	− 1 43 26.6	55.4	8	+ 19.19
632	Polaris	2.0*	8 3.	. .	.	18.667	+ 88 33 47.0	54.3	755	19.18
633	Weisse I, 113	7.0	8 27.47	61.9	3	3.135	+ 9 2 32.5	58.7	6	19.17
634	Schjellerup 402	9.2	9 3.82	63.0	2	3.088	+ 2 16 41.1	66.9	2	19.15
635	Anonymous	6.8	9 18.68	68.9	2	3.391	+ 38 44 26.6	45.9	5	19.15
636	Rumker, N. F., 572	. .	1 9 29.	. .	.	+ 3.102	+ 4 18 56.7	58.3	3	+ 19.14
637	39 Ceti	5.0	9 29.73	68.9	2	3.050	− 3 14 19.5	67.8	2	19.14
638	Anonymous	8.8	9 44.99	68.8	2	3.369	+ 36 40 45.6	46.9	1	19.15
639	40 Ceti	6.7	9 49.06	61.3	2	3.051	− 3 0 50.4	66.4	2	19.14
640	Weisse I, 138	7.0	9 57.82	65.5	2	3.081	+ 1 16 31.6	63.6	3	19.13
641	Weisse I, 139	7.8	1 10 4.90	68.9	2	+ 3.100	+ 3 55 32.5	58.0	2	+ 19.13
642	Weisse I, 144	8.0	10 18.35	69.9	1	3.164	+ 12 49 6.7	56.4	2	19.12
643	*f* Piscium	6.0	10 34.81	54.6	5	3.093	+ 2 52 35.4	65.3	2	19.11
644	41 Ceti	5.8	10 40.32	68.8	2	3.012	− 8 23 59.6	55.9	2	19.11
645	Lalande 2330	6.5	10 51.64	68.9	2	3.375	+ 36 38 53.7	47.4	5	19.09
646	Weisse I, 162	7.2	1 11 37.75	68.7	2	+ 3.101	+ 3 54 58.7	63.0	2	+ 19.08
647	Rumker, N. F., 585	7.5	11 48.97	68.8	2	3.103	+ 4 17 45.5	58.3	3	19.08
648	O. Arg. S. 752	7.5	11 54.77	69.7	2	2.839	− 29 28 16.1	66.3	2	19.08
649	B. A. C. 397	7.2	12 9.65	62.9	2	3.090	+ 2 33 12.5	62.8	5	19.07
650	Anonymous	9.1	12 19.68	69.8	2	3.092	+ 2 49 14.2	65.9	2	19.06
651	42 Ceti	6.0*	1 12 38.90	65.9	2	+ 3.063	− 1 14 43.0	55.4	3	+ 19.06
652	Weisse I, 188, (1st *)	9.2	12 49.75	69.7	2	3.169	+ 13 1 47.3	70.9	2	19.05
653	Weisse I, 188, (2d *)	9.0	12 50.27	68.5	3	3.169	+ 13 1 52.7	68.5	2	19.05
654	Weisse I, 197	8.7	13 7.42	61.9	5	3.085	+ 1 45 7.6	62.0	2	19.04
655	Lalande 2410	8.5	13 14.04	58.7	3	3.167	+ 12 43 55.7	67.7	2	19.04
656	Anonymous	9.0	1 13 21.40	67.2	2	+ 3.249	+ 22 47 47.6	69.4	2	+ 19.04
657	Anonymous	8.3	13 24.74	70.9	1	3.115	+ 5 53 8.0	70.9	1	19.04
658	Weisse I, 201	8.5	13 26.00	67.3	2	3.162	+ 12 7 35.0	65.8	3	19.04
659	Weisse I, 202	7.0	13 28.25	61.4	3	3.043	− 3 58 58.8	55.6	3	19.03
660	Weisse I, 206	7.5	13 44.28	62.0	4	3.057	− 2 2 46.9	55.9	6	19.03
661	Lacaille 362	6.8	1 13 46.92	63.0	2	+ 2.830	− 29 43 19.1	67.0	2	+ 19.03
662	Weisse I, 208	9.5	13 53.30	67.4	2	3.156	+ 11 11 32.4	69.4	2	19.02
663	ξ Andromedæ	5.5	14 6.81	61.5	3	3.494	+ 44 47 38.1	68.0	2	19.02
664	Anonymous	9.1	14 39.88	69.2	3	3.063	− 1 14 8.9	53.8	2	19.00
665	Weisse I, 225	9.0*	14 40.66	47.0	3	3.052	− 2 43 53.0	46.9	4	19.00
666	Weisse I, 227	9.5	1 15 3.19	47.0	3	+ 3.052	− 2 37 50.0	68.9	1	+ 19.00
667	Weisse I, 229	8.7	15 4.59	62.9	4	3.093	+ 2 47 8.1	62.8	4	19.00
668	43 Ceti	6.2	15 25.36	65.2	6	3.063	− 1 10 58.1	62.8	11	18.98
669	Anonymous	9.1	15 29.57	65.8	2	3.115	+ 5 41 57.4	67.8	2	18.98
670	Anonymous	8.0	16 23.83	68.9	2	3.418	+ 38 17 37.7	45.9	1	18.96

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671	Weisse I, 255 . . .	8.1	1 16 29.48	65.8	5	+ 3.116	+ 5 46 5.8	68.4	2	+ 18.95
672	δ Cassiopeæ	4.5	16 41.52	65.4	2	3.818	+ 59 30 22.2	65.4	2	18.94
673	B. A. C. 418. . . .	6.8	16 54.46	63.6	3	2.866	− 25 5 8.0	66.9	2	18.94
674	θ Ceti	3.5	17 1.59	56.5	230	3.003	− 8 54 23.4	53.5	37	18.93
675	Weisse I, 269 . . .	8.0	17 6.90	65.8	5	3.116	+ 5 45 12.0	65.4	2	18.93
676	Weisse I, 281 . . .	9.5	1 17 41.87	65.3	2	+ 3.020	− 6 43 49.3	67.8	2	+ 18.91
677	Weisse I, 280 . . .	5.0	17 41.96	68.8	2	3.044	− 3 34 42.2	55.6	6	18.91
678	Lalande 2559 . . .	7.0	17 45.45	69.8	4	3.391	+ 35 37 46.6	48.9	1	18.01
679	O. Arg. S. 818 . . .	7.1	17 49.23	68.9	2	2.823	− 29 13 51.3	64.5	3	18.91
680	Weisse I, 288 . . .	7.0	17 57.37	68.9	2	3.019	− 6 40 37.1	66.8	2	18.89
681	Weisse I, 299 . . .	8.0	1 18 35.95	61.8	3	+ 3.149	+ 9 48 37.7	55.0	2	+ 18.89
682	ρ Piscium	5.0*	18 42.79	61.9	6	3.222	+ 18 26 33.0	66.3	2	18.89
683	94 Piscium	5.8	19 8.36	65.8	2	3.224	+ 18 30 50.1	66.4	2	18.87
684	Lalande 2603 . . .	7.6	19 10.08	69.3	2	3.438	+ 38 55 42.2	49.0	1	18.87
685	Lalande 2612 . . .	8.4	19 15.61	67.9	3	3.063	− 1 10 24.9	68.4	2	18.87
686	Weisse I, 313 . . .	8.0	1 19 16.70	68.9	2	+ 3.153	+ 10 10 10.1	56.9	2	+ 18.87
687	B. A. C. 433 . . .	6.5	19 17.54	64.4	5	3.063	− 1 7 38.0	62.7	6	18.87
688	Weisse I, 330 . .	7.8	20 2.38	63.2	6	3.097	+ 3 4 46.1	62.7	5	18.85
689	Weisse I, 328 . . .	8.7	20 2.58	65.8	6	3.122	+ 6 14 6.9	65.8	3	18.85
690	Weisse I, 335 . . .	8.6	20 20.34	63.2	5	3.097	+ 3 9 4.2	62.7	5	18.84
691	Weisse I, 336 . . .	9.0	1 20 24.16	62.0	1	+ 3.137	+ 8 3 7.1	55.4	2	+ 18.83
692	(* 61) Washington . .	9.0	20 35.91	68.9	3	3.139	+ 8 18 13.9	55.9	2	18.85
693	Lacaille 403	6.0	20 41.18	63.0	2	2.875	− 23 3 46.1	67.4	2	18.83
694	A Cassiopeæ	5.0*	20 52.37	63.1	2	4.311	+ 69 32 31.0	64.0	9	18.82
695	B. A. C. 439. . . .	6.5	20 52.77	61.2	3	3.208	+ 18 21 12.0	67.9	1	18.82
696	B. A. C. 440. . . .	7.0	1 21 2.58	61.5	3	+ 3.131	+ 7 14 4.6	68.4	2	+ 18.82
697	Weisse I, 348 . . .	8.2	21 7.21	69.3	2	3.131	+ 7 13 56.0	68.4	2	18.81
698	Anonymous . . .	8.3	21 10.43	68.9	1	3.187	− 13 55 55.9	57.0	3	18.81
699	O. Arg. S. 850, (1st *) .	9.0	21 15.81	66.8	2	2.921	− 17 59	. .	.	18.81
700	O. Arg. S. 850, (2d *) .	8.0	21 16.66	65.8	3	2.921	− 17 59 19.3	67.5	2	18.81
701	Lacaille 407. . . .	6.5	1 21 17.02	63.3	3	+ 2.877	− 22 45 52.2	68.3	2	+ 18.81
702	Lacaille 408. . . .	7.5	21 26.13	64.6	3	2.826	− 27 50 19.4	68.3	2	18.80
703	96 Piscium	5.5	21 44.76	61.1	3	3.126	+ 6 34 12.3	68.5	2	18.79
704	Weisse I, 362 . . .	8.0	21 58.08	65.9	2	3.019	− 6 25 34.9	68.4	2	18.79
705	O. Arg. S. 861 . . .	6.8	22 9.74	63.3	2	2.848	− 25 31 24.8	67.4	2	18.78
706	Weisse I, 375 . . .	8.1	1 22 42.63	64.4	2	+ 3.069	− 0 21 2.0	56.4	3	+ 18.76
707	Weisse I, 381 . . .	7.1	22 50.12	65.8	5	3.020	− 6 19 11.5	65.4	2	18.76
708	μ Piscium	5.0	22 51.13	58.1	10	3.117	+ 5 25 15.7	61.7	26	18.76
709	Weisse I, 382 . . .	8.5	22 55.36	61.9	2	3.159	+ 10 21 57.8	54.9	2	18.76
710	Weisse I, 389 . . .	9.0	23 20.05	65.7	4	3.077	+ 0 38 9.9	65.8	2	18.75

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711	B. A. C. 452	6.4	1 23 46.87	63.2	3	+ 2.829	− 26 55 54.6	65.4	2	+ 18.73
712	η Piscium	4.2	23 59.78	64.4	96	3.197	+ 14 37 22.1	60.9	13	18.72
713	Weisse I, 1402	8.0	24 5.12	65.8	5	3.019	− 6 16 0.3	65.4	2	18.72
714	B. A. C. 454	6.5	24 18.92	64.9	2	3.158	+ 10 9 57.1	67.9	2	18.71
715	Lalande 2751	8.0*	24 30.44	70.9	2	4.279	+ 68 13 24.3	70.9	2	18.71
716	Weisse I, 410	7.0	1 24 31.43	68.8	2	+ 3.151	+ 9 15 59.3	56.3	3	+ 18.71
717	Weisse I, 414	8.3	24 48.19	68.8	2	3.166	+ 10 58 26.3	56.9	2	18.70
718	Rumker 331	8.6	25 0.32	68.9	2	3.039	− 3 51 5.0	55.9	2	18.70
719	B. A. C. 460	5.8	25 14.66	68.9	2	2.780	− 31 0 11.1	55.8	4	18.68
720	Lacaille 435	7.2	25 20.76	63.5	3	2.809	− 28 25 31.0	66.9	2	18.68
721	Lacaille 436	7.3	1 25 28.72	66.4	2	+ 2.851	− 24 22 0.5	67.9	2	+ 18.68
722	Anonymous	. .	25 33.53	70.9	3	3.204	+ 14 58 33.9	69.2	4	18.67
723	Weisse I, 432	8.5	25 34.68	68.8	1	3.052	− 2 22 27.3	54.8	3	18.67
724	Lacaille 438, (1st *)	8.5	25 45.27	63.0	2	2.821	− 27 16 14.1	68.3	3	18.67
725	Lacaille 438, (2d *)	7.0	25 46.43	69.7	1	2.820	− 27 16 6.6	68.9	2	18.67
726	B. A. C. 464	6.0	1 25 58.09	58.8	2	+ 3.136	+ 7 29 22.9	67.9	2	+ 18.66
727	Weisse I, 441	8.9	26 0.89	67.6	4	3.050	− 2 30 41.6	54.9	2	18.66
728	Weisse I, 450	8.0	26 29.11	66.8	2	3.050	− 2 35 6.1	58.4	4	18.65
729	Weisse (2) I, 575	9.0	26 30.44	65.0	6	3.204	+ 15 3 2.6	57.6	3	18.64
730	Lacaille 444	6.4	26 35.48	63.8	2	2.843	− 24 53 31.8	66.9	2	18.64
731	Anonymous	9.7	1 26 45.47	68.9	1	+ 3.050	− 2 29 40.1	70.0	3	+ 18.63
732	B. A. C. 469	5.5	27 14.96	57.8	2	3.231	+ 17 44 39.5	69.4	2	18.62
733	Rumker, N. F., 755	8.8	27 25.51	68.9	2	3.125	+ 6 2 38.3	58.0	2	18.61
734	B. A. C. 471	7.5*	27 32.38	59.1	2	3.138	+ 7 33 25.6	67.9	2	18.61
735	Weisse I, 468	8.4	27 33.62	65.6	4	3.200	+ 14 33 11.9	66.7	2	18.61
736	Lacaille 451	6.7	1 27 35.26	68.8	2	+ 2.790	− 29 30 9.5	64.8	3	+ 18.61
737	B. A. C. 472	6.5	27 36.01	68.1	4	3.074	+ 0 14 12.1	60.7	5	18.61
738	Lacaille 452	7.8	27 46.01	62.9	3	2.805	− 28 4 56.9	66.4	2	18.60
739	Lacaille 453	6.6	27 52.89	63.3	3	2.795	− 28 57 17.8	68.0	2	18.60
740	Lacaille 456	6.2	28 13.58	63.0	2	2.844	− 24 25 7.4	65.4	2	18.59
741	101 Piscium	6.0	1 28 17.51	60.7	5	+ 3.196	+ 13 56 38.5	68.9	2	+ 18.59
742	B. A. C. 477	6.0	28 20.48	50.8	6	3.223	+ 16 42 57.3	68.5	2	18.58
743	Lacaille 459	7.2	28 25.79	64.9	2	2.705	− 36 3 49.1	68.9	2	18.58
744	B. A. C. 479	6.2	28 27.13	65.3	2	2.750	− 32 36 33.3	68.4	2	18.58
745	Anonymous	8.0	28 29.95	68.8	2	2.846	− 24 10 2.4	64.9	2	18.58
746	Lacaille 458	6.8	1 28 31.73	68.2	3	+ 2.774	− 30 37 55.1	68.3	2	+ 18.58
747	O. Arg. S. 938	8.3	28 35.65	69.8	2	2.774	− 30 35 39.4	69.4	2	18.58
748	50 Andromedæ	5.0*	28 35.79	45.7	2	3.506	+ 40 42 10.3	72.9	2	18.58
749	B. A. C. 481	6.0	28 43.47	67.4	2	3.133	+ 6 55 39.1	68.4	2	18.57
750	B. A. C. 482	5.0	29 0.26	64.0	2	3.859	+ 57 15 46.1	72.9	2	18.56

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751	Lalande 2942	7.1	1 29 3.86	63.9	2	+ 2.905	− 18 14 31.9	68.4	2	+ 18.56
752	Weisse I, 497	8.5*	29 11.64	58.9	2	3.099	+ 3 4 10.5	54.9	2	18.56
753	Lalande 2936	7.4	29 23.35	68.9	2	3.466	+ 37 48 0.4	47.9	1	18.55
754	51 Andromedæ	3.5*	29 24.72	57.7	2	3.635	+ 47 55 1.4	68.6	3	18.55
755	Lacaille 462	6.5	29 40.08	67.3	2	2.770	− 30 37 30.4	68.3	2	18.54
756	π Piscium	5.0*	1 29 40.85	60.5	15	+ 3.175	+ 11 25 26.8	57.8	6	+ 18.54
757	Weisse I, 504	8.8	29 47.60	58.8	3	3.102	+ 3 22 18.1	56.3	5	18.53
758	Weisse I, 508	9.0	30 2.28	61.4	2	3.089	+ 1 52 4.6	67.9	2	18.53
759	Lacaille 466	6.2	30 26.10	65.8	2	2.738	− 33 0 46.2	66.9	1	18.52
760	B. A. C. 491	6.0*	30 38.35	48.7	1	2.980	− 10 7 18.3	68.5	2	18.51
761	Anonymous	9.0	1 30 47.54	63.0	1	+ 3.102	+ 3 22 17.5	69.4	2	+ 18.50
762	Weisse I, 511	7.0*	31 6.60	61.4	2	3.088	+ 1 52 20.1	58.1	5	18.49
763	Lalande 2966	8.0*	31 16.32	70.9	2	4.246	+ 66 12 28.5	70.9	2	18.49
764	Weisse I, 540	8.9	31 41.98	68.8	3	3.103	+ 3 24 37.1	55.9	2	18.47
765	103 Piscium	6.2	31 42.89	65.4	2	3.220	+ 15 54 49.3	59.6	7	18.47
766	Weisse I, 539	8.5	1 31 44.48	61.9	2	+ 3.180	+ 11 43 35.9	56.9	3	+ 18.47
767	Lalande 3025	6.8	31 52.59	68.8	2	3.484	+ 38 15 30.4	47.9	1	18.47
768	O. Arg. N. 1812	6.0*	32 1.71	69.7	2	4.307	+ 67 16 53.0	53.9	2	18.46
769	105 Piscium	5.5	32 7.90	66.3	2	3.219	+ 15 41 39.4	69.9	2	18.46
770	B. A. C. 503	5.5	32 14.08	66.3	2	2.674	− 37 14 14.1	68.9	2	18.45
771	B. A. C. 504	6.5	1 32 15.57	63.0	3	+ 2.820	− 25 44 7.1	64.8	2	+ 18.45
772	Lacaille 477	7.0	32 16.44	65.9	2	2.733	− 32 52 55.4	70.0	2	18.45
773	Anonymous	9.0	32 19.89	63.0	1	3.098	+ 2 50 22.8	69.9	2	18.45
774	Weisse I, 557	9.0	32 23.56	67.6	1	3.208	+ 14 32 59.4	70.4	2	18.45
775	Weisse I, 558	9.0	32 24.38	67.6	2	3.208	+ 14 32 43.5	70.4	2	18.45
776	Weisse I, 562	8.5	1 32 29.47	61.6	2	+ 2.097	+ 2 44 35.4	58.9	3	+ 18.44
777	Weisse I, 564	9.0*	32 31.43	47.0	2	3.042	− 3 13 47.3	47.3	4	18.44
778	B. A. C. 494	7.5	32 33.33	67.8	4	11.059	+ 86 14 11.1	69.0	2	18.44
779	Anonymous	9.0	32 42.96	65.8	2	3.201	+ 13 45 41.0	68.9	2	18.44
780	Lacaille 480	7.5	32 48.88	62.0	3	2.771	− 29 44 5.7	68.9	2	18.43
781	Anonymous	7.2	1 32 50.25	68.9	2	+ 3.477	+ 37 33 18.2	47.9	1	+ 18.43
782	Anonymous	9.5	32 51.86	61.9	1	3.202	+ 13 48 0.9	68.9	2	18.43
783	Weisse I, 569	9.5	32 54.23	61.9	6	3.176	+ 11 10 9.4	62.0	2	18.43
784	Weisse I, 576	7.2	33 4.33	65.2	3	3.131	+ 6 22 38.6	68.9	2	18.43
785	Weisse I, 578	8.7	33 11.26	65.6	2	3.213	+ 14 54 35.7	69.2	3	18.42
786	O. Arg. S. 992	7.1	1 33 16.58	63.9	3	+ 2.840	− 23 37 27.7	70.6	3	+ 18.42
787	Weisse I, 582	8.5	33 19.19	68.7	2	3.051	− 2 18 43.6	69.5	2	18.42
788	Anonymous	9.2	33 29.65	68.1	2	3.100	+ 3 1 48.3	70.0	2	18.41
789	Weisse I, 594	8.0*	33 40.02	47.0	3	3.041	− 3 19 49.9	46.9	5	18.40
790	Anonymous	9.5	33 41.70	61.9	4	3.179	+ 11 23 14.6	62.0	2	18.40

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791	B. A. C. 514	6.5*	1 33 45.21	48.7	1	+ 3.371	+ 29 20 13.7	70.4	2	+ 18.40
792	Weisse I, 598	9.0*	33 52.70	65.5	2	3.160	+ 9 24 23.7	61.9	2	18.40
793	Weisse I, 601	8.0	33 52.83	68.1	3	3.100	+ 3 0 1.4	70.0	2	18.40
794	Weisse I, 600	8.5	33 53.98	65.5	2	3.161	+ 9 24 9.7	61.9	2	18.40
795	B. A. C. 516	5.5	33 58.60	68.9	2	3.439	+ 34 32 15.4	47.4	2	18.39
796	Weisse I, 607	9.0	1 34 4.43	66.1	4	+ 3.107	+ 3 47 10.0	61.8	2	+ 18.39
797	ν Piscium	4.5	34 8.89	62.0	66	3.117	+ 4 46 40.5	62.1	31	18.39
798	Weisse I, 612	9.0*	34 15.92	65.8	3	3.140	+ 7 11 53.5	67.9	2	18.38
799	Lacaille 492	6.0	34 53.14	68.8	2	2.708	− 34 6 28.9	64.8	3	18.36
800	107 Piscium	5.7	34 54.03	66.0	2	3.263	+ 19 35 4.7	68.4	2	18.36
801	B. A. C. 524	6.5	1 34 54.78	64.0	2	+ 3.217	+ 15 4 11.8	63.8	2	+ 18.36
802	Weisse I, 628	8.8	34 56.13	63.0	3	3.107	+ 3 43 20.5	59.8	3	18.36
803	Anonymous	8.0	35 29.74	69.2	3	3.120	+ 5 1 40.3	55.9	2	18.34
804	Weisse I, 646	8.5	35 46.44	61.4	2	3.190	+ 12 14 56.4	54.9	2	18.33
805	B. A. C. 527	5.0	35 49.24	65.7	2	2.719	− 33 2 3.9	67.4	2	18.33
806	Weisse I, 655	7.5	1 36 20.70	69.8	2	+ 3.120	+ 5 2 20.1	63.9	3	+ 18.31
807	Weisse I, 672	8.0	36 53.60	65.8	2	2.981	− 9 21 47.3	67.4	2	18.29
808	Weisse I, 669	8.8	36 55.64	63.9	3	3.202	+ 13 21 14.6	66.9	2	18.29
809	Weisse I, 675	8.5	37 6.77	60.5	2	3.090	+ 1 54 39.9	54.9	2	18.28
810	109 Piscium	6.5*	37 17.34	58.8	2	3.266	+ 19 22 55.9	68.4	2	18.28
811	τ Ceti	4.5	1 37 32.95	68.9	2	+ 2.907	− 16 40 27.8	68.4	2	+ 18.27
812	Gr. 12-Year Cat. 150	6.2	37 40.89	70.9	2	4.164	+ 63 9 30.7	70.9	3	18.26
813	ο Piscium	4.3	38 0.27	62.0	53	3.154	+ 8 27 5.9	59.6	6	18.25
814	Anonymous	5.7	38 28.97	68.9	3	3.101	+ 2 57 51.1	64.4	2	18.23
815	Lacaille 509	7.2	38 32.17	66.0	2	2.758	− 29 25 40.5	68.3	2	18.23
816	Anonymous	. .	1 38 36.19	68.9	2	+ 3.508	+ 38 2 50.2	47.8	1	+ 18.23
817	Anonymous	. .	38 40.50	67.8	2	3.098	+ 2 42 55.3	67.9	3	18.23
818	Lalande 3237	7.8	38 42.88	60.8	3	3.046	− 2 37 44.6	58.1	6	18.22
819	O. Arg. S. 1049	8.4	38 44.36	66.2	3	2.787	− 27 3 48.8	68.8	2	18.22
820	B. A. C. 539	6.0*	38 57.69	57.8	2	3.009	− 6 26 7.5	68.9	2	18.22
821	O. Arg. S. 1052	7.5	1 39 3.55	64.1	5	+ 2.785	− 27 6 2.6	66.8	3	+ 18.21
822	ε Sculptoris	6.2	39 5.31	63.8	2	2.800	− 25 45 14.7	67.5	2	18.21
823	O. Arg. S. 1056	8.0	39 14.90	64.3	2	2.786	− 27 0 38.0	69.9	1	18.20
824	Anonymous	7.7	39 16.03	68.9	2	2.652	− 36 48 39.1	66.9	2	18.19
825	Anonymous	9.0	39 17.10	67.9	2	2.786	− 26 57 24.2	69.9	4	18.20
826	Lacaille 513	6.5	1 39 32.44	63.3	2	+ 2.772	− 28 2 57.4	64.9	2	+ 18.19
827	Weisse I, 709	6.5	39 43.71	69.7	2	3.173	+ 10 8 34.9	57.4	2	18.19
828	Anonymous	9.0	39 49.47	69.7	1	3.075	+ 0 17 8.6	55.9	2	18.18
829	Weisse I, 713	8.5	39 55.91	62.5	3	3.174	+ 10 15 9.2	56.9	2	18.18
830	Weisse I, 715	8.0*	39 57.86	47.0	3	3.034	− 3 48 56.6	47.0	4	18.17

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831	Weisse I, 721	8.9	1 40 21.14	63.9	3	+ 3.212	+ 13 53 59.9	68.9	2	+ 18.16
832	B. A. C. 544	6.5	40 23.83	68.8	3	3.503	+ 37 15 15.3	46.9	5	18.16
833	Weisse I, 725	8.0	40 26.73	51.8	5	3.036	− 3 36 38.3	56.2	4	18.16
834	O. Arg. S. 1066.	7.5	40 31.91	64.6	3	2.885	− 18 11 1.6	68.9	2	18.16
835	Weisse I, 727	9.0*	40 33.35	47.0	3	3.033	− 3 56 34.2	46.9	2	18.16
836	B. A. C. 547	6.0*	1 40 35.13	58.8	2	+ 3.685	+ 47 11 52.4	55.5	5	+ 18.15
837	B. A. C. 549	8.0*	40 35.53	58.9	2	3.238	+ 16 19 15.7	54.0	3	18.15
838	4 Arietis	6.5*	40 35.63	61.8	3	3.238	+ 16 15 25.8	68.6	2	18.15
839	Weisse I, 732	9.0	41 7.09	61.8	4	3.208	+ 13 21 52.1	58.9	3	18.14
840	B. A. C. 551.	6.5*	41 11.00	60.9	3	3.102	+ 2 59 7.9	61.5	18	18.13
841	Anonymous	. .	1 41	. .	.	+ 3.142	+ 6 58 37.0	70.0	1	+ 18.13
842	Anonymous	8.3	41 13.56	67.4	2	3.142	+ 6 57 42.4	69.0	1	18.13
843	Santini 102	7.8	41 19.52	65.1	4	3.142	+ 6 59 9.6	69.0	2	18.13
844	Weisse I, 740	8.8	41 42.54	65.0	2	3.191	+ 11 41 30.9	56.3	3	18.11
845	Anonymous	. .	41	. .	.	3.212	+ 13 35 47.6	70.0	1	18.11
846	Lacaille 527.	7.0	1 42 7.57	62.7	5	+ 2.779	− 26 57 7.0	65.9	3	+ 18.10
847	Anonymous	9.8	42 11.90	65.4	2	3.212	+ 13 36 2.2	70.0	1	18.10
848	Anonymous	. .	42 22.88	61.9	1	3.213	+ 13 43 6.6	61.8	1	18.09
849	1 Arietis	6.0	42 24.90	57.4	2	3.300	+ 21 34 41.9	69.4	2	18.09
850	Anonymous	8.6	42 27.85	65.5	2	3.215	+ 13 50 22.2	68.9	2	18.08
851	Weisse O, 753	8.0*	1 42 30.73	70.8	2	+ 2.956	− 11 23 55.2	70.4	2	+ 18.08
852	Lalande 3344	7.9	42 34.32	64.9	9	3.213	+ 13 39 7.7	67.3	3	18.08
853	χ Ceti	5.0*	42 42.59	57.8	5	2.956	− 11 22 50.9	70.4	2	18.08
854	Anonymous	10.0	42 48.26	65.4	2	3.212	+ 13 36 43.0	67.9	2	18.07
855	Weisse I, 755	8.8	42 49.36	66.1	2	3.075	+ 0 17 24.3	55.9	2	18.07
856	54 Ceti	6.0*	1 43 26.53	63.3	4	+ 3.178	+ 10 20 55.4	58.9	3	+ 18.05
857	Weisse I, 773	8.1	43 30.89	62.6	4	3.044	− 2 45 29.5	57.0	5	18.05
858	Lacaille 535.	7.2	43 34.51	63.2	5	2.738	− 29 44 12.4	64.9	2	18.04
859	Weisse I, 772	8.0	43 43.83	65.8	3	3.153	+ 7 51 19.6	66.5	2	18.04
860	Weisse I, 775	9.0	43 44.08	61.9	4	3.218	+ 14 3 36.0	56.4	2	18.04
861	Weisse I, 778	9.0*	1 43 44.50	61.8	1	+ 3.108	+ 3 31 37.7	55.9	2	+ 18.04
862	B. A. C. 563	5.5	43 45.98	68.8	2	2.596	− 39 6 33.9	65.0	2	18.03
863	O. Arg. S. 1116.	8.2	43 47.12	66.9	2	2.818	− 23 27 46.6	69.0	2	18.03
864	B. A. C. 562.	6.5*	43 55.04	60.4	4	3.790	+ 50 47 49.6	53.8	2	18.03
865	Weisse I, 780	9.0	43 59.07	65.8	2	3.153	+ 7 49 41.5	68.4	2	18.03
866	ε Cassiopeæ	5.0	1 44 21.82	48.7	14	+ 4.225	+ 62 58 42.0	63.4	11	+ 18.01
867	Weisse I, 790	7.5	44 29.94	60.9	2	3.038	− 3 19 53.3	55.0	2	18.01
868	ζ Ceti	3.0*	44 32.95	46.5	8	2.957	− 11 1 41.6	69.9	1	18.00
869	Anonymous	7.5	44 56.11	68.8	1	3.511	+ 36 37 50.5	46.9	1	17.99
870	O. Arg. S. 1127.	6.5	45 0.12	68.9	1	2.899	− 16 20 29.7	63.9	2	17.99

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871	Weisse I, 800	7.8	1 45 0.94	69.4	2	+ 2.935	− 13 1 30.9	70.0	2	+ 17.99
872	α Trianguli	3.5*	45 6.48	45.7	4	3.399	+ 28 53 38.7	69.0	2	17.98
873	O. Arg. S. 1151	8.0	45 21.58	64.9	3	2.810	− 23 50 34.6	68.4	2	17.97
874	Weisse I, 808	9.0	45 27.36	59.9	4	3.044	− 2 43 16.6	54.8	2	17.97
875	Weisse I, 807	8.4	45 31.50	62.8	5	3.222	+ 14 11 13.6	56.9	2	17.97
876	Weisse I, 812	8.2	1 45 39.60	65.9	2	+ 3.050	− 2 4 23.0	67.9	2	+ 17.96
877	Weisse I, 813	9.0*	45 41.43	47.0	3	3.032	− 3 48 39.1	46.9	2	17.96
878	γ^1 Arietis	4.3*	45 51.21	62.2	5	3.273	+ 18 36 21.3	62.9	2	17.95
879	γ^2 Arietis	4.3*	45 51.21	63.4	2	3.273	+ 18 36 29.5	62.9	2	17.95
880	Weisse I, 819	8.2	46 0.06	65.9	3	3.052	− 2 0 21.1	69.4	2	17.95
881	Weisse I, 820	9.2	1 46 4.84	65.8	4	+ 3.162	+ 8 33 45.5	67.9	2	+ 17.95
882	Weisse I, 821	8.5	46 6.27	65.4	2	3.042	− 2 51 43.9	54.8	3	17.94
883	ξ Piscium	5.3	46 18.61	62.9	6	3.098	+ 2 29 42.8	62.3	19	17.94
884	O. Arg. S. 1146	8.0	46 22.73	68.8	2	2.773	− 26 31 6.0	66.4	2	17.94
885	Weisse I, 831	9.0	46 38.55	65.9	3	3.051	− 2 2 20.4	68.9	2	17.92
886	B. A. C. 576	6.0	1 46 41.93	68.9	2	+ 3.515	+ 36 26 19.6	47.8	1	+ 17.92
887	β Arietis	3.2	46 54.76	63.8	114	3.292	+ 20 7 19.1	59.8	14	17.91
888	Weisse I, 843	8.3	47 20.52	68.2	4	3.052	− 1 53 22.3	68.9	2	17.90
889	Weisse I, 847	8.0	47 32.47	60.0	2	3.100	+ 2 42 13.5	54.5	4	17.89
890	B. A. C. 579	5.7	47 38.04	68.8	3	3.521	+ 36 35 22.3	46.9	3	17.88
891	B. A. C. 580	5.5	1 47 50.97	68.8	2	+ 3.522	+ 36 33 47.6	46.9	3	+ 17.88
892	7 Arietis	5.0	48 3.36	48.7	1	3.328	+ 22 53 19.9	67.9	2	17.87
893	Weisse I, 855	8.2	48 9.54	58.8	2	3.200	+ 11 53 6.5	55.9	2	17.86
894	Weisse I, 860	9.0	48 21.10	61.3	3	3.103	+ 2 53 24.8	56.4	2	17.86
895	Anonymous	8.5	49 14.65	66.4	2	2.757	− 27 10 41.6	69.3	3	17.82
896	Lacaille 566	7.8	1 49 29.11	64.0	2	+ 2.720	− 29 48 5.5	64.8	2	+ 17.81
897	ι Arietis	6.0*	49 42.42	57.2	9	3.262	+ 17 7 56.9	62.8	3	17.80
898	O. Arg. S. 1179	7.8	49 48.82	63.8	2	2.772	− 25 57 58.5	67.5	2	17.80
899	Lacaille 569	7.0	49 51.61	67.4	4	2.608	− 36 55 56.5	66.5	2	17.80
900	Weisse I, 880	9.0	50 2.10	67.3	2	3.172	+ 9 12 9.0	65.4	2	17.79
901	56 Ceti	6.0	1 50 6.84	62.0	2	+ 2.807	− 23 12 42.3	54.0	2	+ 17.79
902	O. Arg. S. 1181	8.8	50 6.85	68.9	2	2.863	− 18 41 25.1	66.8	2	17.79
903	λ Arietis, (1st *)	4.5	50 8.02	61.7	3	3.333	+ 22 54 40.8	68.2	3	17.78
904	λ Arietis, (2d *)	8.0	50 9.96	69.7	2	3.334	+ 22 55 7.5	69.3	3	17.78
905	48 Cassiopeæ	5.0	50 31.33	66.0	2	4.797	+ 70 13 31.5	62.4	4	17.77
906	Lacaille 570	7.6	1 50 32.89	63.3	3	+ 2.765	− 26 18 20.7	69.4	2	+ 17.77
907	O. Arg. S. 1189	6.8	50 34.56	68.9	2	2.866	− 18 21 43.1	66.9	2	17.76
908	58 Ceti	6.0	50 52.59	60.4	4	3.042	− 2 44 38.0	59.6	12	17.76
909	Weisse I, 896	8.0	51 3.31	60.4	2	3.242	+ 15 14 46.6	54.9	2	17.75
910	47 Cassiopeæ	5.5	51 14.09	65.0	2	5.691	+ 76 36 17.6	68.5	2	17.74

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911	50 Cassiopeæ	4.0	1 51 33.34	64.0	8	+ 4.968	+ 71 44 28.0	64.2	14	+ 17.73
912	B. A. C. 607	6.0	51 49.80	54.2	5	3.305	+ 20 22 37.1	69.4	2	17.72
913	B. A. C. 609	6.0	51 56.53	48.4	2	3.200	+ 11 36 49.6	58.8	2	17.71
914	Anonymous	. .	52 0.90	65.9	3	3.054	− 1 41 23.5	69.6	3	17.71
915	O. Arg. S. 1210	8.3	52 23.24	68.8	2	2.858	− 18 44 31.7	66.8	2	17.69
916	Lacaille 586, (1st *)	7.4	1 52 27.94	64.2	6	+ 2.797	− 23 36 7.3	68.4	2	+ 17.69
917	Lacaille 586, (2d *)	7.2	52 28.38	64.2	6	2.797	− 23 36 11.2	66.6	3	17.69
918	B. A. C. 613	7.0	52 37.00	64.0	2	2.507	− 41 51 10.4	63.9	3	17.68
919	Lalande 3702	7.1	52 54.48	65.4	2	2.748	− 27 6 53.2	68.3	2	17.67
920	O. Arg. S. 1219	7.0	52 54.57	66.4	2	2.789	− 24 7 9.6	69.5	2	17.67
921	Weisse I, 942	7.5	1 53 10.81	51.8	5	+ 3.026	− 4 2 53.8	50.0	5	+ 17.66
922	57 Ceti	5.8	53 11.04	61.8	3	2.822	− 21 30 22.9	68.0	2	17.66
923	Weisse I, 943	8.5	53 17.67	60.3	3	3.215	+ 12 42 17.4	56.3	3	17.66
924	B. A. C. 619	6.0	53 36.01	67.6	4	2.511	− 41 24 26.0	68.5	2	17.64
925	Lacaille 598	6.8	54 14.22	62.0	2	2.773	− 25 5 53.4	66.9	2	17.62
926	Weisse I, 963	9.5	1 54 23.06	60.5	5	+ 3.110	+ 3 22 27.5	56.6	3	+ 17.61
927	Weisse I, 969	8.8	54 36.36	61.3	2	3.202	+ 11 30 13.4	56.9	2	17.60
928	Anonymous	7.5	54 36.71	69.9	2	2.506	− 41 23 42.0	68.4	2	17.60
929	α Piscium	3.5*	54 48.29	45.7	2	3.095	+ 2 5 11.5	66.9	2	17.59
930	Weisse I, 972	7.2	54 53.52	60.3	3	3.209	+ 12 0 33.4	56.9	2	17.59
931	Weisse I, 973	6.5	1 55 3.20	64.4	2	+ 3.218	+ 12 47 59.2	55.0	2	+ 17.58
932	O. Arg. S. 1245	8.4	55 9.78	68.8	2	2.754	− 26 18 37.9	64.0	2	17.58
933	Weisse I, 978	7.0	55 10.98	62.0	2	3.167	+ 8 24 17.9	57.9	3	17.58
934	γ Andromedæ, (1st *)	2.3*	55 18.94	69.7	2	3.646	+ 41 39 19.4	68.4	2	17.57
935	γ Andromedæ, (2d *)	5.0*	55 20.02	69.7	2	3.646	+ 41 39 22.7	68.4	2	17.57
936	Weisse I, 984	9.0	1 55 25.47	61.9	4	+ 3.108	+ 3 10 13.3	58.6	3	+ 17.57
937	Anonymous	9.0	55 43.70	68.9	2	3.111	+ 3 25 15.3	55.9	1	17.55
938	Lacaille 607	6.8	56 3.30	62.9	3	2.802	− 22 38 30.2	64.8	2	17.54
939	O. Arg. S. 1256	7.5	56 12.57	64.2	3	2.735	− 27 25 4.7	69.4	2	17.53
940	O. Arg. S. 1259	6.2	56 23.75	68.8	2	2.775	− 24 33 40.2	67.5	2	17.53
941	O. Arg. S. 1261	6.8	1 56 29.71	68.8	2	+ 2.801	− 22 35 12.7	67.4	2	+ 17.52
942	Anonymous	8.8	56 33.67	67.9	3	3.180	+ 9 25 38.2	69.5	2	17.52
943	O. Arg. S. 1266	8.0	56 59.25	66.9	2	2.756	− 25 48 6.2	69.0	3	17.50
944	54 Cassiopeæ	6.5*	57 7.35	61.9	2	4.959	+ 70 53 25.7	67.0	2	17.49
945	Anonymous	7.3	57 13.92	64.5	2	2.857	− 18 11 12.3	69.9	2	17.49
946	B. A. C. 641	7.0	1 57 28.23	60.2	3	+ 3.153	+ 7 3 46.3	63.6	3	+ 17.48
947	Weisse I, 1018	7.8	57 34.02	65.9	3	3.181	+ 9 26 36.3	68.5	2	17.47
948	Weisse I, 1022	8.1	57 56.78	65.9	3	3.181	+ 9 24 15.3	66.9	2	17.46
949	B. A. C. 643	4.8	58 12.82	62.7	4	2.692	− 29 58 13.4	68.0	2	17.45
950	Weisse I, 1038	8.6	58 47.03	65.4	2	3.174	+ 8 46 5.9	58.0	2	17.42

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951	Weisse I, 1040	7.0	1 58 48.78	59.0	2	+ 3.160	+ 7 34 42.2	63.0	2	+ 17.42
952	Weisse (2) I, 1411	8.5	58 56.56	60.0	2	3.267	+ 16 24 51.7	54.9	2	17.42
953	Weisse I, 1042	7.5	58 56.82	61.3	2	3.223	+ 12 47 31.6	55.5	2	17.42
954	Weisse I, 1043	8.3	59 7.18	67.9	5	3.236	+ 13 54 50.9	68.0	1	17.41
955	Weisse I, 1045	8.0	59 12.88	65.8	3	3.187	+ 9 48 29.3	67.5	2	17.41
956	Weisse I, 1048	7.0	1 59 13.	. .	.	+ 3.013	− 5 2 6.5	68.4	2	+ 17.41
957	*a* Arietis	2.0*	59 17.22	55.9	196	3.352	+ 22 47 56.2	51.2	74	17.40
958	Weisse I, 1047	9.1	59 20.28	61.4	4	3.238	+ 13 59 18.8	70.0	2	17.40
959	Weisse I, 1050	9.0	59 20.68	62.4	2	3.237	+ 13 54 51.0	61.8	2	17.40
960	Weisse I, 1056	9.0	59 30.40	61.9	3	3.110	+ 3 14 6.5	62.0	2	17.39
961	Anonymous	9.0	1 59 46.61	61.9	2	+ 3.108	+ 3 6 59.4	69.5	2	+ 17.38
962	Weisse I, 1069	8.0*	59 59.88	47.0	1	3.015	− 4 53 8.8	47.0	2	17.36
963	58 Andromedæ	5.0	2 0 3.10	68.8	3	3.580	+ 37 11 36.5	46.9	1	17.37
964	Weisse I, 1071	7.5	0 12.70	67.3	3	3.168	+ 8 10 37.7	63.2	4	17.36
965	Weisse I, 1075	7.5*	0 27.79	70.9	2	3.057	− 1 16 23.1	70.9	2	17.35
966	Weisse I, 1080	7.1	2 0 54.55	65.9	2	+ 3.169	+ 8 11 1.5	63.2	4	+ 17.33
967	*β* Trianguli	4.2	1 13.49	68.9	2	3.533	+ 34 19 24.3	47.2	6	17.32
968	Anonymous	8.6	1 28.94	69.0	2	3.622	+ 38 55 53.1	49.0	1	17.30
969	Lacaille 638	7.0	1 49.26	63.4	4	2.708	− 28 14 13.8	65.8	2	17.29
970	Anonymous	9.0	2 1.33	66.0	2	3.953	+ 52 24	. .	.	17.28
971	Lalande 3979	6.0	2 2 7.33	68.9	4	+ 2.845	− 18 26 37.8	64.1	2	+ 17.28
972	B. A. C. 663	8.5	2 22.59	61.0	4	3.114	+ 3 34 4.3	55.7	5	17.26
973	59 Andromedæ	6.0*	2 23.87	58.9	2	3.611	+ 38 22 36.0	47.6	15	17.26
974	B. A. C. 662	7.5	2 24.77	58.9	2	3.611	+ 38 22 50.2	54.7	12	17.26
975	O. Arg. S. 1344	7.4	2 36.48	63.6	8	2.773	− 23 39 19.1	64.8	2	17.25
976	O. Arg. N. 2443	8.5	2 2 50.72	61.4	4	+ 3.856	+ 48 56 9.3	65.7	5	+ 17.24
977	15 Arietis	5.0	2 52.34	66.2	2	3.305	+ 18 50 16.9	68.0	2	17.24
978	Lacaille 644	6.7	3 9.92	63.0	2	2.753	− 25 0 31.4	66.9	2	17.23
979	5 Trianguli	7.0	3 14.54	59.0	2	3.481	+ 30 51 53.1	53.9	2	17.22
980	O. Arg. S. 1354	8.0	3 27.62	64.9	1	2.681	− 29 40 14.2	67.9	2	17.22
981	O. Arg. N. 2462	8.5*	2 3 37.71	60.3	5	+ 3.865	+ 49 7 18.1	59.6	3	+ 17.21
982	64 Ceti	6.5*	3 57.86	58.9	1	3.168	+ 7 54 47.5	57.9	4	17.19
983	Groombridge 466	6.8	4 12.16	62.1	5	3.967	+ 52 23 55.5	67.5	2	17.18
984	Anonymous	9.0	4 14.34	61.9	1	2.691	− 28 55 12.4	69.0	2	17.18
985	Weisse II, 35	9.2	4 16.16	60.4	2	3.122	+ 4 6 20.5	64.9	3	17.18
986	Lalande 3987	7.5	2 4 19.79	70.9	2	+ 4.698	+ 67 1 32.9	70.9	2	+ 17.18
987	Weisse II, 38	8.8	4 20.66	62.5	2	3.180	+ 8 54 57.9	57.9	2	17.18
988	Lacaille 649	8.5	4 24.42	62.2	3	2.691	− 28 52 54.0	68.0	2	17.17
989	Anonymous	9.5	4 29.12	66.4	2	3.172	+ 8 14 24.0	68.0	2	17.17
990	O. Arg. N. 2484	6.5	4 30.76	61.9	1	3.972	+ 52 27 53.1	70.0	2	17.17

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991	Weisse II, 44	8.4	2 4 34.88	66.4	2	+ 3.172	+ 8 14 35.0	68.0	2	+ 17.17
992	Weisse II, 52	9.0	4 42.06	64.3	2	3.117	+ 3 42 17.0	69.9	2	17.16
993	Weisse II, 51	8.0	4 42.77	64.8	2	3.120	+ 3 55 52.2	70.0	1	17.16
994	Lacaille 660	7.5	4 49.02	65.8	2	2.510	— 39 1 38.0	69.4	2	17.15
995	O. Arg. S. 1376.	6.7	4 55.20	66.5	2	2.841	— 18 24 14.5	65.4	2	17.15
996	η Arietis	6.0*	2 4 58.18	56.2	3	+ 3.332	+ 20 33 5.8	64.8	2	+ 17.15
907	Weisse II, 56	9.0	5 1.70	65.3	2	3.210	+ 11 13 21.6	70.0	2	17.14
998	Lalande 4070	8.5	5 7.96	67.9	3	3.316	+ 19 9 44.2	67.0	2	17.14
999	Weisse II, 61	7.8	5 19.65	65.5	3	3.210	+ 11 12 2.5	66.6	3	17.13
1000	O. Arg. N. 2511	8.0	5 23.33	60.8	4	4.025	+ 53 52 29.5	62.5	2	17.13
1001	19 Arietis	7.0	2 5 25.43	62.3	3	+ 3.254	+ 14 37 20.6	67.4	2	+ 17.13
1002	O. Arg. S. 1384.	7.2	5 26.21	66.0	2	2.841	— 18 23 15.2	68.5	2	17.13
1003	Weisse II, 64	8.7	5 26.75	61.9	3	3.240	+ 13 35 2.3	58.8	4	17.13
1004	ξ^1 Ceti	4.5	5 35.00	62.7	56	3.172	+ 8 11 17.4	60.7	4	17.12
1005	O. Arg. S. 1388.	8.5	5 47.75	70.5	5	2.675	— 29 36 58.6	67.8	1	17.11
1006	Weisse II, 72	7.8	2 5 57.68	68.8	3	+ 3.122	+ 4 5 31.9	57.5	2	+ 17.10
1007	Anonymous	9.0	5 58.86	70.1	4	2.674	— 29 39 11.5	68.4	2	17.10
1008	B. A. C. 687.	6.7	6 10.61	59.3	7	3.125	+ 4 21 25.3	60.2	3	17.09
1009	O. Arg. N. 2546	8.0	6 39.71	66.2	3	3.881	+ 49 2 45.5	55.9	2	17.07
1010	Weisse II, 81	8.0	6 46.64	68.9	2	3.163	+ 7 22 50.3	62.0	2	17.06
1011	Weisse (2) II, 147	6.8	2 6 47.74	69.0	2	+ 3.631	+ 38 30 52.0	46.9	1	+ 17.06
1012	O. Arg. S. 1404.	9.5	7 10.78	67.5	3	2.671	— 29 37 36.9	69.5	2	17.05
1013	Weisse II, 102	9.0*	7 40.58	61.8	1	3.124	+ 4 12 54.6	58.6	3	17.02
1014	Rumker 568	8.7	7 42.38	61.9	3	3.292	+ 17 15 49.9	59.9	3	17.02
1015	20 Arietis	6.5*	7 45.61	65.0	2	3.404	+ 25 7 51.8	68.0	2	17.02
1016	Weisse II, 109	8.4	2 8 17.58	63.1	2	+ 3.264	+ 15 10 4.9	67.5	2	+ 17.00
1017	Weisse II, 112	9.0	8 28.26	60.5	2	3.134	+ 4 59 50.8	56.4	2	16.99
1018	Lacaille 678.	7.4	8 36.58	63.0	2	2.752	— 24 11 35.8	68.4	2	16.98
1019	O. Arg. S. 1421.	7.8	8 47.17	68.8	2	2.859	— 16 37 48.1	64.9	2	16.97
1020	O. Arg. S. 1424.	8.2	8 49.64	66.8	2	2.756	— 23 56 8.7	68.0	2	16.97
1021	Weisse II, 120	8.5*	2 8 53.34	47.0	2	+ 3.013	— 4 44 45.8	47.0	4	+ 16.97
1022	γ Trianguli	4.5	9 0.08	68.9	2	3.539	+ 33 11 52.0	47.8	3	16.96
1023	B. A. C. 700	6.0	9 16.23	65.3	2	4.151	+ 56 29 9.2	66.9	2	16.95
1024	O. Arg. S. 1433.	7.4	9 19.67	63.8	2	2.705	— 27 10 32.4	68.5	2	16.95
1025	B. A. C. 701.	6.0	9 25.38	65.3	2	4.154	+ 56 31 11.4	66.9	2	16.94
1026	B. A. C. 702.	7.5*	2 9 30.02	59.0	2	+ 4.520	+ 63 41 18.6	53.9	3	+ 16.94
1027	67 Ceti	6.0	10 0.11	61.5	47	2.983	— 7 4 9.1	58.6	3	16.92
1028	Lalande 4238	7.5	10 0.87	61.9	1	3.303	+ 17 48 13.3	59.0	3	16.91
1029	θ Arietis	5.7	10 20.64	61.3	7	3.324	+ 19 15 3.0	69.0	2	16.90
1030	Weisse II, 143	8.0	10 27.52	61.9	3	3.249	+ 13 49 4.2	55.0	2	16.89

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1031	Weisse II, 144	8.0	2 10 31.68	61.0	2	+ 3.236	+ 12 46 51.4	57.1	4	+ 16.89
1032	Anonymous	8.2	10 31.92	68.9	2	4.112	+ 55 15 45.7	57.9	1	16.89
1033	Weisse II, 147	6.0	10 45.46	70.9	2	3.086	+ 1 5 45.5	70.9	2	16.88
1034	Weisse II, 159	8.5*	11 12.83	47.0	2	3.012	− 4 44 50.7	47.0	4	16.86
1035	Weisse II, 155	7.0	11 16.78	69.9	1	3.231	+ 12 20 35.2	69.0	2	16.86
1036	Weisse II, 158	7.0	2 11 16.88	61.7	4	+ 3.168	+ 7 31 56.1	55.6	3	+ 16.86
1037	Weisse II, 168	8.0	11 29.86	62.8	2	3.002	− 5 31 4.1	58.0	2	16.84
1038	Anonymous	8.8	11 31.07	62.5	2	3.001	− 5 33 53.4	57.9	2	16.84
1039	B. A. C. 718.	7.0*	12 3.56	64.2	2	4.176	+ 56 35 55.9	53.9	3	16.82
1040	Anonymous	8.0	12 16.47	57.9	2	3.011	− 4 46 26.2	69.0	2	16.81
1041	o Ceti	5.0	2 12 16.49	58.8	2	+ 3.026	− 3 36 56.9	69.9	3	+ 16.81
1042	Weisse II, 182	8.0	12 37.03	64.5	2	3.250	+ 13 39 10.5	55.0	2	16.79
2043	i Persei	5.2	12 37.44	68.8	2	4.124	+ 55 12 9.9	63.4	2	16.79
1044	Weisse II, 185	9.0	12 38.24	62.5	2	2.999	− 5 38 40.7	63.3	3	16.79
1045	B. A. C. 722.	7.0	12 38.75	58.0	3	3.008	− 4 59 28.3	68.0	2	16.79
1046	B. A. C. 723.	6.4	2 12 42.13	65.6	5	+ 2.706	− 26 36 30.0	69.9	2	+ 16.79
1047	Weisse II, 189	9.0	12 43.06	62.0	2	2.999	− 5 40 25.3	66.5	2	16.79
1048	Anonymous	8.0	12 57.98	58.7	1	3.241	+ 12 58	. .	.	16.78
1049	Weisse II, 188	8.8	13 1.79	68.9	3	3.242	+ 13 3 36.3	69.9	2	16.77
1050	B. A. C. 725.	8.0*	13 6.58	60.8	2	4.191	+ 56 44 40.6	60.5	2	16.77
1051	O. Arg. S. 1489.	8.0	2 13 30.39	63.2	3	+ 2.740	− 24 16 40.2	67.9	2	+ 16.75
1052	Lalande 4342	7.2	13 51.97	69.0	3	3.629	+ 37 4 46.9	46.9	1	16.83
1053	Weisse II, 209	9.3	13 53.05	1.8	5	3.251	+ 13 37 34.0	55.9	2	16.73
1054	O. Arg. N. 2680.	9.0	13 53.96	61.9	2	4.462	+ 62 3 3.5	69.5	2	16.83
1055	69 Ceti	5.0	14 46.38	57.2	2	3.069	− 0 14 44.4	68.0	2	16.69
1056	70 Ceti	6.0*	2 15 4.86	45.7	4	+ 3.052	− 1 31 27.0	69.1	2	+ 16.67
1057	Weisse II, 231	7.5*	15 10.78	69.7	2	2.922	− 11 24 57.1	68.9	2	16.67
1058	Lalande 4410	6.1	15 29.23	64.4	4	2.826	− 18 18 2.0	65.5	2	16.65
1059	Weisse II, 235	8.0	15 30.77	60.4	4	3.176	+ 7 54 20.0	58.3	3	16.65
1060	Lalande 4387	6.8	15 33.57	68.9	2	3.669	+ 38 42 28.1	49.0	1	16.65
1061	B. A. C. 728.	8.5	2 15 44.04	70.8	2	+ 3.206	+ 10 11 48.0	69.9	2	+ 16.64
1062	Lacaille 711.	6.8	15 49.57	62.9	4	2.666	− 28 30 4.0	65.9	2	16.63
1063	κ Fornacis	6.0	16 8.25	62.0	2	2.732	− 24 27 13.5	68.0	2	16.62
1064	O. Arg. N. 2729	7.2	16 22.22	58.9	2	4.207	+ 56 35 33.6	53.9	3	16.61
1065	O. Arg. S. 1522.	6.3	16 22.27	68.8	2	2.814	− 18 59 22.5	66.0	2	16.61
1066	Weisse II, 250	7.1	2 16 24.23	62.8	4	+ 2.982	− 6 49 47.3	62.0	2	+ 16.61
1067	B. A. C. 741	6.5*	17 1.91	54.1	7	3.192	+ 9 4 43.5	57.3	3	16.58
1068	B. A. C. 742.	6.0	17 7.66	64.9	2	2.628	− 30 30 14.9	67.0	1	16.57
1069	B. A. C. 743.	6.6	17 8.54	63.2	5	2.678	− 27 37 51.6	66.9	2	16.57
1070	ξ Arietis	5.5	17 18.99	55.8	4	3.205	+ 9 58 30.5	61.2	3	16.56

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1071	ι Cassiopeæ	4.0*	2 17 35.06	49.8	20	+ 4.831	+ 66 46 11.7	62.6	15	+ 16.55
1072	Anonymous	8.5	17 35.35	64.5	2	4.444	+ 61 10 8.5	68.0	2	16.55
1073	B. A. C. 740.	6.0*	17 42.61	61.9	2	7.856	+ 81 1 10.0	61.8	3	16.54
1074	Weisse II, 278	8.4	17 44.53	68.9	2	3.177	+ 7 54 55.5	56.4	2	16.54
1075	O. Arg. S. 1535.	8.5	17 49.34	68.9	2	2.814	− 18 47 53.8	64.9	2	16.54
1076	Weisse II, 410	8.2	2 17 51.10	59.7	4	+ 3.331	+ 18 55 11.7	57.2	4	+ 16.54
1077	Lacaille 726.	6.4	18 2.77	64.3	3	2.695	− 26 29 4.4	68.0	2	16.53
1078	Weisse II, 288	8.2	18 6.14	68.9	2	2.999	− 5 22 55.9	47.0	1	16.52
1079	Lalande 4504	7.5	18 53.80	64.5	2	3.146	+ 5 39 39.1	69.0	2	16.48
1080	Lacaille 727.	7.2	18 58.48	63.6	4	2.757	− 22 26 30.0	68.4	2	16.48
1081	Weisse (2) II, 444	8.5	2 19 3.08	62.2	4	+ 3.384	+ 22 14 47.3	58.7	5	+ 16.48
1082	Weisse II, 305	7.5	19 15.33	64.5	2	3.206	+ 9 55 59.5	55.0	3	16.47
1083	Weisse (2) II, 449	9.5	19 16.38	62.3	3	3.385	+ 22 16 19.6	59.2	4	16.47
1084	O. Arg. S. 1551.	5.8	19 21.06	68.9	2	2.853	− 15 58 21.4	66.1	2	16.45
1085	O. Arg. S. 1554.	7.0	19 30.71	68.9	2	2.724	− 24 28 32.1	68.0	2	16.45
1086	Carrington 347.	9.0*	2 19 32.04	61.9	2	+30.305	+ 88 23 30.4	67.5	2	+ 16.45
1087	Weisse II, 312	8.0	19 41.94	59.9	3	3.147	+ 5 35 46.5	56.8	2	16.44
1088	O. Arg. S. 1558.	8.5	19 54.94	69.1	1	2.721	− 24 30 49.4	69.5	2	16.43
1089	25 Arietis	7.0*	19 56.75	60.0	3	3.201	+ 9 34 32.1	54.0	3	16.43
1090	12 Trianguli	5.0	19 58.00	45.7	3	3.498	+ 29 2 31.6	69.5	2	16.43
1091	Anonymous	9.5	2 20 26.26	68.9	1	+ 4.470	+ 61 11 4.7	64.3	3	+ 16.44
1092	Anonymous	6.8	20 33.56	68.9	2	3.646	+ 36 42 7.0	46.9	1	16.40
1093	ξ² Ceti	4.8	20 43.15	61.8	44	3.178	+ 7 49 50.0	60.5	5	16.39
1094	Weisse II, 333	9.0	20 48.77	61.5	5	3.145	+ 5 25 39.9	59.0	2	16.39
1095	Anonymous.	6.8	21 33.25	68.9	2	3.685	+ 38 19 40.0	46.9	2	16.35
1096	Lacaille 745.	7.0*	2 21 49.	. .	.	+ 2.540	− 34 26 23.2	64.7	5	+ 16.34
1097	Lacaille 744.	7.8	22 1.08	63.0	2	2.675	− 27 3 37.2	69.0	2	16.33
1098	Anonymous	8.0	22 3.99	70.0	2	4.479	+ 61 6 36.3	68.0	2	16.33
1099	B. A. C. 764.	7.0*	22 7.04	58.9	2	3.194	+ 8 56 18.8	53.8	2	16.32
1100	Weisse II, 363	7.2	22 17.83	66.9	2	3.180	+ 7 52 21.3	67.5	2	16.31
1101	B. A. C. 766.	6.5*	2 22 29.58	45.7	1	+ 3.429	+ 24 36 45.3	69.5	2	+ 16.30
1102	B. A. C. 768.	6.0*	22 33.39	58.9	2	2.590	− 31 43 45.3	53.9	3	16.30
1103	Anonymous	9.2	22 37.61	69.0	2	3.651	+ 36 36 45.7	46.9	1	16.29
1104	Lacaille 750.	7.5	22 40.65	63.7	4	2.628	− 23 50 1.5	67.0	1	16.29
1105	26 Arietis	5.5	22 47.62	57.3	2	3.344	+ 19 13 54.0	69.9	2	16.29
1106	Weisse II, 373	9.0	2 22 56.32	66.0	2	+ 3.261	+ 13 38 13.3	63.2	4	+ 16.28
1107	Anonymous	8.4	23 2.27	64.4	2	2.659	− 27 53 4.6	70.0	2	16.27
1108	27 Arietis	6.0*	23 8.79	60.7	7	3.312	+ 17 4 57.3	56.3	6	16.27
1109	Weisse II, 379	8.1	23 10.28	68.8	2	3.250	+ 12 48 31.8	58.9	2	16.27
1110	Lacaille 756.	7.0	23 10.96	63.5	2	2.712	− 24 43 54.2	68.9	2	16.27

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			h. m. s.			"	° ′ "			"
1111	Weisse (2) II, 545	6.0	2 23 12.47	68.9	2	+ 3.672	+ 37 29 58.0	46.9	2	+ 16.27
1112	Weisse II, 386	9.0	23 23.48	56.9	2	2.976	− 6 57 11.0	56.9	2	16.26
1113	B. A. C. 773	6.3	23 31.79	63.0	2	2.734	− 23 18 31.6	67.0	2	16.25
1114	14 Trianguli	5.0	23 34.20	69.0	2	3.632	+ 35 31 25.6	47.2	2	16.25
1115	B. A. C. 774	7.0	23 56.06	60.7	3	2.692	− 25 48 43.6	68.0	2	16.23
1116	Anonymous	7.1	2 24 1.92	68.9	2	+ 3.707	+ 38 55 11.8	46.9	1	+ 16.22
1117	Weisse II, 397	8.2	24 6.78	59.0	2	3.095	+ 1 38 48.1	68.7	3	16.22
1118	B. A. C. 775	6.3	24 9.78	63.2	3	2.735	− 23 10 4.2	65.5	2	16.22
1119	B. A. C. 776	6.5	24 15.78	59.0	2	3.095	+ 1 38 42.1	63.7	3	16.21
1120	Lalande 4667	6.8	24 19.88	68.8	2	3.659	+ 36 42 51.6	48.0	5	16.21
1121	Lacaille 767	7.0*	2 24 20.	. .	.	+ 2.546	− 33 44 55.9	65.6	2	+ 16.21
1122	Weisse (2) II, 587	8.2	24 26.76	66.9	2	3.386	+ 21 42 44.7	65.9	2	16.20
1123	75 Ceti	5.5*	25 2.29	48.0	2	3.050	− 1 39 19.2	69.4	2	16.17
1124	Weisse II, 415	7.5	25 22.23	61.9	2	3.115	+ 3 7 7.1	65.0	2	16.15
1125	σ Ceti	4.3	25 27.30	45.7	4	2.847	− 15 51 39.6	64.4	4	16.14
1126	Rumker 654	8.2	2 25 37.28	59.6	4	+ 3.358	+ 19 49 9.7	56.5	6	+ 16.14
1127	Lacaille 771	7.3	25 38.88	63.3	3	2.724	− 23 42 18.5	66.0	2	16.14
1128	Anonymous	7.0	26 13.75	68.9	2	2.550	− 33 13 34.7	65.0	2	16.11
1129	O. Arg. S. 1630	7.0	26 18.28	63.9	7	2.655	− 27 37 21.9	69.9	3	16.11
1130	Weisse II, 437	8.0	26 55.13	62.0	4	2.979	− 6 37 25.5	66.0	1	16.07
1131	Weisse (2) II, 642	5.6	2 27 2.02	68.8	2	+ 3.668	+ 36 41 49.4	46.9	3	+ 16.07
1132	Weisse II, 443, (1st *)	7.5	27 8.81	68.8	2	2.984	− 6 15 10.5	50.3	7	16.06
1133	Weisse II, 443, (2d *)	7.5	27 8.83	68.8	2	2.984	− 6 15 10.5	50.3	7	16.06
1134	Σ Cat. Gen. 250	8.0	27 8.90	60.0	2	2.984	− 6 15 12.6	53.5	3	16.06
1135	Lalande 4761	6.8	27 19.14	68.9	2	3.664	+ 36 26 36.5	47.9	1	16.05
1136	B. A. C. 789	7.0	2 27 39.46	59.4	4	+ 3.169	+ 6 51 35.8	54.9	4	+ 16.04
1137	B. A. C. 790, (1st *)	9.0	27 42.07	66.3	2	2.629	− 28 51 2.4	69.0	2	16.03
1138	B. A. C. 790, (2d *)	7.0	27 42.82	65.6	3	2.629	− 28 50 56.6	69.0	2	16.03
1139	Weisse II, 455	8.1	27 50.94	64.3	3	3.121	+ 3 30 46.7	61.9	2	16.03
1140	Lacaille 787	6.2	28 12.85	64.4	2	2.738	− 22 32 33.4	69.4	2	16.01
1141	Weisse (2) II, 669	5.6	2 28 13.60	68.9	2	+ 3.704	+ 38 7 36.2	69.0	2	+ 16.01
1142	Lacaille 789	6.8	28 14.14	68.9	2	2.534	− 33 43 47.6	65.5	2	16.00
1143	Weisse II, 464	6.5	28 25.79	70.9	2	3.160	+ 6 13 16.7	70.9	2	16.00
1144	O. Arg. S. 1655	7.3	28 30.19	63.9	3	2.811	− 17 54 18.5	69.9	1	15.99
1145	Weisse II, 470	8.2	28 31.14	61.5	2	3.281	+ 14 32 13.0	56.7	5	15.99
1146	ν Ceti	4.5*	2 28 31.76	46.5	4	+ 3.142	+ 4 58 48.9	69.5	2	+ 15.99
1147	Weisse II, 475	8.0	28 34.41	68.9	2	2.983	− 6 17 5.3	46.9	3	15.99
1148	Weisse (2) II, 691	9.0	28 50.01	60.0	2	3.368	+ 20 5 19.7	55.0	2	15.97
1149	30 Arietis	6.4	28 53.70	68.1	3	3.433	+ 24 2 9.7	61.0	3	15.97
1150	B. A. C. 797	6.0	28 56.51	67.1	3	3.433	+ 24 2 7.1	61.0	3	15.97

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			h. m. s.			″	° ′ ″			″
1151	31 Arietis	5.5*	2 29 0.15	63.3	2	+ 3.242	+ 11 50 19.8	47.8	2	+ 15.96
1152	Weisse II, 479	9.0	29 3.48	61.5	2	3.282	+ 14 34 5.7	55.9	3	15.96
1153	Lacaille 792	7.4	29 4.78	63.2	3	2.617	− 29 18 41.5	68.0	2	15.96
1154	B. A. C. 800	6.5*	29 10.23	58.9	3	3.173	+ 7 7 6.3	69.5	2	15.96
1155	O. Arg. S. 1664	8.7	29 32.76	63.9	3	2.653	− 27 18 33.0	67.9	2	15.93
1156	Weisse (2) II, 702	7.0*	2 29 39.	. .	.	+ 3.687	+ 37 7 7.0	46.9	1	+ 15.93
1157	Weisse (2) II, 711	8.5	29 52.44	66.0	2	3.462	+ 25 35 48.2	67.9	1	15.92
1158	B. A. C. 803	5.7	30 7.05	62.8	1	2.589	− 30 39 23.0	69.5	2	15.91
1159	Lacaille 796	7.0	30 11.06	63.3	3	2.700	− 24 31 49.1	66.0	1	15.90
1160	Weisse (2) II, 718	7.5	30 13.72	70.9	2	3.547	+ 30 13 17.4	70.9	2	15.90
1161	Weisse (2) II, 727	9.0	2 30 28.53	63.0	1	+ 3.464	+ 25 37 56.8	67.0	2	+ 15.89
1162	81 Ceti	5.5*	30 38.74	59.3	6	3.015	− 4 0 14.4	54.0	2	15.88
1163	ν Arietis	5.0	30 52.39	68.9	2	3.392	+ 21 21 13.7	62.9	2	15.87
1164	Lacaille 802	7.4	30 59.72	63.5	2	2.607	− 29 36 9.2	69.0	2	15.86
1165	B. A. C. 809	6.0*	31 9.81	59.6	3	2.494	− 35 10 41.6	53.8	2	15.85
1166	Lacaille 803	7.1	2 31 24.51	65.8	5	+ 2.714	− 23 36 8.3	64.9	3	+ 15.84
1167	B. A. C. 810	6.0	31 31.36	64.5	2	3.217	+ 10 1 55.1	67.5	2	15.82
1168	Anonymous	6.5	32 1.81	68.8	2	2.511	− 34 17 8.6	67.0	2	15.80
1169	δ Ceti	5.5	32 18.51	55.8	5	3.068	− 0 16 38.5	65.0	2	15.79
1170	Lacaille 813	6.7	32 41.96	63.3	4	2.663	− 26 20 54.5	68.0	2	15.77
1171	Anonymous	7.0	2 32 46.26	64.4	2	+ 2.571	− 31 12 20.7	69.5	4	+ 15.76
1172	Anonymous	9.0	32 48.88	65.9	2	3.398	+ 21 31 21.8	70.0	2	15.76
1173	B. A. C. 814	7.1	32 49.60	61.9	2	5.042	+ 67 13 31.6	67.0	1	15.76
1174	B. A. C. 817	6.8	32 52.93	68.9	2	3.152	+ 5 30 29.3	67.0	2	15.76
1175	Weisse II, 556	8.5	32 56.93	59.0	2	3.295	+ 15 4 59.6	59.9	4	15.75
1176	Lacaille 814	7.0	2 32 57.81	63.5	5	+ 2.624	− 28 25 31.7	70.1	2	+ 15.75
1177	Weisse II, 566	9.0	33 8.74	62.5	2	2.981	− 6 17 0.8	51.9	4	15.74
1178	Lacaille 816	7.1	33 12.99	62.9	2	2.665	− 26 10 29.0	69.5	2	15.74
1179	Weisse (2) II, 805	8.4	33 32.47	65.9	2	3.401	+ 21 38 33.0	65.0	2	15.72
1180	Weisse II, 576	8.0	33 35.25	62.6	2	2.990	− 5 37 40.4	56.9	2	15.72
1181	Weisse II, 574	8.5	2 33 35.25	66.0	2	+ 3.010	− 4 18 44.1	68.1	2	+ 15.72
1182	Weisse II, 569	9.0	33 35.66	59.0	2	3.301	+ 15 26 15.3	54.9	2	15.72
1183	Weisse II, 580	7.1	33 45.48	68.9	2	3.152	+ 5 28 8.6	67.0	2	15.71
1184	Weisse II, 575	8.1	33 45.95	68.9	2	3.295	+ 15 2 25.0	60.3	3	15.71
1185	Weisse (2) II, 815	9.0	34 2.21	69.0	2	3.441	+ 23 55 3.1	56.9	2	15.70
1186	Weisse II, 585	7.2	2 34 2.65	61.9	4	+ 3.128	+ 3 49 39.3	64.5	4	+ 15.69
1187	O. Arg. S. 1735	7.0	34 3.31	67.3	2	2.567	− 31 14 8.3	69.0	2	15.69
1188	O. Arg. S. 1738	7.0	34 14.90	68.9	2	2.688	− 24 44 18.8	67.0	2	15.69
1189	μ Arietis	6.0*	34 28.70	60.9	6	3.366	+ 19 24 44.3	68.0	2	15.67
1190	O. Arg. S. 1744	7.7	34 40.58	64.3	2	2.794	− 18 25 17.3	68.5	2	15.66

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			h. m. s.			"	° ′ "			"
1191	Anonymous . . .	8.0	2 34 40.92	69.0	2	+ 3.715	+ 37 34 9.2	49.0	1	+ 15.66
1192	Weisse II, 603 . . .	9.4	35 14.18	64.0	2	3.260	+ 12 40 3.3	70.0	2	15.64
1193	Weisse (2) II, 860 . .	8.0	35 44.98	60.0	2	3.385	+ 20 33 1.6	55.7	3	15.60
1194	O. Arg. S. 1758. . .	8.2	35 51.60	68.9	2	2.615	− 28 32 28.8	65.5	2	15.59
1195	γ Ceti	3.4*	36 3.00	55.1	167	3.111	+ 2 38 39.4	50.4	89	15.58
1196	Weisse II, 615 . . .	8.1	2 36 6.94	65.0	6	+ 3.162	+ 12 41 35.4	66.5	2	+ 15.58
1197	Lacaille 838. . . .	6.5	36 45.48	63.5	3	2.609	− 28 44 55.5	67.5	2	15.54
1198	Rumker 695 . . .	8.2	36 50.68	61.2	4	3.397	+ 21 1 11.5	58.7	4	15.54
1199	38 Arietis	5.5	37 20.19	59.9	3	3.250	+ 11 51 14.4	57.9	2	15.51
1200	Weisse II, 640 . . .	8.6	37 21.69	62.8	4	2.996	− 5 6 58.2	56.9	3	15.51
1201	μ Ceti	4.0*	2 37 22.63	59.7	4	+ 3.214	+ 9 31 16.3	69.0	2	+ 15.51
1202	π Ceti	6.0	37 27.67	69.1	1	2.854	− 14 27 10.9	69.9	2	15.51
1203	Weisse II, 639 . . .	7.0	37 29.85	66.9	2	3.261	+ 12 34 16.7	67.5	2	15.50
1204	Lacaille 846. . . .	6.7	37 39.33	68.9	3	2.611	− 28 29 42.1	65.5	2	15.49
1205	O. Arg. S. 1780. . .	9.0	37 53.22	69.9	2	2.600	− 29 1 55.9	69.9	1	15.48
1206	B. A. C. 854. . . .	6.7	2 38 1.22	63.9	2	+ 2.656	− 26 5 32.3	70.1	2	+ 15.47
1207	Weisse (2) II, 915 . .	5.8	38 19.95	68.9	2	3.677	+ 35 23 32.6	46.9	1	15.46
1208	Lalande 5112 . . .	6.3	38 43.72	69.0	3	3.719	+ 37 12 7.9	47.0	1	15.43
1209	B. A. C. 857. . . .	7.0	38 56.66	58.9	2	4.361	+ 56 26 44.9	53.9	2	15.42
1210	Lalande 5115 . . .	8.0	38 57.45	68.9	3	3.762	+ 38 54 55.1	49.0	1	15.42
1211	B. A. C. 858. . . .	6.5	2 39 12.74	58.9	2	+ 4.365	+ 56 29 49.9	53.9	3	+ 15.41
1212	Lacaille 865. . . .	7.1	39 56.39	63.4	4	2.670	− 25 5 24.1	65.5	2	15.37
1213	Weisse (2) II, 972 . .	7.0	40 25.86	64.5	2	3.468	+ 24 42 20.1	56.9	1	15.34
1214	η Persei	5.0	40 30.53	65.5	2	4.317	+ 55 18 40.4	64.2	7	15.34
1215	B. A. C. 866. . . .	6.5*	40 37.90	59.6	4	3.467	+ 24 36 5.2	58.7	4	15.33
1216	Weisse II, 694 . . .	9.0	2 40 44.64	66.5	2	+ 3.261	+ 12 21 48.5	68.1	2	+ 15.32
1217	Lalande 5181 . . .	7.0	40 52.54	68.9	2	3.703	+ 36 13 25.9	47.9	1	15.31
1218	Lacaille 873. . . .	6.5	40 52.81	63.9	2	2.609	− 23 4 21.9	67.0	2	15.31
1219	Weisse II, 702 . . .	8.2	41 7.57	66.6	2	3.263	+ 12 26 59.2	65.5	2	15.30
1220	π Arietis	6.0	41 29.09	62.6	11	3.335	+ 16 52 47.0	63.9	4	15.28
1221	41 Arietis	3.0*	2 41 45.02	56.6	7	+ 3.508	+ 26 40 50.8	67.0	2	+ 15.26
1222	16 Persei	4.7	41 45.39	55.7	5	3.743	+ 37 44 24.0	49.4	9	15.26
1223	Weisse (2) II, 1018. .	7.5	42 5.08	61.6	2	3.472	+ 24 45 3.9	62.4	2	15.25
1224	Weisse II, 724 . . .	7.8	42 32.60	64.5	2	3.275	+ 13 7 40.1	66.5	2	15.22
1225	O. Arg. S. 1834. . .	7.6	42 43.08	66.1	2	2.662	− 25 11 41.3	68.4	2	15.21
1226	Anonymous . . .	6.2	2 42 44.35	68.9	2	+ 2.476	− 34 21 58.3	65.0	3	+ 15.21
1227	Weisse II, 728 . . .	8.0	42 47.24	65.2	3	3.271	+ 12 51 59.5	68.5	2	15.21
1228	Weisse (2) II, 1038. .	8.5	42 49.11	66.0	2	3.308	+ 15 8 29.7	68.1	2	15.20
1229	17 Persei	5.5	42 54.00	68.9	2	3.671	+ 34 28 52.8	47.8	1	15.20
1230	O. Arg. S. 1838. . .	8.0	43 11.72	63.9	3	2.790	− 17 51 50.0	68.5	2	15.18

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			h. m. s.			''	° ' ''			''
1231	β Fornacis	4.8	2 43 13.95	69.0	2	+ 2.505	− 32 59 44.2	66.6	2	+ 15.19
1232	Weisse (2) II, 741	7.2	43 25.44	59.5	2	2.959	− 7 20 52.6	54.9	2	15.17
1233	Weisse (2) II, 742	8.0	43 25.48	59.5	4	2.959	− 7 23 13.9	56.0	4	15.17
1234	Lacaille 891	7.0	43 29.82	69.4	2	2.538	− 31 23 47.1	65.5	2	15.17
1235	γ Fornacis	6.0	43 38.83	59.9	4	2.661	− 25 8 16.1	59.4	4	15.16
1236	σ Arietis	6.0*	2 43 46.01	62.1	3	+ 3.299	+ 14 30 9.7	67.0	1	+ 15.15
1237	Weisse II, 746	8.8	43 49.47	65.2	5	3.273	+ 12 54 47.1	66.5	2	15.15
1238	B. A. C. 883	5.5	43 50.29	62.3	5	2.595	− 28 31 30.2	65.3	3	15.15
1239	Weisse II, 762	8.5	44 19.06	62.0	2	3.045	− 1 44 37.1	62.9	2	15.12
1240	τ Persei	5.0*	44 21.11	60.5	2	4.204	+ 52 11 9.7	62.3	4	15.12
1241	Lalande 5315	8.5	2 44 33.23	65.6	3	+ 2.688	− 23 36 28.5	67.4	2	+ 15.10
1242	20 Persei	5.5	44 53.41	69.4	2	3.738	+ 37 4 54.0	47.0	1	15.09
1243	Lacaille 900	7.1	45 26.16	65.4	2	2.541	− 31 0 50.8	65.0	2	15.05
1244	B. A. C. 894	5.8	46 0.61	62.6	6	2.531	− 31 23 42.4	65.5	2	15.02
1245	Weisse II, 790	7.5	46 15.32	58.8	2	3.209	+ 8 45 44.4	55.5	4	15.01
1246	Weisse II, 789	7.2	2 46 15.42	68.9	2	+ 3.287	+ 13 38 41.5	47.8	2	+ 15.01
1247	Lalande 5358	7.6	46 29.17	61.0	3	3.038	− 2 12 56.5	59.7	4	14.99
1248	Lacaille 908	6.4	47 0.21	63.8	4	2.700	− 22 39 52.0	67.5	2	14.96
1249	Lacaille 910	6.0	47 17.14	63.1	2	2.695	− 22 56 49.0	69.0	2	14.95
1250	Anonymous	8.5	47 19.97	66.0	2	3.499	+ 25 35 56.3	69.9	2	14.94
1251	Rumker 742	9.0	2 47 26.94	59.0	2	+ 3.439	+ 22 21 46.6	54.3	3	+ 14.94
1252	Anonymous	7.4	47 29.22	68.9	2	2.680	− 23 43 6.4	66.4	5	14.94
1253	Weisse II, 820	7.0	47 37.60	60.0	2	3.062	− 0 37 18.1	62.5	2	14.93
1254	Weisse (2) II, 1148	8.0	47 52.78	63.1	1	3.499	+ 25 31 17.7	61.4	2	14.91
1255	ρ^2 Arietis	6.0*	47 56.89	45.7	2	3.358	+ 17 45 42.9	69.5	2	14.90
1256	O. Arg. S. 1887	8.2	2 47 58.92	68.9	2	+ 2.682	− 23 31 19.2	67.0	2	+ 14.90
1257	Weisse II, 831	6.5	48 3.50	69.0	2	3.070	− 0 7 56.5	62.5	2	14.90
1258	Anonymous	9.3	48 10.76	61.3	6	3.308	+ 14 47 50.6	61.9	2	14.89
1259	Anonymous	. .	48 12.43	50.0	1	3.197	+ 7 57 5.3	50.0	1	14.89
1260	Anonymous	9.2	48 28.40	61.4	6	3.309	+ 14 47 44.6	59.3	3	14.88
1261	Weisse II, 841	8.3	2 48 31.55	65.0	6	+ 3.285	+ 13 20 48.9	65.0	2	+ 14.87
1262	ρ^3 Arietis	6.0*	48 32.19	56.4	13	3.354	+ 17 27 44.5	60.0	3	14.87
1263	O. Arg. S. 1901	6.7	48 43.68	63.6	4	2.523	− 31 27 41.6	65.0	2	14.86
1264	B. A. C. 905	6.5*	48 44.65	59.0	2	3.195	+ 7 48 57.9	55.0	2	14.86
1265	Weisse II, 846	8.5	48 45.60	65.5	2	3.071	− 0 3 10.3	63.0	2	14.86
1266	Weisse II, 853	8.5	2 49 2.89	65.4	2	+ 3.071	− 0 2 49.5	63.5	2	+ 14.84
1267	Anonymous	7.0	49 10.32	68.9	2	3.776	+ 38 2 57.5	46.5	4	14.84
1268	Lacaille 922	6.6	49 20.16	63.1	2	2.635	− 25 52 17.8	69.1	2	14.83
1269	Weisse II, 855	8.8	49 27.39	65.6	2	3.306	+ 14 34 6.4	61.5	2	14.82
1270	η Eridani	6.0	49 35.30	45.8	3	2.922	− 9 27 28.3	69.0	2	14.81

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1271	Weisse II, 866	8.5	2 49 40.75	60.4	2	+ 2.964	− 6 49 13.9	55.1	2	+ 14.81
1272	O. Arg. S. 1910	8.4	49 41.14	64.5	2	2.674	− 23 47 16.0	67.5	2	14.80
1273	Anonymous	8.0	49 53.91	69.1	2	3.783	+ 38 14 14.0	47.9	2	14.79
1274	Weisse II, 872	6.5	49 59.52	68.9	2	3.070	− 0 7 5.7	62.5	2	14.79
1275	47 Arietis	5.8	50 4.82	65.0	2	3.403	+ 20 6 14.4	68.0	2	14.78
1276	B. A. C. 908	6.0	2 50 16.79	67.3	3	+ 8.733	+ 80 55 17.6	67.0	2	+ 14.77
1277	24 Persei	5.8	50 23.77	69.1	2	3.697	+ 34 37 9.4	47.8	1	14.76
1278	Rumker 755	8.0	50 28.70	61.4	8	3.322	+ 15 25 47.6	57.4	3	14.76
1279	Weisse II, 880	8.5*	50 50.92	60.0	2	3.226	+ 9 38 25.5	54.9	2	14.74
1280	Weisse II, 881	8.6	50 54.47	62.3	3	3.308	+ 14 35 29.4	66.0	4	14.73
1281	Lacaille 932, (1st *)	7.6	2 51 3.56	63.2	2	+ 2.638	− 25 32 20.6	68.1	2	+ 14.72
1282	Lacaille 932, (2d *)	7.1	51 4.94	63.3	3	2.638	− 25 31 57.7	68.1	2	14.72
1283	4 Eridani	6.7	51 10.30	62.0	5	2.660	− 24 25 30.8	53.0	2	14.72
1284	ε Arietis	5.0*	51 12.72	62.1	18	3.417	+ 20 46 40.9	62.9	3	14.71
1285	Anonymous.	9.0	51 24.75	69.1	1	3.310	+ 14 38 2.9	70.0	2	14.70
1286	O. Arg. S. 1930	7.2	2 51 28.09	68.9	2	+ 2.805	− 16 24 27.1	64.3	3	+ 14.70
1287	Anonymous.	8.8	51 31.10	69.1	2	3.310	+ 14 38 39.3	54.0	1	14.70
1288	Weisse II, 893	8.0	51 44.66	60.0	2	3.227	+ 9 38 54.3	54.9	2	14.68
1289	(* 132) W.	9.8	52 7.50	68.7	4	3.295	+ 13 43	. .	.	14.66
1290	λ Ceti	6.0	52 12.87	61.7	3	3.206	+ 8 20 49.5	59.5	4	14.66
1291	Anonymous	8.3	2 52 38.12	64.3	3	+ 2.596	− 27 29 20.8	68.1	2	+ 14.63
1292	Lalande 5490	7.5*	52 45.03	70.9	2	4.734	+ 61 10 32.4	70.9	2	14.62
1293	Rumker 767	8.2	53 15.80	60.0	2	3.228	+ 9 39 11.1	62.0	2	14.59
1294	Lacaille 951.	6.2	53 20.11	69.2	3	2.435	− 34 44 56.0	65.0	2	14.59
1295	B. A. C. 940.	5.5	53 26.38	63.0	2	2.628	− 25 50 16.1	67.5	2	14.58
1296	B. A. C. 944.	6.0*	2 53 51.84	60.0	2	+ 2.473	− 33 4 2.1	53.8	2	+ 14.56
1297	Weisse (2) II, 1293	8.2	54 0.38	61.3	4	3.335	+ 15 57 50.7	56.9	2	14.55
1298	O. Arg. S. 1968.	7.3	54 43.08	64.2	4	2.577	− 28 11 39.2	67.0	2	14.50
1299	α Ceti	2.3*	54 57.87	54.3	156	3.129	+ 3 32 18.2	50.5	76	14.49
1300	Weisse II, 970	6.2	55 13.93	65.4	2	2.958	− 7 2 35.8	60.7	4	14.47
1301	Weisse II, 967	8.0	2 55 19.38	58.8	2	+ 3.201	+ 7 55 11.0	55.7	3	+ 14.47
1302	Weisse (2) II, 1322	7.8	55 21.87	61.2	4	3.456	+ 22 30 32.2	60.3	3	14.47
1303	B. A. C. 951.	6.2	55 35.53	62.7	3	2.566	− 28 37 51.1	67.9	2	14.45
1304	O. Arg. S. 1977.	6.5	55 36.56	68.9	2	2.758	− 18 45 37.9	65.1	2	14.45
1305	Weisse II, 976	8.5	55 49.92	64.3	3	3.302	+ 13 55 12.7	65.6	2	14.44
1306	ρ Persei	4.0	2 56 12.92	61.0	2	+ 3.805	+ 38 17 43.0	47.5	16	+ 14.41
1307	τ^3 Eridani	4.9	56 13.18	63.4	3	2.655	− 24 10 31.3	65.0	2	14.41
1308	Weisse II, 1001	8.4	57 18.18	65.6	3	3.273	+ 12 6 45.2	65.0	2	14.35
1309	ρ^3 Eridani	5.0*	57 24.06	59.5	2	2.938	− 8 9 2.4	63.0	2	14.34
1310	O. Arg. S. 2000	8.5	57 32.40	66.3	2	2.763	− 18 17 16.5	67.0	1	14.33

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1311	Lalande 5682	7.9	2 57 39.21	68.9	2	+ 3.804	+ 38 3 23.5	49.0	1	+ 14.33
1312	Anonymous	8.2	57 41.68	64.4	3	3.300	+ 13 43 43.5	69.9	2	14.33
1313	Anonymous	9.0	58 0.56	64.4	2	2.662	− 23 41 30.0	69.9	1	14.30
1314	Anonymous	8.3	58 4.25	64.1	2	3.301	+ 13 43 21.1	68.0	3	14.30
1315	Anonymous	6.5	58 36.50	67.3	3	2.415	− 34 57 23.3	68.4	3	14.26
1316	Anonymous	7.0	2 58 38.11	68.9	2	+ 2.607	− 26 19 31.5	64.9	2	+ 14.27
1317	Weisse II, 1037	8.8	58 54.00	58.8	2	3.310	+ 14 13 47.8	55.4	2	14.25
1318	β Persei	3.0	59 4.34	49.6	9	3.874	+ 40 24 46.9	62.6	4	14.24
1319	53 Arietis	6.0	59 33.05	61.8	8	3.366	+ 17 20 14.8	65.4	2	14.21
1320	B. A. C. 960	6.0*	59 52.34	60.4	2	12.716	+ 84 24 15.5	59.2	4	14.19
1321	κ Persei	5.0	3 0 4.15	63.2	3	+ 3.996	+ 44 19 24.6	67.0	2	+ 14.18
1322	Weisse II, 1066	8.0	0 24.30	68.9	2	3.304	+ 13 44 19.1	67.5	2	14.16
1323	Weisse II, 1069	7.2	0 26.90	69.0	2	3.086	+ 0 51 52.6	66.0	2	14.15
1324	Lacaille 981.	8.0	0 47.91	66.4	2	2.513	− 30 31 44.1	67.0	2	14.13
1325	B. A. C. 975	7.0*	1 9.05	59.0	2	3.204	+ 7 55 42.2	55.0	2	14.11
1326	Lacaille 983.	7.5	3 1 28.72	64.6	2	+ 2.457	− 32 53 31.9	67.6	2	+ 14.09
1327	B. A. C. 978	6.8	1 51.98	63.4	2	2.557	− 28 22 10.3	67.5	2	14.07
1328	Weisse III, 1	9.0	1 56.36	60.0	2	3.208	+ 8 8 36.3	55.1	2	14.06
1329	Weisse III, 20	6.2	2 0.29	69.0	2	3.264	+ 11 20 20.7	65.5	2	14.00
1330	Lacaille 988.	6.3	2 6.30	66.5	2	2.502	− 30 51 12.2	68.6	2	14.05
1331	B. A. C. 980	6.5*	3 2 8.56	58.9	2	+ 3.547	+ 26 21 27.2	68.0	2	+ 14.05
1332	Lalande 5834	7.0	2 27.65	68.9	2	3.806	+ 37 32 8.3	58.6	2	14.03
1333	48 Cephei, (H.)	5.5	2 42.10	69.2	3	7.287	+ 77 12 50.5	62.3	5	14.01
1334	Weisse III, 23	8.8	2 55.05	70.0	2	2.901	− 10 6 42.0	68.6	2	14.00
1335	Weisse (2) III, 45	9.0	3 12.40	59.5	2	3.361	+ 16 46 10.7	55.5	2	13.98
1336	Weisse III, 26	6.8	3 3 15.18	61.8	3	+ 3.232	+ 9 28 16.6	62.0	4	+ 13.98
1337	O. Arg. S. 2073.	8.0	3 24.14	65.5	2	2.542	− 28 54 0.9	69.1	2	13.97
1338	Weisse III, 30	7.5	3 25.15	69.0	1	3.232	+ 9 27 24.0	68.1	2	13.97
1339	Weisse III, 35	8.5	3 35.28	65.6	2	3.210	+ 8 11 26.5	55.7	3	13.96
1340	δ Arietis	4.0*	3 37.76	62.1	63	3.406	+ 19 11 39.6	59.2	5	13.96
1341	B. A. C. 987	6.1	3 3 40.79	65.8	3	+ 3.284	+ 12 30 52.2	65.0	3	+ 13.95
1342	Weisse III, 62	8.0	4 4.96	60.0	2	3.208	+ 8 3 52.2	58.5	5	13.93
1343	Weisse (2) III, 58	9.0	4 6.86	65.5	2	3.836	+ 38 26 35.7	61.0	2	13.93
1344	Weisse (2) III, 67	8.2	4 23.87	65.5	2	3.837	+ 38 26 20.0	65.5	2	13.91
1345	Weisse (2) III, 75	8.5	4 24.12	65.9	2	3.362	+ 16 46 14.0	55.9	2	13.91
1346	Lacaille 996.	6.7	3 4 25.44	66.4	2	+ 2.638	− 24 16 20.8	64.5	4	+ 13.90
1347	Weisse III, 56	9.0	4 36.18	66.0	2	3.155	+ 4 54 14.1	67.0	2	13.89
1348	Weisse III, 90	8.0	5 42.59	68.9	2	2.933	− 8 10 39.8	56.9	2	13.82
1349	12 Eridani	3.5*	6 7.37	58.7	5	2.522	− 29 32 21.8	70.0	4	13.80
1350	Weisse III, 95	8.4	6 12.08	66.1	2	3.125	+ 3 6 41.5	68.5	2	13.79

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1351	Weisse III, 98	7.8	3 6 24.94	68.9	2	+ 3.242	+ 9 55 48.7	55.9	2	+ 13.78
1352	Lalande 5997	7.5	6 43.34	67.0	2	2.753	− 18 9 25.7	68.0	2	13.76
1353	Weisse III, 101	8.1	6 45.65	66.6	2	3.289	+ 12 32 54.2	68.1	2	13.76
1354	Lacaille 1004	6.7	6 47.85	67.0	2	2.442	− 32 55 31.2	67.6	2	13.75
1355	ζ Arietis	4.6	6 51.58	64.3	37	3.436	+ 20 31 22.2	61.5	2	13.75
1356	Anonymous	8.5	3 7 1.27	64.9	1	+ 2.753	− 18 8 38.3	68.0	2	+ 13.74
1357	Anonymous	9.0	7 12.97	66.6	2	3.290	+ 12 37 8.6	70.0	2	13.73
1358	Weisse III, 114	8.7	7 15.50	60.8	4	3.278	+ 11 54 32.3	55.4	2	13.73
1359	Lacaille 1010	7.0	7 24.31	64.0	3	2.551	− 28 6 2.0	69.0	2	13.72
1360	Anonymous	7.5	7 30.59	66.0	2	2.520	− 29 29 53.7	70.0	2	13.71
1361	Weisse (2) III, 161	9.0	3 7 54.90	61.0	3	+ 3.504	+ 23 50 39.3	58.6	3	+ 13.68
1362	Weisse III, 139	9.0	8 41.43	65.8	3	3.301	+ 13 9 53.0	66.9	3	13.63
1363	Weisse (2) III, 173	6.0	8 42.00	69.0	2	3.860	+ 38 45 57.4	46.9	2	13.63
1364	B. A. C. 1010	7.5	8 43.50	69.9	2	2.911	− 9 17 28.6	68.0	2	13.63
1365	B. A. C. 1012	6.4	8 58.93	64.9	2	2.580	− 26 37 15.6	64.9	2	13.62
1366	ζ Eridani	5.5	3 9 2.10	45.7	6	+ 2.910	− 9 20 30.9	68.0	2	+ 13.61
1367	Weisse III, 145	9.0*	9 7.42	66.0	2	3.163	+ 5 19 30.7	67.5	2	13.61
1368	Weisse (2) III, 196	7.5	9 18.40	59.0	2	3.374	+ 17 3 19.2	69.0	2	13.59
1369	Lacaille 1026	6.0	9 18.89	65.5	2	2.530	− 28 51 57.4	66.0	2	13.59
1370	Anonymous	9.0	9 55.35	68.9	2	3.328	+ 14 34 48.5	65.5	2	13.57
1371	Anonymous	9.5	3 10 7.89	62.0	1	+ 3.507	+ 23 48 35.8	70.1	1	+ 13.54
1372	Weisse III, 168	8.1	10 8.35	63.0	5	3.306	+ 13 19 50.0	64.4	3	13.54
1373	B. A. C. 1019	6.0*	10 25.11	61.2	6	2.470	− 31 20 46.0	57.2	4	13.54
1374	Weisse (2) III, 216	7.7	10 25.12	66.1	2	3.386	+ 17 39 36.1	67.6	2	13.54
1375	Weisse III, 172	8.0	10 33.63	58.9	2	3.288	+ 12 18 31.4	57.6	4	13.54
1376	Weisse III, 173	7.1	3 10 39.37	64.1	2	+ 3.331	+ 14 40 22.4	65.1	2	+ 13.51
1377	O. Arg. S. 2173	8.9	11 0.96	69.1	2	2.733	− 18 54 21.1	66.5	2	13.48
1378	Lacaille 1041	6.4	11 8.98	64.9	2	2.630	− 24 2 10.1	64.9	2	13.48
1379	Lacaille 1048	7.2	11 50.53	64.0	2	2.569	− 26 51 59.5	67.0	2	13.43
1380	*l* Persei	6.0*	12 4.62	63.0	2	3.993	+ 42 49 13.0	67.1	2	13.42
1381	60 Arietis	6.2	3 12 8.07	66.9	3	+ 3.539	+ 25 9 19.5	65.0	2	+ 13.41
1382	Weisse III, 205	8.0	12 8.88	60.7	2	3.299	+ 12 51 58.4	56.3	3	13.41
1383	15 Eridani	6.0	12 10.80	66.4	2	2.649	− 23 1 30.7	68.1	2	13.41
1384	Weisse (2) III, 255	8.3	12 13.55	65.3	4	3.341	+ 15 8 49.3	66.5	2	13.41
1385	O. Arg. S. 2189, (1st *)	6.8	12 17.74	68.9	2	2.728	− 19 4 11.8	64.5	2	13.40
1386	O. Arg. S. 2189, (2d *)	8.4	3 12 18.08	68.9	2	+ 2.728	− 19 4 11.8	64.5	2	+ 13.40
1387	Anonymous	8.5	12 35.61	64.4	2	3.488	+ 22 40 30.2	68.6	2	13.38
1388	Weisse III, 224	8.5	13 2.15	60.0	2	3.222	+ 8 31 35.6	69.0	2	13.35
1389	Weisse III, 228	9.0	13 4.55	65.6	4	3.010	− 3 31 39.7	69.5	2	13.35
1390	τ^1 Arietis	5.5	13 8.97	61.2	7	3.448	+ 20 38 21.8	58.1	2	13.35

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1391	τ^4 Eridani	4.4	3 13 17.46	69.0	2	+ 2.663	− 22 16 8.6	64.9	2	+ 13.33
1392	B. A. C. 1039	5.2	13 28.67	68.9	2	2.614	− 24 37 55.8	65.0	2	13.32
1393	Weisse III, 233	8.3	13 42.31	66.1	2	3.250	+ 10 7 24.1	61.9	2	13.31
1394	Weisse III, 240	8.1	13 47.69	65.6	4	3.009	− 3 37 2.2	68.6	2	13.30
1395	Rumker 845	9.0	13 55.36	65.4	2	3.523	+ 24 14 45.4	61.9	2	13.30
1396	Anonymous	9.0	3 14 0.70	65.0	2	+ 3.228	+ 8 51 22.1	70.0	2	+ 13.29
1397	Weisse III, 251	8.5	14 16.93	61.4	2	3.226	+ 8 43 41.6	57.6	4	13.27
1398	α Persei	2.0*	14 20.70	51.2	108	4.240	+ 49 21 34.0	48.4	78	13.27
1399	Lacaille 1055	7.1	14 21.60	69.0	2	2.612	− 24 37 17.9	68.0	3	13.27
1400	τ^2 Arietis	5.3	14 42.15	69.0	2	3.442	+ 20 14 19.3	65.0	2	13.24
1401	B. A. C. 1046	6.8	3 14 44.96	63.0	2	+ 2.565	− 26 47 58.7	68.0	2	+ 13.24
1402	B. A. C. 1047	7.0	14 46.47	63.0	2	2.558	− 27 6 51.9	70.0	1	13.24
1403	B. A. C. 1049	6.0	15 17.15	64.3	5	2.621	− 24 8 23.3	67.5	2	13.21
1404	Anonymous	9.0	15 26.	. .	.	3.540	+ 24 55 39.3	69.5	2	13.19
1405	64 Arietis	5.5*	16 2.75	52.4	4	3.526	+ 24 13 31.8	57.0	3	13.16
1406	B. A. C. 1054	6.0	3 16 15.10	69.0	2	+ 2.576	− 26 5 27.9	66.0	2	+ 13.14
1407	65 Arietis	5.8	16 22.08	66.0	2	3.446	+ 20 18 13.9	67.1	2	13.13
1408	Weisse III, 278	7.2	16 27.56	60.4	2	2.925	− 8 17 13.4	57.0	2	13.13
1409	Weisse (2) III, 351	9.0	16 43.86	60.3	2	3.543	+ 24 56 21.1	62.0	2	13.11
1410	O. Arg. S. 2237.	7.2	16 53.04	64.5	2	2.744	− 17 56 30.2	67.0	2	13.10
1411	ο Tauri	4.5*	3 17 16.94	60.2	4	+ 3.224	+ 8 32 0.4	60.5	7	+ 13.07
1412	Weisse III, 295	8.0	17 23.58	62.5	4	3.242	+ 9 30 43.9	61.0	3	13.07
1413	Weisse III, 299	9.0	17 38.94	64.4	2	3.236	+ 9 11 38.8	55.1	2	13.05
1414	B. A. C. 1058	4.0*	17 45.74	45.5	5	4.793	+ 59 26 52.9	69.0	2	13.04
1415	Lacaille 1079	7.7	17 46.30	64.0	2	2.522	− 28 25 45.7	68.5	2	13.04
1416	O. Arg. S. 2245	6.6	3 17 53.55	64.2	4	+ 2.673	− 21 25 43.5	66.5	2	+ 13.03
1417	Weisse III, 306	9.0	17 57.24	61.3	2	3.309	+ 13 7 30.6	59.7	3	13.03
1418	Lalande 6326	8.0	18 0.08	69.0	2	2.724	− 18 58 15.2	65.0	2	13.03
1419	Weisse (2) III, 376	8.0*	18 23.29	62.1	2	3.855	+ 37 33 9.9	61.0	2	13.00
1420	Weisse III, 316	9.0	18 25.72	67.5	2	3.197	+ 7 0 8.5	67.0	2	13.00
1421	B. A. C. 1063	7.0	3 18 51.06	59.4	2	+ 4.260	+ 49 21 29.5	63.4	3	+ 12.97
1422	Weisse (2) III, 393	7.5	19 3.95	59.0	2	3.409	+ 18 15 49.4	56.1	1	12.95
1423	Anonymous	9.2	19 13.09	64.1	1	3.164	+ 5 9	. .	.	12.94
1424	ξ Tauri	4.0*	19 35.13	55.2	7	3.238	+ 9 14 30.5	58.0	8	12.92
1425	Weisse III, 334	6.5	19 36.20	65.0	2	3.294	+ 12 14 38.2	68.6	2	12.92
1426	Anonymous	6.0	3 19 40.83	66.9	2	+ 2.533	− 27 45 58.6	66.5	2	+ 12.91
1427	Weisse III, 343	7.0	20 7.60	69.0	2	3.221	+ 8 16 32.3	70.1	1	12.89
1428	66 Arietis	6.5*	20 16.	. .	.	3.493	+ 22 19 6.6	58.1	1	12.87
1429	B. A. C. 1073	6.0	20 27.99	63.5	5	2.531	− 27 48 40.1	66.5	2	12.86
1430	Anonymous	8.8	20 38.28	65.1	2	3.295	+ 12 13 28.2	70.1	1	12.85

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1431	Anonymous	. .	3 20 52.18	66.4	3	+ 3.845	+ 36 56 52.7	69.1	2	+ 12.83
1432	Lacaille 1102	7.7	20 53.53	64.0	2	2.501	− 29 3 12.0	68.5	2	12.83
1433	Weisse (2) III, 420	8.5	20 54.80	69.1	2	3.844	+ 36 55 41.1	68.4	3	12.83
1434	B. A. C. 1061	6.0*	21 2.12	62.4	10	18.532	+ 86 11 44.1	65.5	4	12.82
1435	Rumker 870	8.0	21 48.02	59.5	2	3.412	+ 18 16 15.9	55.6	2	12.77
1436	Anonymous	9.2	3 21 50.96	59.5	2	+ 3.244	+ 9 28 16.7	55.0	3	+ 12.77
1437	Anonymous	9.0	22 3.18	69.1	1	3.169	+ 5 23 31.1	69.5	2	12.75
1438	Lacaille 1108	6.0	22 8.07	67.1	2	2.317	− 36 10 13.3	69.0	2	12.75
1439	Anonymous	8.8	22 11.95	67.4	3	3.170	+ 5 26 9.2	69.5	2	12.74
1440	Rumker, N. F., 875	8.0	22 32.55	67.4	2	3.300	+ 12 25 10.5	69.0	2	12.74
1441	Anonymous	9.5	3 22 42.98	69.0	1	+ 2.729	− 18 21 4.0	70.0	1	+ 12.71
1442	Groombridge 698	7.3	22 44.41	62.9	4	4.012	+ 42 16 5.3	67.6	2	12.71
1443	Lacaille 1111	7.0	22 47.40	67.1	2	2.311	− 36 20 26.8	70.1	2	12.70
1444	Weisse (2) III, 461	8.2	22 53.18	63.7	3	3.852	+ 36 59 43.7	65.7	3	12.70
1445	Rumker 879	7.5	22 55.32	61.4	5	3.415	+ 18 19 10.3	.62.6	2	12.70
1446	Weisse (2) III, 464	9.5	3 22 59.50	61.1	1	+ 3.853	+ 37 2 3.6	66.4	3	+ 12.69
1447	*f* Tauri	4.5	23 8.87	62.7	7	3.301	+ 12 27 13.8	64.1	3	12.68
1448	O. Arg. S. 2311	6.7	23 28.56	63.8	7	2.611	− 23 57 39.4	65.0	4	12.66
1449	17 Eridani	4.5*	23 40.28	45.8	4	2.971	− 5 33 28.0	68.0	1	12.65
1450	Lacaille 1114	7.0	23 40.36	66.1	2	2.632	− 22 59 23.1	68.0	2	12.65
1451	Weisse (2) III, 493	8.0	3 23 44.27	64.5	2	+ 3.416	+ 18 19 12.5	56.5	2	+ 12.64
1452	Anonymous	9.5	23 44.30	66.5	2	3.200	+ 7 3 4.4	70.0	2	12.64
1453	Weisse III, 428	7.8	24 34.96	61.5	3	3.202	+ 7 5 17.6	61.9	2	12.58
1454	Lacaille 1121	7.5	24 48.41	69.1	2	2.508	− 28 24 24.2	65.0	2	12.57
1455	Weisse III, 442	7.0	25 13.46	59.9	2	2.919	− 8 19 4.8	56.9	2	12.55
1456	Weisse III, 447	7.2	3 25 35.36	60.0	2	+ 3.319	+ 13 18 26.9	56.0	2	+ 12.51
1457	Weisse III, 456	7.0	25 36.79	68.9	2	2.905	− 9 4 14.4	47.0	2	12.51
1458	Lacaille 1127	6.8	25 53.14	63.3	3	2.366	− 34 1 30.7	66.5	2	12.49
1459	Lacaille 1124	6.0	25 54.57	69.0	1	2.560	− 26 5 28.2	64.5	4	12.50
1460	Weisse (2) III, 528	7.5	25 58.01	69.0	2	3.892	+ 38 6 49.8	46.3	3	12.49
1461	7 Tauri	5.5	3 26 9.48	66.0	2	+ 3.538	+ 23 59 30.2	67.5	2	+ 12.48
1462	B. A. C. 1097	7.0*	26 18.05	58.9	2	3.690	+ 30 32 44.6	54.0	2	12.46
1463	ε Eridani	4.1	26 20.10	61.1	21	2.888	− 9 56 2.8	62.8	2	12.46
1464	Lacaille 1128	6.5	26 24.64	62.5	2	2.581	− 25 5 36.6	67.0	2	12.46
1465	O. Arg. S. 2343	8.5	26 28.42	65.0	1	2.558	− 26 8 2.9	65.0	2	12.46
1466	Anonymous	. .	3 26	. .	.	+ 3.708	+ 31 14 0.7	70.0	1	+ 12.45
1467	Anonymous	8.7	26 39.66	64.0	2	3.710	+ 31 19 13.0	67.0	1	12.44
1468	Weisse III, 474	8.8	26 46.66	60.0	2	3.328	+ 13 42 8.8	55.5	2	12.43
1469	B. A. C. 1101	7.2	26 55.88	62.2	3	3.708	+ 31 12 33.4	57.2	4	12.42
1470	Lacaille 1134	6.2	28 12.83	64.5	2	2.438	− 31 6 1.1	68.9	2	12.33

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1471	B. A. C. 1105	6.0*	3 28 33.11	64.9	2	+ 4.026	+ 42 7 5.6	54.0	2	+ 12.31
1472	Weisse III, 517	9.0	28 40.40	59.0	2	3.334	+ 13 59 20.6	56.0	2	12.30
1473	9 Tauri	6.0*	28 44.40	60.7	14	3.515	+ 22 44 42.6	67.6	2	12.30
1474	Lacaille 1137	6.2	28 53.96	63.2	4	2.555	− 26 3 13.9	67.5	2	12.29
1475	B. A. C. 1109	6.0*	28 56.92	61.0	3	2.403	− 32 20 41.4	65.0	2	12.28
1476	Anonymous	9.5	3 29 10.63	69.4	2	+ 2.903	− 9 5 46.8	47.1	1	+ 12.26
1477	B. A. C. 1110	6.5*	29 36.40	60.0	2	3.074	+ 0 7 42.1	54.1	2	12.24
1478	10 Tauri	5.0	29 43.72	66.6	2	3.071	− 0 2 48.9	68.0	2	12.23
1479	Anonymous	8.5	29 46.13	69.1	2	3.628	+ 27 40 44.0	61.6	2	12.23
1480	Anonymous	7.7	29 53.51	69.1	2	2.707	− 19 0 48.7	64.0	2	12.22
1481	O. Arg. S. 2388	8.8	3 29 56.02	69.5	2	+ 2.600	− 23 58 59.0	65.3	3	+ 12.22
1482	B. A. C. 1111	5.5*	30 2.61	70.9	2	5.132	+ 62 45 29.8	70.9	2	12.20
1483	Weisse (2) III, 639	7.7	30 8.24	60.3	3	3.435	+ 18 53 51.7	56.0	2	12.20
1484	Weisse (2) III, 657	7.0	31 16.40	49.0	2	3.781	+ 33 39 27.2	68.0	2	12.12
1485	Weisse III, 575	8.1	31 25.76	55.4	2	3.114	+ 2 16 3.8	66.1	2	12.11
1486	Weisse III, 569	6.9	3 31 30.01	69.1	2	+ 3.327	+ 13 26 10.2	46.0	1	+ 12.11
1487	B. A. C. 1119	7.0	31 31.96	64.1	4	3.378	+ 16 4 43.3	64.1	2	12.10
1488	Weisse (2) III, 669, (1st*)	9.0	31 36.79	69.0	2	3.925	+ 38 39 56.5	46.0	3	12.10
1489	Weisse (2) III, 669, (2d*)	8.0	31 37.31	69.0	2	3.925	+ 38 39 37.8	46.0	3	12.10
1490	Weisse III, 580	6.9	31 37.91	64.9	3	3.115	+ 2 8 13.7	66.5	2	12.10
1491	Anonymous	9.0	3 31 46.07	70.0	2	+ 2.629	− 22 33 28.3	66.5	2	+ 12.08
1492	Anonymous	. .	31 47.	. .	.	2.496	− 28 21 48.5	71.0	1	12.08
1493	B. A. C. 1123	5.0	32 1.60	69.0	2	3.881	+ 37 7 29.5	46.4	3	12.07
1494	11 Tauri	8.0	32 24.93	61.5	7	3.568	+ 24 52 24.0	65.4	3	12.04
1495	Lacaille 1160	7.0	32 32.36	64.0	4	2.410	− 31 45 38.5	67.6	2	12.03
1496	12 Tauri	6.0*	3 32 33.84	45.8	2	+ 3.121	+ 2 35 58.1	69.9	2	+ 12.03
1497	B. A. C. 1130	6.0	32 58.33	61.3	7	2.493	− 28 24 10.4	54.0	2	12.00
1498	δ Persei	3.0	32 58.43	54.4	4	4.234	+ 47 20 10.0	65.6	6	12.00
1499	Weisse (2) III, 721	8.0	33 23.45	65.0	2	3.440	+ 18 56 5.2	65.0	3	11.97
1500	ο Persei	4.0*	33 30.73	55.7	3	3.782	+ 33 30 45.3	63.0	3	11.96
1501	Weisse (2) III, 733	8.0	3 34 3.16	59.0	2	+ 3.599	+ 26 7 20.4	63.1	4	+ 11.93
1502	Radcliffe 1041	6.5	34 4.65	66.0	2	4.269	+ 48 4 27.1	68.0	2	11.93
1503	Lacaille 1171	6.5	34 6.70	63.5	4	2.477	− 28 57 45.5	65.5	2	11.92
1504	Rumker 940	8.5	34 22.27	59.6	3	3.348	+ 14 20 24.3	60.6	6	11.90
1505	Lacaille 1176	7.0	34 38.11	67.0	2	2.318	− 35 0 0.7	67.4	2	11.89
1506	Weisse (2) III, 750	8.0*	3 34 48.47	69.1	2	+ 3.911	+ 37 55 30.9	56.0	7	+ 11.87
1507	Anonymous	9.0	34 50.79	69.3	4	3.328	+ 13 21 4.5	58.0	2	11.87
1508	Weisse (2) III, 751	8.0*	34 51.00	69.1	2	3.911	+ 37 55 32.4	69.4	3	11.87
1509	Lacaille 1177	7.0	35 1.10	63.0	3	2.488	− 28 25 17.9	68.7	3	11.86
1510	61 Pleiadum	. .	35 24.16	69.2	4	3.551	+ 23 55 41.3	65.6	2	11.83

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1511	61 Pleiadum, (Eq.)	. .	3 35 24.24	66.1	5	+ 3.551	+ 23 55 38.1	66.1	5	+ 11.83
1512	Lalande 6820	5.5	35 28.41	69.9	2	3.856	+ 36 0 52.5	58.6	2	11.84
1513	64 Pleiadum, (Eq.)	. .	35 30.17	65.8	5	3.544	+ 23 35 29.8	65.8	5	11.82
1514	77 Pleiadum, (Eq.)	. .	35 32.10	65.9	5	3.548	+ 23 47 59.0	65.9	5	11.82
1515	ο Persei	5.2	35 32.70	69.5	2	3.743	+ 31 50 28.1	57.8	2	11.82
1516	72 Pleiadum, (Eq.)	. .	3 35 37.21	65.9	5	+ 3.549	+ 23 48 10.8	65.9	5	+ 11.82
1517	112 Pleiadum, (Eq.)	. .	35 40.13	66.1	5	3.556	+ 24 6 41.4	66.1	5	11.82
1518	65 Pleiadum, (Eq.)	. .	35 41.36	65.9	5	3.546	+ 23 42 5.5	65.9	5	11.81
1519	91 Pleiadum, (Eq.)	. .	35 42.35	65.9	3	3.548	+ 23 45 24.9	65.9	3	11.81
1520	75 Pleiadum, (Eq.)	. .	35 42.37	65.9	4	3.540	+ 23 26 8.8	65.9	4	11.81
1521	106 Pleiadum, (Eq.)	. .	3 35 43.13	66.1	5	+ 3.558	+ 24 11 53.7	66.1	5	+ 11.81
1522	78 Pleiadum, (Eq.)	. .	35 46.15	65.9	5	3.549	+ 23 49 44.7	65.9	5	11.81
1523	73 Pleiadum, (Eq.)	. .	35 51.74	65.9	5	3.549	+ 23 48 2.6	65.9	5	11.80
1524	94 Pleiadum, (Eq.)	. .	35 54.08	66.1	5	3.552	+ 23 57 27.5	66.1	5	11.80
1525	69 Pleiadum, (Eq.)	. .	35 54.95	65.9	3	3.544	+ 23 35 9.1	65.9	3	11.80
1526	70 Pleiadum, (Eq.)	. .	3 35 56.80	65.9	3	+ 3.546	+ 23 39 25.5	65.9	3	+ 11.79
1527	74 Pleiadum, (Eq.)	. .	35 58.04	65.9	5	3.550	+ 23 49 37.4	65.9	5	11.79
1528	Lacaille 1186	7.2	35 58.20	63.6	2	2.565	− 25 6 7.1	67.0	2	11.79
1529	107 Pleiadum, (Eq.)	. .	35 59.50	66.1	6	3.563	+ 24 25 43.2	66.1	6	11.79
1530	98 Pleiadum, (Eq.)	. .	36 0.98	66.1	3	3.549	+ 23 48 49.9	66.1	3	11.79
1531	O. Arg. S. 2468.	8.5	3 36 1.76	64.0	3	+ 2.597	− 23 41 45.1	64.9	2	+ 11.79
1532	Rumker, N. F., 952	9.0	36 5.10	67.1	2	3.547	+ 23 41 17.6	64.1	2	11.78
1533	66 Pleiadum, (Eq.)	. .	36 5.25	65.9	5	3.547	+ 23 41 19.2	65.9	5	11.78
1534	60 Pleiadum, (Eq.)	. .	36 6.21	65.0	2	3.553	+ 23 57 3.5	65.0	2	11.78
1535	95 Pleiadum, (Eq.)	. .	36 6.52	66.1	5	3.553	+ 23 56 57.5	66.1	5	11.78
1536	103 Pleiadum, (Eq.)	. .	3 36 15.49	66.1	5	+ 3.556	+ 24 5 57.7	66.1	5	+ 11.77
1537	109 Pleiadum, (Eq.)	. .	36 20.15	66.1	3	3.563	+ 24 22 29.4	66.1	3	11.75
1538	79 Pleiadum, (Eq.)	. .	36 25.29	65.9	5	3.550	+ 23 47 10.7	65.9	5	11.76
1539	71 Pleiadum, (Eq.)	. .	36 26.34	65.9	2	3.547	+ 23 37 1.9	65.9	2	11.76
1540	16 Tauri.	6.0	36 29.22	66.4	5	3.551	+ 23 50 44.7	65.1	4	11.75
1541	92 Pleiadum, (Eq.)	. .	3 36 30.78	65.9	3	+ 3.548	+ 23 43 5.9	65.9	3	+ 11.75
1542	17 Tauri.	4.5*	36 34.05	61.5	25	3.547	+ 23 40 12.8	64.1	9	11.75
1543	96 Pleiadum, (Eq.)	. .	36 36.90	66.1	5	3.554	+ 23 59 22.2	66.1	5	11.74
1544	76 Pleiadum, (Eq.)	. .	36 36.91	65.9	4	3.543	+ 23 28 36.9	65.9	4	11.75
1545	B. A. C. 1150	5.0*	36 40.94	61.0	2	2.384	− 32 23 14.9	68.1	1	11.74
1546	Anonymous	. .	3 36 46.	. .	.	+ 3.551	+ 23 49 17.3	67.1	2	+ 11.73
1547	57 Pleiadum. (Eq.)	. .	36 47.69	64.9	6	3.551	+ 23 49 12.2	64.9	6	11.73
1548	97 Pleiadum, (Eq.)	. .	36 48.16	66.1	5	3.538	+ 23 15 35.1	66.1	5	11.73
1549	18 Tauri.	7.0*	36 48.83	69.1	2	3.564	+ 24 23 48.6	69.1	2	11.73
1550	101 Pleiadum, (Eq.)	. .	36 50.37	66.2	5	3.556	+ 24 2 27.1	66.2	5	11.73

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1551	19 Tauri	5.2	3 36 52.76	69.1	2	+ 3.556	+ 24 1 28.5	69.4	3	+ 11.73
1552	104 Pleiadum, (Eq.) . .	. .	36 57.15	66.2	4	3.561	+ 24 16 52.8	66.2	4	11.72
1553	110 Pleiadum, (Eq.) . .	. .	36 59.74	66.1	3	3.556	+ 24 28 47.0	66.1	3	11.72
1554	93 Pleiadum, (Eq.) . .	. .	37 1.16	65.9	3	3.549	+ 23 44 10.9	65.9	3	11.72
1555	A.1 Pleiadum	. .	37 7.73	65.8	3	3.546	+ 23 35 36.9	64.1	5	11.71
1556	A.1 Pleiadum, (Eq.) . .	. .	3 37 7.94	64.3	17	+ 3.546	+ 23 35 34.4	64.3	17	+ 11.71
1557	53 Pleiadum, (Eq.) . .	. .	37 14.63	64.9	3	3.556	+ 24 1 20.2	64.9	3	11.70
1558	A.2 Pleiadum, (Eq.) . .	. .	37 14.78	66.2	4	3.556	+ 24 1 17.3	66.2	4	11.70
1559	62 Pleiadum, (Eq.) . .	. .	37 14.87	65.8	10	3.556	+ 24 1 20.6	65.8	10	11.70
1560	52 Pleiadum, (Eq.) . .	. .	37 18.46	64.9	5	3.554	+ 23 54 29.7	64.9	5	11.70
1561	A.4 Pleiadum, (Eq.) . .	. .	3 37 18.55	65.8	4	+ 3.553	+ 23 53 41.0	67.5	2	+ 11.70
1562	99 Pleiadum, (Eq.) . .	. .	37 19.95	66.2	4	3.560	+ 24 11 10.2	66.2	4	11.69
1563	A.6 Pleiadum, (Eq.) . .	. .	37 22.12	65.9	5	3.552	+ 23 50 48.6	65.9	5	11.69
1564	105 Pleiadum, (Eq.) . .	. .	37 23.98	66.2	5	3.562	+ 24 16 17.1	66.2	5	11.69
1565	63 Pleiadum, (Eq.) . .	. .	37 25.43	65.8	4	3.551	+ 23 46 41.6	65.8	4	11.69
1566	58 Pleiadum, (Eq.) . .	. .	3 37 25.49	65.0	3	+ 3.551	+ 23 46 39.5	65.0	3	+ 11.69
1567	Lacaille 1196 . . .	7.0*	37	. .	.	2.407	− 31 27 54.4	70.0	1	11.69
1568	Lalande 6888, (1st *) .	. .	37 29.75	70.9	2	4.018	+ 41 1 53.0	71.0	3	11.68
1569	20 Tauri	5.0	37 30.09	69.0	3	3.554	+ 23 55 37.5	64.1	2	11.68
1570	Lalande 6888, (2d *) .	. .	37 30.33	70.9	2	4.018	+ 41 2 0.0	71.0	2	11.68
1571	A.7 Pleiadum	. .	3 37 33.11	65.8	3	+ 3.547	+ 23 35 53.9	64.1	4	+ 11.68
1572	21 Tauri	6.0	37 34.34	69.5	3	3.559	+ 24 6 52.0	69.1	2	11.68
1573	111 Pleiadum, (Eq.) . .	. .	37 42.39	66.1	3	3.565	+ 24 22 57.7	66.1	3	11.67
1574	22 Tauri	7.0*	37 43.	65.8	7	3.558	+ 24 5 14.4	70.1	1	11.67
1575	67 Pleiadum, (Eq.) . .	. .	37 45.70	65.9	5	3.547	+ 23 36 13.4	65.9	5	11.66
1576	68 Pleiadum, (Eq.) . .	. .	3 37 49.75	65.9	5	+ 3.548	+ 23 37 12.7	65.9	5	+ 11.66
1577	O. Arg. S. 2488. . .	9.0	37 47.17	70.0	2	2.624	− 22 22 54.7	64.9	1	11.66
1578	A.8 Pleiadum	8.5	37 54.66	66.0	6	3.551	+ 23 45 20.9	64.5	2	11.65
1579	A.8 Pleiadum, (Eq.) . .	. .	37 54.85	63.5	19	3.551	+ 23 45 21.7	63.5	19	11.65
1580	A.9 Pleiadum	8.5	37 56.90	65.8	6	3.551	+ 23 45 0.7	67.1	2	11.65
1581	23 Tauri	6.5	3 38 1.29	66.6	4	+ 3.546	+ 23 30 31.5	63.9	9	+ 11.65
1582	100 Pleiadum, (Eq.) . .	. .	38 2.64	66.2	4	3.560	+ 24 7 52.6	66.2	4	11.64
1583	A.10 Pleiadum	. .	38 7.96	66.2	5	3.553	+ 23 48 57.2	67.1	2	11.64
1584	A.10 Pleiadum, (Eq.) . .	. .	38 8.06	64.1	26	3.553	+ 23 48 56.6	64.1	26	11.64
1585	108 Pleiadum , (Eq.) . .	. .	38 11.09	66.2	5	3.567	+ 24 25 47.3	66.2	5	11.63
1586	O. Arg. S. 2495. . .	7.3	3 38 12.40	64.0	3	+ 2.467	− 29 4 19.3	67.6	2	+ 11.63
1587	80 Pleiadum, (Eq.) . .	. .	38 14.25	65.9	4	3.544	+ 23 25 15.0	65.9	4	11.63
1588	84 Pleiadum, (Eq.) . .	. .	38 16.74	65.9	4	3.546	+ 23 31 21.7	65.9	4	11.63
1589	81 Pleiadum, (Eq.) . .	. .	38 19.66	65.9	4	3.542	+ 23 20 53.0	65.9	4	11.63
1590	A.11 Pleiadum, (Eq.) . .	. .	38 20.58	64.1	31	3.550	+ 23 40 23.4	64.1	31	11.62

Number.	Name of Star.	Magnitude.	Mean Right Ascension, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.	Mean Declination, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.
			h. m. s.			″	° ′ ″			″
1591	51 Pleiadum, (Eq.)	. .	3 38 22.58	64.8	1	+ 3.537	+ 23 6 58.4	64.8	1	+ 11.62
1592	59 Pleiadum, (Eq.)	. .	38 24.54	65.0	1	3.553	+ 23 49 12.3	65.0	1	11.62
1593	B. A. C. 1163	6.5	38 39.10	66.1	2	3.559	+ 24 4 56.4	68.7	3	11.60
1594	106 Pleiadum, (Eq.)	. .	38 43.13	66.2	5	3.562	+ 24 11 53.7	66.2	5	11.59
1595	A. 13 Pleiadum	. .	38 45.59	68.1	3	3.548	+ 23 33 25.3	64.1	1	11.59
1596	A. 13 Pleiadum, (Eq.)	. .	3 38 45.71	64.3	19	+ 3.548	+ 23 33 26.5	64.3	19	+ 11.59
1597	O. Arg. S. 2504	7.6	38 49.52	70.0	2	2.590	− 23 49 15.7	67.5	2	11.59
1598	54 Pleiadum, (Eq.)	. .	38 50.49	64.9	4	3.554	+ 23 50 25.9	64.9	4	11.59
1599	82 Pleiadum, (Eq.)	. .	38 52.24	65.9	4	3.543	+ 23 20 30.8	65.9	4	11.58
1600	A. 15 Pleiadum	. .	38 57.47	66.3	3	3.551	+ 23 41 32.4	67.1	2	11.58
1601	A. 15 Pleiadum, (Eq.)	. .	3 38 57.54	63.8	10	+ 3.551	+ 23 41 30.1	63.8	10	+ 11.58
1602	83 Pleiadum, (Eq.)	. .	38 58.65	65.9	4	3.544	+ 23 23 15.8	65.9	4	11.58
1603	A. 46 Pleiadum, (Eq.)	. .	38 58.79	63.9	3	3.546	+ 23 28 29.6	63.9	3	11.58
1604	A. 17 Pleiadum	. .	38 59.93	70.1	1	3.542	+ 23 17 18.2	68.1	2	11.58
1605	A. 18 Pleiadum	. .	39 0.28	65.8	4	3.551	+ 23 42 9.8	70.9	1	11.58
1606	A. 17 Pleiadum, (Eq.)	. .	3 39 0.30	64.8	6	+ 3.542	+ 23 17 17.5	64.8	6	+ 11.58
1607	A. 18 Pleiadum, (Eq.)	. .	39 0.35	63.8	10	3.551	+ 23 42 9.0	63.8	10	11.58
1608	24 Tauri	8.3	39 2.02	62.9	27	3.551	+ 23 40 48.3	55.2	14	11.57
1609	Weisse (2) III, 862	9.0*	39 2.84	65.8	3	3.677	+ 28 58 21.2	65.1	1	11.57
1610	A. 20 Pleiadum	. .	39 3.	. .	.	3.562	+ 24 9 6.8	68.0	1	11.57
1611	A. 19 Pleiadum, (Eq.)	. .	3 39 3.19	64.8	16	+ 3.544	+ 23 22 0.2	64.8	16	+ 11.57
1612	A. 20 Pleiadum, (Eq.)	. .	39 3.48	66.2	4	3.562	+ 24 9 8.4	66.2	4	11.57
1613	49 Pleiadum, (Eq.)	. .	39 5.60	64.8	2	3.538	+ 23 6 40.1	64.8	2	11.57
1614	A. 22 Pleiadum	. .	39 6.	. .	.	3.546	+ 23 28 38.2	69.0	3	11.57
1615	A. 22 Pleiadum, (Eq.)	. .	39 6.02	63.8	10	3.546	+ 23 28 40.8	63.8	10	11.57
1616	A. 21 Pleiadum, (Eq.)	. .	3 39 6.06	66.2	4	+ 3.563	+ 24 13 19.0	66.2	4	+ 11.57
1617	Anonymous	8.5	39 8.31	66.3	3	3.289	+ 11 14 7.1	60.7	3	11.57
1618	50 Pleiadum, (Eq.)	. .	39 8.51	64.8	2	3.538	+ 23 6 13.1	64.8	2	11.57
1619	102 Pleiadum, (Eq.)	. .	39 8.76	66.2	5	3.561	+ 24 7 10.0	66.2	5	11.57
1620	A. 23 Pleiadum	. .	39 9.	. .	.	3.541	+ 23 14 29.3	69.1	2	11.56
1621	A. 23 Pleiadum, (Eq.)	. .	3 39 9.51	64.8	6	+ 3.541	+ 23 14 25.8	64.8	6	+ 11.56
1622	B. A. C. 1165, (Eq.)	. .	39 9.96	63.8	23	3.555	+ 23 51 8.1	63.8	23	11.56
1623	B. A. C. 1165	6.5	39 10.05	68.9	1	3.555	+ 23 51	. .	.	11.56
1624	η Tauri	3.0*	39 10.06	56.3	143	3.551	+ 23 40 9.0	53.9	74	11.56
1625	Weisse III, 746	8.0*	39 11.	. .	.	2.890	− 9 26 53.3	58.5	2	11.56
1626	103 Pleiadum, (Eq.)	. .	3 39 15.49	66.2	5	+ 3.561	+ 24 5 57.7	66.2	5	+ 11.56
1627	A. 25 Pleiadum, (Eq.)	. .	39 19.19	64.8	5	3.540	+ 23 10 18.5	64.8	5	11.55
1628	A. 47 Pleiadum, (Eq.)	. .	39 21.21	63.9	2	3.549	+ 23 33 56.4	63.9	2	11.55
1629	A. 26 Pleiadum, (Eq.)	. .	39 24.83	64.8	5	3.538	+ 23 6 19.7	64.8	5	11.55
1630	Anonymous	8.0	39 33.37	59.0	1	3.290	+ 11 15	. .	.	11.53

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1631	A. 48 Pleiadum, (Eq.). .	. .	3 39 33.89	63.9	3	+ 3.548	+ 23 30 20.5	63.9	3	+ 11.54
1632	Weisse (2) III, 878 .	7.8	39 38.18	64.1	3	3.391	+ 16 16 7.5	65.6	2	11.53
1633	Weisse III, 751 . .	9.0	39 39.56	66.4	2	3.305	+ 12 0 56.1	71.0	1	11.53
1634	A. 42 Pleiadum, (Eq.). .	. .	39 40.55	63.8	14	3.551	+ 23 39 48.5	63.8	14	11.53
1635	Weisse III, 752 . .	8.2	39 40.65	66.4	2	3.306	+ 12 4 19.0	56.0	2	11.53
1636	85 Pleiadum, (Eq.). .	. .	3 39 42.53	65.9	5	+ 3.546	+ 23 26 32.9	65.9	5	+ 11.53
1637	55 Pleiadum, (Eq.). .	. .	39 47.74	64.9	4	3.553	+ 23 42 26.9	64.9	4	11.52
1638	A. 43 Pleiadum, (Eq.). .	. .	39 48.04	63.9	19	3.553	+ 23 42 27.7	63.9	19	11.52
1639	Weisse (2) III, 881 .	8.5	39 52.02	59.5	2	3.610	+ 26 9 14.5	63.0	4	11.51
1640	A. 27 Pleiadum, (Eq.). .	. .	39 54.14	67.0	9	3.557	+ 23 53 7.6	67.0	9	11.51
1641	86 Pleiadum, (Eq,). .	. .	3 39 58.75	65.9	5	+ 3.547	+ 23 27 22.5	65.9	5	+ 11.51
1642	Weisse (2) III, 887 .	8.0	40 2.84	62.6	4	3.397	+ 16 31 38.6	58.5	4	11.50
1643	A. 28 Pleiadum, (Eq.). .	. .	40 3.20	64.8	5	3.537	+ 22 59 5.3	64.8	5	11.50
1644	A. 44 Pleiadum, (Eq.). .	. .	40 7.13	63.8	10	3.551	+ 23 36 52.5	63.8	10	11.50
1645	B. A. C. 1171 . .	6.5	40 10.08	65.9	8	3.558	+ 23 54 43.6	59.0	4	11.50
1646	A. 29 Pleiadum, (Eq.). .	. .	3 40 10.53	67.0	9	+ 3.558	+ 23 54 47.5	67.0	9	+ 11.50
1647	A. 41 Pleiadum, (Eq.). .	. .	40 15.51	63.8	10	3.554	+ 23 44 54.6	63.8	10	11.50
1648	Weisse (2) III, 890 .	9.0*	40 31.10	65.4	2	3.826	+ 34 29 3.3	70.1	2	11.47
1649	*e* Tauri	5.0*	40 35.93	68.6	4	3.280	+ 10 42 35.5	69.0	2	11.46
1650	A. 45 Pleiadum, (Eq.). .	. .	40 37.21	65.9	8	3.551	+ 23 35 24.4	65.9	8	11.46
1651	26 Tauri, (Eq.). . .	7.0*	3 40 38.35	64.9	6	+ 3.548	+ 23 25 30.7	64.9	6	+ 11.46
1652	B. A. C. 1179 . .	7.6	40 45.09	67.0	2	2.444	− 29 46 33.1	66.5	2	11.45
1653	Weisse (2) III, 901 .	8.0*	40 46.23	65.0	2	3.368	+ 15 4 19.1	69.1	2	11.45
1654	τ^6 Eridani	4.7	40 49.38	64.4	2	2.591	− 23 39 57.9	64.9	3	11.44
1655	27 Tauri	6.5	40 50.57	58.9	34	3.552	+ 23 37 19.5	63.7	12	11.44
1656	28 Tauri	7.2	3 40 51.75	64.4	17	+ 3.554	+ 23 42 20.2	66.6	6	+ 11.44
1657	Weisse (2) III, 896 .	7.5*	40 52.15	70.0	2	3.913	+ 37 26 39.3	46.8	4	11.44
1658	Pleiadum . . .	. .	40 53.48	65.1	1	3.554	+ 23 41	. .	.	11.44
1659	A. 30 Pleiadum, (Eq.). .	. .	40 53.72	64.9	6	3.548	+ 23 27 15.8	64.9	6	11.44
1660	Pleiadum . . .	. .	40 54.62	63.7	1	3.554	+ 23 40	. .	.	11.44
1661	Pleiadum . . .	. .	3 40 55.96	63.7	1	+ 3.555	+ 23 44	. .	.	+ 11.44
1662	Pleiadum . . .	. .	40 56.27	61.0	1	3.550	+ 23 57 51.7	68.6	2	11.44
1663	A. 31 Pleiadum, (Eq.). .	. .	40 56.92	67.0	8	3.560	+ 23 57 56.9	67.0	8	11.44
1664	Weisse III, 774 . .	8.5	40 59.69	60.7	1	3.370	+ 15 9 11.1	69.1	2	11.43
1665	B. A. C. 1182 . .	7.5	41 1.42	61.0	1	3.560	+ 23 56 59.5	68.8	4	11.43
1666	Pleiadum . . .	. .	3 41 1.50	65.0	1	+ 3.556	+ 23 46	. .	.	+ 11.43
1667	A. 32 Pleiadum, (Eq.). .	. .	41 2.02	67.0	8	3.560	+ 23 57 3.7	67.0	8	11.43
1668	A. 33 Pleiadum, (Eq.). .	. .	41 6.18	63.9	23	3.557	+ 23 49 1.1	63.9	23	11.42
1669	A. 33 Pleiadum . . .	7.4	41 6.23	69.2	6	3.546	+ 23 49 0.4	66.1	3	11.42
1670	Weisse III, 781 . .	8.5	41 9.82	59.1	2	3.291	+ 11 16 32.6	63.3	4	11.42

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			h. m. s.			″	° ′ ″			″
1671	Weisse (2) III, 906	6.0	3 41 14.89	65.4	2	+ 3.824	+ 34 23 26.6	70.1	2	+ 11.41
1672	114 Pleiadum, (Eq.)	. .	41 21.65	67.1	4	3.553	+ 23 36 21.7	67.1	4	11.40
1673	A. 34 Pleiadum, (Eq.)	. .	41 25.26	67.1	10	3.546	+ 23 16 53.9	68.1	2	11.40
1674	A. 35 Pleiadum, (Eq.)	. .	41 26.42	67.0	9	3.558	+ 23 48 52.6	67.0	9	11.40
1675	A. 36 Pleiadum, (Eq.)	. .	41 35.05	67.0	5	3.557	+ 23 47 15.9	67.0	5	11.39
1676	Pleiadum	. .	3 41 36.29	65.0	1	+ 3.557	+ 23 46	. .	.	+ 11.39
1677	A. 37 Pleiadum, (Eq.)	. .	41 36.67	67.0	9	3.560	+ 23 55 12.1	67.0	9	11.39
1678	56 Pleiadum, (Eq.)	. .	41 37.74	64.9	5	3.551	+ 23 31 22.8	64.9	5	11.39
1679	τ^7 Eridani	5.0*	41 38.47	62.5	2	2.575	− 24 18 37.5	67.0	2	11.39
1680	B. A. C. 1188	7.0	41 39.35	64.1	2	3.549	+ 23 25 11.5	68.1	1	11.38
1681	B. A. C. 1188, (Eq.)	. .	3 41 39.57	64.9	13	+ 3.549	+ 23 25 9.4	64.9	13	+ 11.38
1682	Weisse (2) III, 917	8.5	41 51.99	65.5	2	3.834	+ 34 40 14.5	65.1	2	11.37
1683	Lacaille 1231	7.0	42 6.77	66.6	2	2.516	− 26 45 42.4	64.1	2	11.35
1684	Lalande 7069	7.5	42 10.80	66.9	3	3.246	+ 8 58 38.6	68.1	1	11.35
1685	Groombridge 745	8.0*	42 13.	. .	.	7.419	+ 75 46 1.5	71.0	2	11.34
1686	A. 39 Pleiadum, (Eq.)	. .	3 42 17.33	67.0	6	+ 3.565	+ 24 4 46.5	67.0	6	+ 11.34
1687	Weisse (2) III, 931	9.0	42 17.77	60.1	1	3.625	+ 26 38 56.4	60.7	3	11.34
1688	Pleiadum, (Eq.)	. .	42 20.86	67.1	4	3.552	+ 23 30 18.9	67.1	4	11.33
1689	O. Arg. S. 2556	6.1	42 25.92	64.5	2	2.641	− 21 20 3.4	67.0	2	11.33
1690	Weisse (2) III, 932	8.0	42 27.90	61.1	2	3.821	+ 34 10 46.1	55.6	2	11.33
1691	B. A. C. 1195	7.9	3 42 33.18	63.7	5	+ 3.553	+ 23 32 5.5	64.0	8	+ 11.32
1692	Radcliffe 1084	7.7	42 40.43	63.0	1	4.011	+ 40 22 16.3	70.1	1	11.31
1693	Lacaille 1239	7.6	43 7.34	62.6	2	2.522	− 26 27 42.8	65.5	2	11.28
1694	O. Arg. S. 2571	8.1	43 43.50	64.0	2	2.494	− 27 32 13.8	69.0	1	11.23
1695	Anonymous	6.9	43 57.40	68.9	2	2.687	− 19 10 23.0	66.6	2	11.22
1696	Anonymous	6.6	3 44 45.86	67.0	2	+ 2.358	− 32 42 42.8	68.1	1	+ 11.16
1697	Weisse (2) III, 972	8.0*	44 49.30	69.4	3	3.944	+ 38 7 41.0	58.0	4	11.16
1698	Weisse (2) III, 974	8.5*	44 50.39	69.6	2	3.944	+ 38 6 25.3	70.0	2	11.16
1699	B. A. C. 1205	7.0*	45 2.39	58.8	2	3.042	− 1 34 15.4	61.8	4	11.14
1700	B. A. C. 1206	6.5	45 9.99	64.1	4	3.410	+ 16 54 26.4	66.1	2	11.13
1701	ζ Persei	3.5*	3 45 20.33	68.1	17	+ 3.753	+ 31 27 51.2	63.1	3	+ 11.12
1702	Lacaille 1252	6.5	45 45.06	66.3	2	2.394	− 31 17 43.8	67.6	2	11.09
1703	Weisse III, 878	7.8	45 56.14	68.9	2	3.366	+ 14 45 58.1	46.1	2	11.08
1704	Groombridge 748	8.5*	46 0.	. .	.	7.466	+ 75 45 39.3	71.0	1	11.07
1705	Lalande 7184	7.5	46 27.23	66.1	2	3.541	+ 22 47 47.0	67.1	2	11.04
1706	Rumker 1023	7.0	3 46 29.10	58.9	2	+ 3.397	+ 16 12 21.4	55.2	6	+ 11.03
1707	Groombridge 751	8.0*	46 34.	. .	.	7.467	+ 75 44 36.7	71.0	1	11.03
1708	Weisse (2) III, 1013	8.6	46 35.82	61.9	6	3.472	+ 19 41 10.5	56.3	3	11.03
1709	Weisse (2) III, 1015	9.0	46 37.66	64.0	3	3.412	+ 16 55 38.9	66.1	2	11.02
1710	Lacaille 1259	7.2	46 45.12	62.8	4	2.604	− 22 42 50.6	68.0	2	11.01

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			h. m. s.			"	° ' "			"
1711	B. A. C. 1211	5.5*	3 46 48.32	69.1	2	+ 9.612	+ 80 18 15.1	64.0	10	+ 11.01
1712	Weisse (2) III, 1019	8.8	46 52.56	62.0	6	3.472	+ 19 41 1.3	56.3	3	11.00
1713	Lalande 7206	6.5	47 27.	. .	.	3.846	+ 34 40 5.7	47.0	1	10.96
1714	Anonymous	. .	47 32.32	49.0	1	3.872	+ 35 32 59.7	49.0	1	10.96
1715	Weisse (2) III, 1030	8.5*	47 38.89	55.7	3	3.874	+ 35 35 30.0	53.6	4	10.95
1716	Lalande 7220	8.5	3 47 43.93	63.1	3	+ 3.541	+ 22 42 51.9	68.1	2	+ 10.94
1717	τ^8 Eridani	4.0	47 45.32	66.0	2	2.548	− 25 1 44.3	68.0	2	10.94
1718	Weisse III, 924	8.0	47 52.00	59.0	2	2.876	− 9 56 7.0	53.0	3	10.93
1719	O. Arg. S. 2623	6.8	47 54.22	63.8	7	2.584	− 23 32 30.5	65.5	2	10.93
1720	Lalande 7238	7.5	48 10.42	66.1	2	3.542	+ 22 44 26.2	67.1	3	10.91
1721	Anonymous	. .	3 48 27.09	49.0	2	+ 3.890	+ 36 4 26.2	49.1	1	+ 10.89
1722	Weisse (2) III, 1041	7.5	48 27.13	60.0	3	3.890	+ 36 5 6.8	55.5	2	10.89
1723	ε Persei	3.5*	48 28.07	52.9	4	4.001	+ 39 36 4.3	58.1	2	10.89
1724	O. Arg. S. 2637.	8.5	48 29.53	65.1	2	2.639	− 21 5 53.3	68.1	2	10.89
1725	B. A. C. 1222	8.4	48 30.45	67.4	3	2.473	− 28 5 7.0	66.5	2	10.89
1726	Anonymous	8.0	3 48 45.03	67.8	4	+ 3.474	+ 19 40 24.4	57.0	2	+ 10.87
1727	33 Tauri	6.5	48 46.00	63.1	2	3.544	+ 22 45 56.7	67.0	2	10.87
1728	Lacaille 1284.	7.4	49 43.23	63.0	3	2.514	− 26 20 23.2	65.3	3	10.80
1729	O. Arg. S. 2663.	8.0	49 45.27	69.0	2	2.507	− 26 37 30.5	64.5	2	10.79
1730	ξ Persei	5.2	49 53.38	69.1	2	3.873	+ 35 23 5.9	46.7	8	10.78
1731	Weisse III, 965.	7.5	3 49 55.31	59.1	2	+ 2.870	− 10 9 38.6	62.1	2	+ 10.78
1732	O. Arg. S. 2666	8.0*	49 55.37	63.0	2	2.513	− 26 21 16.3	66.0	2	10.78
1733	B. A. C. 1229	7.5	49 56.49	66.0	4	2.791	− 14 0 27.9	65.6	2	10.78
1734	Weisse (2) 1082.	8.1	50 3.22	69.1	2	3.544	+ 22 42 2.5	68.1	2	10.77
1735	Lacaille 1291	7.2	50 32.21	63.5	3	2.418	− 30 4 8.5	67.0	2	10.74
1736	Lacaille 1288	7.2	3 50 32.92	63.4	2	+ 2.531	− 25 34 49.8	67.6	2	+ 10.74
1737	Weisse III, 975.	8.0	50 41.44	69.1	3	3.368	+ 14 40 58.1	57.1	2	10.73
1738	Anonymous	8.0	50 46.27	69.1	2	2.684	− 18 57 41.9	66.6	2	10.72
1739	γ Eridani	3.0*	51 29.93	55.6	142	2.792	− 13 54 32.7	49.5	60	10.67
1740	O. Arg. S. 2696.	9.0	52 6.91	65.1	2	2.462	− 28 16 33.9	68.0	2	10.62
1741	λ Tauri	4.0*	3 52 55.60	60.2	6	+ 3.316	+ 12 5 30.4	57.7	3	+ 10.56
1742	Lalande 7391	6.5	53 8.95	68.9	2	3.983	+ 38 42 10.8	49.0	1	10.54
1743	Weisse (2) III, 1143	8.5*	53 38.02	70.9	2	3.867	+ 34 55 39.2	70.9	3	10.51
1744	O. Arg. S. 2710	9.0	53 45.44	67.0	2	2.436	− 29 10 27.6	67.6	2	10.50
1745	B. A. C. 1235	6.0*	53 47.00	67.4	4	+16.583	+ 85 10 44.4	65.0	2	10.49
1746	τ^9 Eridani	4.6	3 53 57.48	63.0	3	2.554	− 24 24 56.5	65.9	2	+ 10.48
1747	B. A. C. 1244	7.0*	54 8.05	59.4	2	3.265	+ 9 36 9.0	53.9	2	10.47
1748	Anonymous	9.0	54 37.57	63.9	2	2.484	− 27 13 58.9	66.5	2	10.43
1749	Anonymous	9.2	55 1.80	67.1	2	2.621	− 21 32 18.2	69.1	3	10.40
1750	B. A. C. 1250	6.2	55 5.58	63.2	5	+ 2.388	− 30 53 15.0	66.1	2	10.40

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			h. m. s.			"	° ′ "			"
1751	Lalande 7492 . . .	7.0	3 55 8.63	69.0	3	+ 2.594	— 22 40 18.2	65.5	2	+ 10.39
1752	Lacaille 1317 . . .	7.3	55 31.06	62.8	4	2.491	— 26 54 42.8	66.1	2	10.37
1753	O. Arg. S. 2741 . .	7.9	55 47.92	65.0	3	2.623	— 21 24 51.3	66.0	2	10.35
1754	B. A. C. 1247 . . .	6.0*	56 8.74	69.1	2	13.063	+ 83 27 12.0	65.6	2	10.32
1755	A^1 Tauri.	5.5*	56 25.39	62.4	18	3.528	+ 21 41 45.2	61.1	3	10.30
1756	Weisse III, 1092 . .	7.0	3 56 32.66	68.9	2	+ 3.318	+ 12 7 10.3	67.6	2	+ 10.29
1757	Weisse (2) III, 1210 .	9.0	56 39.46	64.0	4	3.406	+ 16 14 23.4	59.4	3	10.28
1758	Lacaille 1324 . . .	7.7	56 40.72	63.4	3	2.438	— 28 55 13.3	68.0	2	10.28
1759	Lacaille 1326 . . .	7.2	56 41.10	66.4	2	2.272	— 34 52 26.7	68.0	2	10.28
1760	Weisse (2) III, 1212 .	9.0	56 44.96	60.9	3	3.501	+ 20 28 15.7	55.0	2	10.27
1761	Weisse (2) III, 1214 .	8.7	3 56 53.20	60.4	2	+ 3.670	+ 27 29 43.8	62.0	2	+ 10.26
1762	O. Arg. S. 2761 . .	7.5	56 56.56	63.9	6	2.464	— 27 52 34.4	67.6	2	10.26
1763	A^2 Tauri.	6.0*	57 3.28	65.6	2	3.528	+ 21 37 38.7	67.0	2	10.25
1764	Anonymous . . .	8.8	57 42.65	69.6	2	2.489	— 26 52 6.9	66.1	2	10.21
1765	Lacaille 1329 . . .	7.0	57 43.14	63.0	2	2.505	— 26 14 7.7	64.1	3	10.20
1766	Rumker 1079 . . .	8.0	3 57 46.48	60.3	3	+ 3.388	+ 15 21 16.0	55.9	2	+ 10.20
1767	Rumker 1084 . . .	7.0	58 19.56	59.9	5	3.388	+ 15 18 57.9	56.3	3	10.15
1768	ψ Tauri.	6.5	58 21.55	58.3	4	3.701	+ 28 37 10.0	70.2	5	10.15
1769	c Persei	5.0	58 30.61	61.0	2	4.324	+ 47 20 5.2	68.0	4	10.14
1770	Weisse (2) III, 1261 .	8.3	58 42.36	64.1	4	3.431	+ 17 16 59.6	65.6	2	10.13
1771	Weisse (2) III, 1266 .	8.5	3 58 55.08	63.0	3	+ 3.513	+ 20 52 56.7	68.1	2	+ 10.11
1772	50 Persei	5.5*	59 17.26	68.9	2	3.964	+ 37 40 13.0	46.6	2	10.08
1773	Lacaille 1341 . . .	7.6	59 17.75	63.3	4	2.388	— 30 36 25.1	67.6	2	10.08
1774	O. Arg. S. 2793 . .	8.6	59 25.17	63.1	3	2.389	— 30 33 50.3	68.6	2	10.07
1775	Weisse (2) III, 1275 .	8.5	59 29.79	64.6	4	3.513	+ 20 53 8.4	62.3	4	10.07
1776	Anonymous . . .	8.0	3 59 33.67	65.1	1	+ 3.513	+ 20 53	. .	.	+ 10.06
1777	O. Arg. S. 2796 . .	6.1	59 38.48	64.0	3	2.630	— 20 53 39.3	67.6	2	10.05
1778	Rumker 1089, (1st *) .	9.1	59 46.76	69.1	2	3.377	+ 14 47 6.4	54.1	3	10.05
1779	Rumker 1089, (2d *) .	7.0	59 46.94	69.1	2	3.377	+ 14 47 6.4	54.1	3	10.05
1780	B. A. C. 1273 . . .	5.5	59 51.26	62.8	4	2.456	— 28 2 12.3	67.0	2	10.04
1781	B. A. C. 1272 . . .	6.5	3 59 58.63	59.8	2	+ 3.425	+ 16 57 45.2	54.0	2	+ 10.03
1782	Lacaille 1346 . . .	7.6	4 0 5.03	66.0	6	2.364	— 31 25 53.8	69.0	3	10.02
1783	O. Arg. S. 2803 . .	8.0*	0 11.77	65.0	1	2.564	— 23 39 39.4	68.6	2	10.01
1784	Anonymous . . .	8.0	0 13.40	63.9	1	2.364	— 31 25	. .	.	10.01
1785	ω^2 Tauri.	6.0	1 0.90	64.5	2	3.477	+ 19 14 9.2	69.1	2	9.95
1786	O. Arg. S. 2828. . .	9.0	4 1 36.85	67.1	2	+ 2.460	— 27 46 34.3	68.1	2	+ 9.91
1787	Anonymous. . . .	8.8	1 40.81	67.5	2	2.912	— 7 51 31.3	68.1	1	9.90
1788	Weisse (2) IV, 1 . .	8.8	2 1.76	64.1	2	3.444	+ 17 43 52.5	68.1	2	9.87
1789	Weisse IV, 21 . . .	9.0	2 34.77	60.3	3	3.222	+ 7 19 41.6	60.0	5	9.83
1790	Weisse IV, 24 . . .	8.3	2 46.56	69.0	3	3.382	+ 14 51 58.3	46.1	1	9.82

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			h. m. s.			″	° ′ ″			″
1791	Weisse (2) IV, 22 . .	6.8	4 2 58.46	69.1	5	+ 3.397	+ 15 34 41.3	67.1	2	+ 9.80
1792	O. Arg. S. 2848 . .	7.5	3 7.21	67.1	3	2.518	− 25 23 22.1	65.6	2	9.79
1793	B. A. C. 1282 . . .	6.0*	3 21.06	58.8	2	4.402	+ 48 43 49.0	53.9	2	9.77
1794	37 Eridani	6.0	3 32.84	63.2	4	2.922	− 7 17 33.2	66.0	2	9.76
1795	O. Arg. S. 2858 . .	8.5*	3 40.70	66.2	4	2.446	− 28 10 52.5	68.1	2	9.75
1796	Rumker 1104 . . .	9.0	4 3 41.95	62.4	3	+ 3.696	+ 28 4 2.8	55.9	3	+ 9.75
1797	Lalande 7819 . . .	7.2	4 3.28	68.4	4	2.883	− 9 11 16.7	68.4	3	9.72
1798	Lacaille 1370 . . .	7.0*	4 5.82	69.8	3	2.516	− 25 24 40.3	67.1	1	9.71
1799	Lalande 7773 . . .	8.1	4 19.40	70.0	3	4.217	+ 44 23 18.5	70.1	2	9.70
1800	Rumker 1110 . . .	6.0	4 29.88	69.0	2	3.428	+ 16 54 51.4	46.0	1	9.69
1801	Weisse (2) IV, 65 . .	8.7	4 4 35.36	65.3	6	+ 3.441	+ 17 28 15.3	66.4	3	+ 9.68
1802	μ Persei	. .	4 37.87	69.1	2	4.375	+ 48 2 56.7	63.0	2	9.68
1803	Anonymous . . .	8.4	4 46.85	69.7	3	2.476	− 26 58 27.9	65.0	2	9.67
1804	Lacaille 1374 . . .	6.5	4 47.15	66.5	2	2.256	− 34 52 2.9	67.6	2	9.67
1805	Lacaille 1373 . . .	7.9	4 52.85	63.3	3	2.514	− 25 27 37.1	68.1	2	9.66
1806	o¹ Eridani	4.0	4 5 2.03	61.5	52	+ 2.924	− 7 12 17.9	65.0	2	+ 9.64
1807	Weisse IV, 81 . . .	8.0	5 11.48	67.1	2	2.882	− 9 12 10.3	68.1	2	9.63
1808	Anonymous . . .	8.5	5 17.	. .	.	4.221	+ 44 24 31.3	70.1	1	9.62
1809	Lalande 7817 . . .	8.5	5 21.50	70.0	2	4.221	+ 44 24 9.6	69.9	1	9.62
1810	Anonymous . . .	9.1	5 40.48	69.1	2	2.930	− 6 52 24.8	69.4	3	9.60
1811	Anonymous . . .	9.0	4 5 50.49	65.0	1	+ 2.930	− 6 54	. .	.	+ 9.58
1812	Lalande 7833 . . .	8.5	5 51.98	70.0	2	4.219	+ 44 19 37.4	58.1	1	9.58
1813	Anonymous . . .	9.0	5 56.10	65.4	2	3.787	+ 31 20	. .	.	9.58
1814	46 Tauri	5.0	6 1.00	61.8	2	3.224	+ 7 21 19.3	56.0	4	9.57
1815	Weisse IV, 114. . .	7.3	6 50.37	69.0	2	2.848	− 10 44 45.0	70.0	2	9.51
1816	Lacaille 1379 . . .	6.6	4 6 51.74	63.0	2	+ 2.543	− 24 10 52.6	67.0	2	+ 9.50
1817	Anonymous . . .	9.1	6 52.09	67.2	2	2.437	− 28 20 39.9	68.6	2	9.50
1818	Weisse (2) IV, 121 . .	8.0	7 0.07	66.1	2	3.589	+ 23 42 21.7	62.0	2	9.49
1819	Weisse (2) IV, 118 . .	7.8	7 3.30	65.2	5	3.789	+ 31 20 21.4	67.1	2	9.49
1820	Lalande 7931 . . .	8.3	7 4.75	66.6	2	2.560	− 23 29 13.9	65.5	2	9.49
1821	Weisse (2) IV, 120. .	8.3	4 7 6.19	65.2	5	+ 3.790	+ 31 21 5.9	67.1	2	+ 9.48
1822	Weisse (2) IV, 127. .	9.0	7 20.32	60.0	2	3.523	+ 20 55 29.7	59.7	3	9.47
1823	Anonymous . . .	. .	7 28.35	61.1	1	3.507	+ 20 15	. .	.	9.46
1824	Lacaille 1387 . . .	6.0	7 39.77	66.1	2	2.302	− 33 9 15.7	68.4	2	9.44
1825	A Eridani	5.5	7 44.11	69.0	2	2.851	− 10°36 21.2	47.0	2	9.44
1826	Anonymous . . .	7.5	4 7 45.55	62.1	1	+ 2.345	− 31 38 28.4	69.1	1	+ 9.43
1827	Anonymous . . .	9.0	8 18.30	69.5	2	3.409	+ 15 56 2.0	48.0	1	9.39
1828	Weisse (2) IV, 137. .	7.5	8 24.52	69.1	2	4.226	+ 44 20 8.7	58.1	1	9.38
1829	B. A. C. 1308 . . .	7.3	8 30.07	64.9	5	2.377	− 30 28 12.1	69.1	3	9.38
1830	Lacaille 1389 . . .	6.8	8 33.57	64.0	2	2.322	− 32 23 57.6	68.1	1	9.37

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1831	B. A. C. 1307	6.5*	4 8 43.63	60.0	1	+ 4.466	+ 49 41 11.7	58.8	5	+ 9.36
1832	Weisse (2) IV, 152.	7.0	8 50.64	63.9	3	3.408	+ 15 51 50.8	54.0	4	9.35
1833	o^2 Eridani	5.0	8 51.16	47.9	1	2.908	− 7 51	. .	.	9.35
1834	ω^2 Tauri	6.5	9 3.71	62.3	10	3.508	+ 20 13 49.2	64.7	3	9.33
1835	Weisse (2) IV, 160.	8.0	9 6.92	70.0	2	3.507	+ 20 9 45.7	68.1	2	9.33
1836	Weisse (2) IV, 166.	9.0	4 9 14.96	68.4	3	+ 3.508	+ 20 12 28.7	69.1	2	+ 9.32
1837	O. Arg. S. 2930.	7.7	9 32.84	63.9	6	2.376	− 30 25 28.5	68.6	2	9.30
1838	b^2 Persei	6.5*	9 36.06	59.8	2	4.513	+ 50 34 34.0	54.1	3	9.29
1839	Anonymous	. .	9 37.22	59.0	2	3.425	+ 16 35 51.8	48.0	1	9.29
1840	B. A. C. 1313	6.0	9 39.21	71.0	2	5.158	+ 60 23 50.0	70.9	2	9.29
1841	O. Arg. S. 2938	5.8	4 9 48.02	63.8	7	+ 2.554	− 23 35 26.7	65.6	2	+ 9.28
1842	O. Arg. S. 2939.	6.7	9 50.17	69.1	1	2.581	− 22 30 3.8	68.0	2	9.27
1843	Weisse (2) IV, 183.	8.2	9 55.93	65.9	5	3.455	+ 17 54 36.3	67.0	2	9.27
1844	51 Tauri	7.0*	10 6.29	59.0	2	3.533	+ 21 14	. .	.	9.25
1845	Lalande 7994	8.0*	10 10.04	68.9	2	3.987	+ 37 39 13.0	47.0	1	9.25
1846	Anonymous	. .	4 10 27.79	48.1	1	+ 3.445	+ 17 27 48.7	48.0	2	9.22
1847	Anonymous	9.0	11 1.52	64.5	2	4.334	+ 46 43 15.5	62.0	1	+ 9.18
1848	56 Tauri	5.6	11 19.67	61.6	5	3.539	+ 21 25 54.6	56.1	2	9.16
1849	Anonymous	9.2	11 26.01	67.1	2	2.373	− 30 25 52.5	69.1	3	9.15
1850	B. A. C. 1327	7.0	11 33.62	69.1	2	2.100	− 39 13 52.1	65.6	2	9.14
1851	γ Tauri	4.0*	4 11 49.84	66.0	32	+ 3.398	+ 15 17 9.8	60.2	6	+ 9.12
1852	55 Tauri	6.5	11 54.13	57.9	4	3.418	+ 16 10 54.5	58.0	2	9.11
1653	h Tauri	5.5*	12 4.81	58.9	2	3.362	+ 13 41 40.1	53.0	2	9.10
1854	Weisse (2) IV, 248.	6.5	12 17.36	64.1	2	3.469	+ 18 24 14.0	65.1	2	9.08
1855	Lacaille 1410	7.4	12 35.34	66.6	4	2.251	− 34 31 50.7	68.1	2	9.06
1856	B. A. C. 1334	6.2	4 12 38.61	61.9	6	+ 2.558	− 23 18 52.5	59.8	4	+ 9.06
1857	58 Tauri	5.0	12 40.24	67.5	2	3.386	+ 14 45 21.2	57.6	2	9.05
1858	Anonymous	9.3	13 7.68	67.5	2	2.461	− 27 4 28.1	68.1	2	9.02
1859	Anonymous	8.5	13 17.47	68.9	1	2.546	− 23 45 21.1	65.0	2	9.00
1860	Rumker 1159	7.8	13 18.58	70.0	3	3.459	+ 17 55 44.8	69.1	2	9.00
1861	Weisse (2) IV, 270.	7.0	4 13 25.39	67.1	2	+ 3.462	+ 18 4 54.3	65.1	2	+ 8.99
1862	Rumker 1163	8.5	13 31.93	69.1	2	3.425	+ 16 28 12.4	56.7	3	8.99
1863	Lacaille 1416	7.5	13 32.07	70.1	2	2.252	− 34 27 48.4	68.5	2	8.99
1864	Anonymous	8.0	13 37.31	65.0	2	2.334	− 31 40 12.3	69.5	2	8.98
1865	B. A. C. 1340	7.0	13 51.28	63.6	4	2.505	− 25 21 51.7	66.1	1	8.96
1866	O. Arg. S. 2997.	8.0	4 13 56.82	66.5	2	+ 2.405	− 29 7 38.8	69.5	2	+ 8.95
1867	Rumker 1167	7.5	14 42.81	69.1	3	3.426	+ 16 27 31.9	56.6	4	8.89
1868	Weisse IV, 286	6.0	14 47.97	69.0	2	3.387	+ 14 43 23.6	46.1	2	8.89
1869	δ^1 Tauri	4.5	14 51.86	56.8	12	3.443	+ 17 12 39.0	64.1	4	8.88
1870	63 Tauri	7.2	15 23.30	60.3	7	3.426	+ 16 26 50.1	58.7	8	8.84

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			h. m. s.			"	° ' "			"
1871	55 Persei	6.0	4 15 24.52	69.1	2	+ 3.876	+ 33 48 8.0	47.9	1	+ 8.84
1872	B. A. C. 1351	6.5*	15 26.65	59.1	1	3.423	+ 16 17 56.4	63.9	2	8.84
1873	B. A. C. 1355	5.7	15 42.77	64.2	7	2.485	− 26 3 37.1	67.0	3	8.81
1874	Weisse (2) IV, 325	8.8	15 44.36	60.4	3	3.538	+ 21 12 41.1	61.2	5	8.81
1875	O. Arg. S. 3022	8.5	15 45.00	67.1	2	2.485	− 26 3 1.0	68.0	2	8.81
1876	Weisse (2) IV, 330	7.5	4 15 56.09	59.4	2	+ 3.543	+ 21 24 32.4	56.0	3	+ 8.80
1877	δ^2 Tauri	6.0	16 1.68	59.2	3	3.442	+ 17 6 57.7	67.6	2	8.79
1878	Anonymous	. .	16 23.	. .	.	3.428	+ 16 29 50.9	68.1	1	8.76
1879	Anonymous	. .	16 25.	. .	.	3.428	+ 16 28 32.9	57.0	1	8.76
1880	Weisse (2) IV, 344	7.8	16 26.05	69.6	5	3.430	+ 16 33 33.9	70.9	1	8.74
1881	Weisse (2) IV, 348	8.0*	4 16 34.99	60.1	4	+ 3.476	+ 18 35 10.6	67.1	3	+ 8.74
1882	Anonymous	. .	16 48.	. .	.	3.209	+ 6 29 45.7	70.1	1	8.73
1883	Lacaille 1433	7.5	16 50.70	66.4	2	2 222	− 35 13 47.7	68.4	3	8.73
1884	Weisse (2) IV, 350	8.6	16 52.33	63.4	5	3.745	+ 29 12 5.6	58.6	4	8.72
1885	Lacaille 1431	6.0	17 14.64	62.8	5	2.504	− 25 13 13.2	65.0	2	8.69
1886	Weisss (2) IV, 363	8.4	4 17 20.06	57.3	4	+ 3.476	+ 18 33 33.5	67.6	2	+ 8.69
1887	Anonymous	. .	17 25.	. .	.	2.620	− 20 33 55.2	70.1	1	8.69
1888	Anonymous	8.2	17 27.94	67.1	2	2.416	− 28 33 57.3	68.2	2	8.68
1889	Anonymous	7.8	17 28.	. .	.	2.492	− 25 42 47.0	64.0	2	8.68
1890	70 Tauri	7.0	17 38.00	60.5	2	3.409	+ 15 37 2.6	58.3	4	8.66
1891	Weisse (2) IV, 376	7.7	4 17 42.90	64.1	3	+ 3.476	+ 18 32 30.4	65.6	2	+ 8.66
1892	O. Arg. S. 3044	8.8	17 48.08	65.0	4	2.431	− 27 59 3.5	68.1	2	8.65
1893	υ^1 Tauri	5.0	17 56.12	60.3	8	3.571	+ 22 29 31.7	68.5	2	8.64
1894	Weisse (2) IV, 387	7.8	18 22.37	69.6	5	3.430	+ 16 31 53.5	68.2	2	8.61
1895	O. Arg. S. 3061	8.0	19 13.62	65.0	2	2.414	− 28 31 51.5	67.1	2	8.55
1896	Weisse (2) IV, 391	8.0*	4 19 38.14	69.1	3	+ 3.429	+ 16 25 36.5	56.4	5	+ 8.50
1897	Anonymous	9.0	19 40.38	69.1	2	3.428	+ 16 24 42.3	70.1	2	8.50
1898	B. A. C. 1374	6.5	19 45.26	69.6	2	2.222	− 35 4 33.1	54.0	2	8.49
1899	Weisse (2) IV, 420	9.0	19 53.93	69.1	2	3.606	+ 23 47 6.4	62.1	2	8.49
1900	Lacaille 1449	7.5	20 16.10	66.6	2	2.192	− 35 59 39.8	68.6	2	8.47
1901	Anonymous	8.5	4 20 26.08	69.1	2	+ 3.392	+ 14 46 22.8	61.4	3	+ 8.44
1902	ε Tauri	3.5	20 26.74	62.9	72	3.486	+ 18 51 58.5	58.6	5	8.44
1903	θ^1 Tauri	5.2	20 34.85	69.1	2	3.412	+ 15 38 52.5	59.4	3	8.43
1904	O. Arg. S. 3082	8.0	20 35.15	64.5	2	2 546	− 23 27 11.9	65.0	2	8.43
1905	Anonymous	9.2	20 35.60	69.1	2	3.391	+ 14 45 3.3	69.1	2	8.44
1906	Weisse (2) IV, 436	7.5	4 20 41.42	67.6	2	+ 3.693	+ 27 5 28.4	68.1	2	+ 8.42
1907	Lacaille 1451	5.9	21 3.79	62.8	3	2.521	− 24 23 52.7	67.1	2	8.39
1908	Lalande 8431	7.0	21 11.50	65.5	2	2.826	− 11 26 23.5	59.7	3	8.38
1909	Weisse (2) IV, 458	7.0	21 37.12	59.9	2	3.714	+ 27 49 8.5	54.6	4	8.35
1910	Lacaille 1459	7.7	21 52.17	63.4	3	2.383	− 29 30 57.5	68.4	3	8.33

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			h. m. s.			"	° ' "			"
1911	Lalande 8479 . . .	8.0	4 22 18.15	60.0	2	+ 2.827	− 11 22 3.4	55.0	2	+ 8.29
1912	O. Arg. S. 3108. . .	8.8	22 18.31	69.0	2	2.545	− 23 24 55.1	65.0	3	8.29
1913	Lacaille 1463 . . .	6.7	22 19.49	65.1	1	2.290	− 32 43 24.6	68.9	2	8.29
1914	Anonymous. . . .	10.0	22 22.97	62.0	2	3.746	+ 28 59 37.7	65.5	2	8.29
1915	Anonymous. . . .	10.0	22 39.60	62.0	2	3.748	+ 29 0 7.3	70.0	2	8.26
1916	Weisse IV, 471. . .	8.8	4 22 43.02	67.5	2	+ 2.840	− 10 47 19.0	68.2	2	+ 8.26
1917	Anonymous. . . .	8.0	22 52.46	65.6	2	2.462	− 26 36 18.4	66.9	2	8.25
1918	Lalande 8455 . . .	6.8	22 57.41	69.1	2	3.983	+ 36 44 15.4	47.9	2	8.24
1919	84 Tauri	7.0*	23 10.71	69.1	3	3.395	+ 14 48 57.2	47.0	2	8.22
1920	Anonymous . . .	7.2	23 13.51	65.1	1	2.287	− 32 46 39.6	69.1	2	8.22
1921	Weisse (2) IV, 505 . .	8.0	4 23 22.58	64.4	3	+ 3.411	+ 15 30 35.5	67.1	2	+ 8.21
1922	Lacaille 1474 . . .	6.9	23 47.48	62.6	2	2.465	− 26 25 8.6	65.0	3	8.17
1923	Weisse (2) IV, 512 .	7.8	23 51.20	64.5	5	3.638	+ 24 52 56.7	65.6	2	8.17
1924	85 Tauri.	6.5	23 52.20	63.3	6	3.411	+ 15 32 51.6	60.9	8	8.17
1925	Lacaille 1480 . . .	7.4	24 9.64	63.4	3	2.385	− 29 20 12.7	67.1	1	8.14
1926	Lacaille 1485 . . .	7.6	4 24 22.73	64.0	9	+ 2.389	− 29 11 14.5	66.4	3	+ 8.13
1927	Lacaille 1483 . . .	6.0	24 37.30	65.5	2	2.544	− 23 19 46.5	66.0	2	8.11
1928	Rumker 1235 . . .	8.8	24 49.90	63.1	3	3.416	+ 15 42 19.5	61.6	4	8.09
1929	Lalande 8577 . . .	7.9	24 53.22	64.0	3	2.535	− 23 42 49.1	67.6	2	8.09
1930	B. A. C. 1404 . . .	7.5	24 53.93	61.1	1	2.344	− 30 45 5.4	67.6	2	8.08
1931	Anonymous . . .	8.5	4 24 58.38	65.5	2	+ 3.734	+ 28 25 53.4	70.1	1	+ 8.08
1932	Anonymous . . .	8.5	24 59.96	70.0	2	3.412	+ 15 31 1.9	67.1	1	8.08
1933	Weisse (2) IV, 535 .	9.0	25 11.47	70.0	2	3.506	+ 19 30 50.1	58.1	2	8.06
1934	Weisse (2) IV, 538 . .	9.0	25 17.66	59.1	2	3.565	+ 21 56 32.0	62.5	2	8.06
1935	O. Arg. S. 3154. . .	7.2	25 45.96	64.3	7	2.387	− 29 11 4.0	67.8	3	8.02
1936	B. A. C. 1408 . . .	7.0*	4 25 52.60	64.1	3	+ 3.742	+ 28 39 52.7	53.1	1	+ 8.01
1937	Weisse IV, 533. . .	7.5	26 1.03	69.1	2	3.398	+ 14 51 56.8	57.1	2	8.00
1938	Weisse (2) IV, 562. .	9.0*	26 20.40	64.6	2	3.569	+ 22 5 4.7	62.6	2	7.97
1939	Lacaille 1501 . . .	7.2	26 30.45	63.8	3	2.390	− 29 6 8.9	67.1	2	7.96
1940	Weisse IV, 554. . .	6.0	26 41.75	69.1	2	3.185	+ 5 16 19.9	64.1	1	7.94
1941	Lacaille 1504 . . .	7.5	4 26 49.57	65.8	4	+ 2.487	− 25 30 17.3	65.1	2	+ 7.93
1942	Weisse IV, 572. . .	8.0	27 15.76	69.1	2	3.074	+ 0 6 53.6	66.0	2	7.90
1943	Weisse (2) IV, 579. .	8.3	27 16.77	61.0	3	3.562	+ 21 43 40.9	61.6	2	7.90
1944	Lacaille 1509 . . .	7.0	27 22.98	63.5	2	2.476	− 25 51 24.5	64.1	2	7.89
1945	α Tauri.	1.0	27 53.42	56.2	222	3.430	+ 16 13 29.8	50.2	79	7.84
1946	υ^6 Eridani	4.5*	4 28 1.04	62.6	2	+ 2.360	− 30 3 6.2	53.9	2	+ 7.84
1947	Anonymous . . .	9.0	28 5.90	65.0	1	3.698	+ 26 57 57.3	68.1	2	7.83
1948	Anonymous . . .	9.5	28 10.90	66.6	2	3.199	+ 5 53	. .	.	7.82
1949	Weisse (2) IV, 606. .	8.0	28 27.44	59.5	2	3.717	+ 27 38 12.3	54.0	5	7.80
1950	Anonymous . . .	8.0	28 39.92	65.0	2	2.337	− 30 49 27.6	68.1	2	7.78

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			h. m. s.			″	° ′ ″			″
1951	Weisse (2) IV, 618	8.0*	4 28 40.72	69.0	2	+ 3.416	+ 15 34 48.1	68.1	1	+ 7.78
1952	Anonymous	9.0	28 44.10	63.9	1	3.570	+ 22 0 42.6	69.1	2	7.78
1953	Weisse (2) IV, 620	7.9	28 50.87	64.6	4	3.658	+ 25 26 23.7	65.5	2	7.77
1954	B. A. C. 1427	5.5	29 2.99	64.6	2	2.988	− 3 54 6.4	54.0	2	7.75
1955	Anonymous	9.5	29 4.82	67.4	3	3.199	+ 5 52	. .	.	7.75
1956	Lacaille 1521	7.0*	4 29 6.08	65.6	2	+ 2.488	− 25 19 46.1	65.0	2	+ 7.75
1957	Lacaille 1522	6.5	29 26.41	62.8	3	2.501	− 24 49 28.1	66.1	2	7.72
1958	Weisse (2) IV, 634	9.0	29 38.21	61.2	2	3.759	+ 29 6 5.4	59.4	5	7.71
1959	Weisse (2) IV, 637	8.8	29 40.56	62.6	2	3.628	+ 24 16 5.9	67.1	2	7.70
1960	ν^7 Eridani	4.1	30 6.60	58.7	6	2.334	− 30 51 8.2	68.1	3	7.67
1961	Weisse IV, 646	7.5*	4 30 22.13	69.0	2	+ 3.224	+ 7 1 56.5	56.7	3	+ 7.65
1962	Anonymous	8.8	30 39.05	69.1	2	2.446	− 26 50 59.1	67.0	2	7.62
1963	Weisse (2) IV, 669	8.8	30 51.05	59.5	2	3.581	+ 22 22 13.1	56.1	2	7.61
1964	Lacaille 1531	7.6	30 54.63	63.4	3	2.432	− 27 20 1.0	66.4	4	7.60
1965	σ^2 Tauri	5.5	31 16.13	59.5	2	3.419	+ 15 38 14.6	57.0	4	7.57
1966	B. A. C. 1439	6.2	4 31 24.94	65.1	3	+ 2.328	− 31 0 10.3	68.1	2	+ 7.56
1967	Lacaille 1537	7.5	31 31.19	68.4	3	2.100	− 38 6 33.5	68.6	2	7.55
1968	Weisse (2) IV, 676	7.5*	31 42.61	71.1	2	4.182	+ 41 51 21.6	70.9	2	7.53
1969	53 Eridani	5.5	31 46.22	61.6	3	2.750	− 14 34 51.0	69.3	5	7.53
1970	Anonymous	9.2	32 1.45	69.1	2	2.439	− 27 3 44.2	65.0	1	7.51
1971	c^2 Tauri	5.5	4 32 15.92	69.1	2	+ 3.334	+ 11 55 8.4	58.1	3	+ 7.49
1972	Weisse (2) IV, 694	5.5	32 19.84	69.1	2	4.041	+ 38 0 30.5	46.1	2	7.48
1973	Anonymous	8.2	32 21.00	64.1	3	2.425	− 27 32 35.6	68.1	2	7.48
1974	Weisse IV, 705	8.0	32 27.73	69.0	3	3.224	+ 6 59 33.7	62.5	2	7.48
1975	Weisse (2) IV, 713	9.0	33 1.04	62.4	5	3.584	+ 22 24 7.5	61.8	4	7.43
1976	Lacaille 1540	7.0*	4 33 10.32	62.1	1	+ 2.466	− 25 59 1.5	64.6	2	+ 7.42
1977	Anonymous	. .	33 19.	. . .	.	4.048	+ 38 9 15.0	46.1	1	7.41
1978	Weisse (2) IV, 719	8.8	33 19.22	62.2	5	3.583	+ 22 21 11.0	59.6	6	7.41
1979	Lacaille 1541	7.2	33 19.26	65.5	5	2.406	− 28 11 27.4	66.1	2	7.41
1980	Weisse (2) IV, 720	8.5	33 20.26	63.1	5	3.586	+ 22 27 27.0	68.1	2	7.40
1981	Weisse IV, 722	9.0*	4 33 30.75	64.3	4	+ 3.395	+ 14 32 55.2	68.6	2	+ 7.39
1982	Weisse IV, 725	9.0	33 36.58	69.0	1	3.247	+ 8 0 23.3	66.6	2	7.38
1983	Weisse IV, 727	8.0*	33 42.	. . .	.	3.120	+ 2 13 49.3	61.9	1	7.37
1984	Weisse IV, 729	9.0	33 42.62	69.5	2	2.896	− 8 4 9.8	69.5	2	7.37
1985	Weisse IV, 728	9.0	33 44.94	59.1	2	3.142	+ 3 14 25.8	72.9	2	7.37
1986	Rumker 1250	6.5	4 33 48.24	64.1	2	+ 3.591	+ 22 40 11.5	67.0	2	+ 7.37
1987	τ Tauri	5.0*	33 50.77	61.8	22	3.592	+ 22 41 4.5	66.8	3	7.36
1988	Weisse IV, 732	9.0	34 0.90	61.0	4	3.146	+ 3 23 8.2	62.0	2	7.35
1989	Weisse IV, 733	9.0*	34 10.07	47.9	2	3.384	+ 14 3 16.4	47.9	2	7.34
1990	B. A. C. 1450	5.7	34 17.47	63.6	4	2.498	− 24 45 30.2	68.1	2	7.33

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1991	54 Eridani	4.0*	4 34 19.12	62.6	2	+ 2.620	− 19 56 33.4	66.0	2	+ 7.32
1992	Anonymous	. .	34 27.18	69.1	1	2.494	− 24 54 31.8	70.7	1	7.31
1993	Anonymous	. .	34 52.27	65.1	1	2.467	− 25 55	. .	.	7.28
1994	Weisse IV, 754	8.0	34 54.62	61.2	2	3.131	+ 2 43 11.1	62.3	3	7.28
1995	Lacaille 1549	7.6	35 6.82	63.9	8	2.396	− 28 27 53.1	67.1	2	7.26
1996	Lacaille 1553	7.3	4 35 25.72	65.0	3	+ 2.059	− 39 4 49.2	67.1	2	+ 7.23
1997	Lalande 8870	7.0	35 29.90	66.1	2	3.593	+ 22 40 39.1	67.0	2	7.23
1998	Anonymous	9.0	36 4.61	69.0	2	3.034	− 1 43 9.3	56.5	2	7.18
1999	Lacaille 1557	7.0	36 18.81	67.1	2	2.030	− 39 51 15.5	69.6	2	7.16
2000	Anonymous	6.5	36 27.85	69.1	2	2.530	− 23 26 45.1	67.5	2	7.15
2001	B. A. C. 1459	6.5*	4 36 39.15	64.5	2	+ 4.880	+ 55 20 51.3	54.0	2	+ 7.13
2002	B. A. C. 1460	7.0	36 40.49	61.6	3	3.312	+ 10 52 54.3	68.6	2	7.13
2003	Weisse IV, 794	8.0	36 48.94	47.9	3	3.392	+ 14 21 48.2	58.0	2	7.12
2004	Lalande 8923	7.8	37 6.34	63.6	2	2.997	− 3 25 51.0	67.1	2	7.10
2005	β Cœli	5.5	37 6.54	67.1	2	2.115	− 37 25 10.6	68.0	2	7.10
2006	B. A. C. 1463	7.5*	4 37 15.59	58.9	2	+ 3.612	+ 23 22 0.5	54.0	5	+ 7.08
2007	O. Arg. S. 3325	8.8	37 16.63	69.6	2	2.512	− 24 6 42.7	64.9	2	7.08
2008	Weisse IV, 806	7.7	37 23.17	69.6	2	3.136	+ 2 56 42.0	55.0	3	7.07
2009	O. Arg. S. 3326	7.8	37 23.92	64.1	3	2.518	− 23 53 39.1	68.1	2	7.07
2010	Weisse IV, 809	8.0	37 33.51	60.5	4	3.035	− 1 41 47.9	61.2	4	7.06
2011	Lacaille 1564	5.3	4 37 44.71	67.5	2	+ 2.319	− 31 1 44.6	68.0	2	+ 7.05
2012	Lacaille 1568	8.2	37 52.94	69.5	2	2.054	− 39 7 25.1	67.1	2	7.04
2013	μ Eridani	4.1	38 30.24	63.3	26	2.995	− 3 30 51.1	66.1	3	6.98
2014	B. A. C. 1471	7.4	38 37.40	64.1	5	2.410	− 27 50 20.2	66.0	2	6.97
2015	Weisse IV, 824	8.5*	38 38.15	47.9	3	3.391	+ 14 16 22.1	47.9	2	6.97
2016	Lacaille 1570	6.8	4 38 52.94	63.0	3	+ 2.399	− 28 12 36.3	66.1	3	+ 6.95
2017	Weisse (2) IV, 866	8.0*	39 31.70	69.1	2	3.783	+ 29 31 12.4	62.5	2	6.90
2018	Weisse (2) IV, 886	8.5*	40 3.97	69.6	2	3.644	+ 24 29 28.6	61.8	4	6.86
2019	O. Arg. S. 3360	7.5	40 7.27	64.4	3	2.378	− 28 54 56.1	68.1	2	6.85
2020	α Camelopardi	4.2	40 9.37	63.1	9	5.908	+ 66 5 55.2	63.7	9	6.85
2021	Lacaille 1580	8.0	4 40 17.33	67.0	2	+ 2.475	− 25 25 3.6	68.6	2	+ 6.84
2022	1 Aurigæ	5.2	40 29.52	69.0	2	4.028	+ 37 14 12.6	46.5	5	6.82
2023	Anonymous	9.0	40 31.79	65.4	2	3.311	+ 10 45 56.2	69.1	2	6.82
2024	Anonymous	9.2	40 34.	. .	.	3.309	+ 10 40 2.6	69.1	2	6.81
2025	Weisse (2) IV, 904	8.5	40 40.50	66.6	2	3.647	+ 24 33 13.5	67.6	2	6.80
2026	Anonymous	8.9	4 40 40.97	69.6	2	+ 3.309	+ 10 40 3.4	69.1	1	+ 6.80
2027	Anonymous	8.5	40 43.86	69.4	3	3.308	+ 10 36 57.4	69.1	1	6.80
2028	Anonymous	. .	40 45.	. .	.	3.309	+ 10 40 43.2	69.1	2	6.80
2029	Anonymous	8.8	40 45.52	67.4	8	3.310	+ 10 42 54.4	68.6	4	6.80
2030	(* 128) Washington	8.9	40 48.04	66.5	4	3.310	+ 10 41 38.2	68.1	1	6.79

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			h. m. s.			"	° ′ "			"
2031	B. A. C. 1482	6.5	4 40 50.42	63.7	3	+ 2.394	— 28 19 34.4	65.0	3	+ 6.79
2032	Anonymous	8.6	40 50.47	66.3	3	3.310	+ 10 42 54.1	67.0	2	6.79
2033	Anonymous	. .	40 53.	. .	.	3.310	+ 10 41 38.7	68.8	3	6.79
2034	Anonymous	10.0	40 55.75	65.1	2	3.036	— 1 36 37.7	58.1	1	6.78
2035	Anonymous	9.4	40 57.59	67.1	2	3.310	+ 10 43	. .	.	6.78
2036	Anonymous	7.0	4 41 0.47	65.1	1	+ 3.308	+ 10 38 18.3	69.1	3	+ 6.78
2037	O. Arg. S. 3382	7.5	41 6.95	69.1	2	2.443	— 26 33 21.3	67.1	2	6.77
2038	Anonymous	8.5	41 10.11	70.1	1	3.099	+ 1 13 2.5	56.5	2	6.77
2039	Lacaille 1595	7.0	41 24.48	67.5	2	2.155	— 36 3 42.2	68.8	3	6.74
2040	Lalande 9012	7.5*	41 26.68	71.0	2	4 358	+ 45 36 31.4	70.9	2	6.74
2041	O. Arg. S. 3389	7.6	4 41 29.09	64.5	9	+ 2.355	— 29 39 38.0	67.5	2	+ 6.74
2042	Anonymous	. .	41 30.	. .	.	2.344	— 30 0 54.2	69.1	1	6.74
2043	Weisse IV, 888	8.5	41 32.84	61.8	3	3.037	— 1 36 23.4	61.9	6	6.73
2044	96 Tauri	6.0*	41 43.67	64.9	2	3.426	+ 15 39 23.4	54.2	2	6.72
2045	π^1 Orionis	4.0	42 14.	. .	.	3.221	+ 6 42 49.5	69.1	2	6.59
2046	*i* Tauri	5.5	4 43 11.22	61.3	8	+ 3.497	+ 18 35 52.3	60.9	6	+ 6.60
2047	Weisse IV, 925	8.1	43 14.65	69.6	2	3.100	+ 1 17 0.6	56.3	4	6.59
2048	2 Aurigæ	5.3	43 15.93	69.0	3	4.005	+ 36 27 45.3	47.1	2	6.59
2049	Weisse IV, 926	7.3	43 27.16	68.4	3	3.314	+ 10 49 31.7	64.6	2	6.58
2050	Lacaille 1610	6.7	44 3.15	65.0	2	2.201	— 34 33 23.3	65.6	2	6.53
2051	Lacaille 1611	6.5	4 44 3.92	67.1	2	+ 2.176	— 35 20 1.0	67.0	2	+ 6.58
2052	O. Arg. N. 5259	7.2	44 15.60	62.4	7	4.654	+ 51 22 13.2	67.1	2	6.51
2053	Weisse (2) IV, 986	8.0	44 18.46	59.0	2	3.704	+ 26 32 27.3	63.8	7	6.50
2054	Anonymous	9.2	44 27.	. .	.	4.299	+ 44 7 25.8	70.1	1	6.49
2055	Weisse IV, 957	6.0*	44 37.02	47.9	1	3.388	+ 14 0 46.6	69.1	2	6.48
2056	B. A. C. 1496	6.5	4 44 37.40	66.6	2	+ 7.498	+ 74 2 41.4	68.6	2	+ 6.48
2057	Anonymous	9.0	44 41.62	70.0	2	2.521	— 23 31 57.6	66.6	2	6.47
2058	Lacaille 1617	7.5	44 47.83	69.1	2	2.174	— 35 20 48.0	67.1	2	6.46
2059	Lalande 9106	7.2	44 48.58	69.8	3	4.287	+ 43 49 41.0	49.0	2	6.46
2060	O. Arg. S. 3437	7.1	44 52.95	63.6	8	2.418	— 27 20 36.0	68.6	2	6.46
2061	Weisse IV, 972	8.0	4 44 57.90	59.1	2	+ 3.100	+ 1 16 19.0	56.5	5	6.45
2062	Groombridge 892	6.2	45 2.01	69.6	2	4.730	+ 52 38 13.0	62.0	2	6.44
2063	Anonymous	9.0	45 5.17	49.1	1	4.289	+ 43 52 14.0	69.0	1	6.44
2064	Anonymous	9.2	45 6.11	67.0	2	3.597	+ 22 32 14.3	69.6	2	6.44
2065	Lacaille 1615	7.1	45 21.86	63.9	6	2.466	— 25 33 1.7	66.1	2	6.42
2066	Anonymous	9.0	4 45 22.70	56.0	3	+ 4.289	+ 43 52 13.7	49.0	1	+ 6.42
2067	Weisse (2) IV, 1012	9.0	45 27.10	65.1	3	3.598	+ 22 32 10.5	63.0	2	6.41
2068	Weisse IV, 986	8.0	45 37.67	67.5	2	3.257	+ 8 19 11.7	66.6	2	6.40
2069	Lacaille 1622	6.2	45 40.16	70.1	2	2.053	— 38 48 19.3	67.1	2	6.39
2070	Anonymous	9.0	45 49.96	49.0	2	4.291	+ 43 53 16.4	69.0	1	6.39

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			h. m. s.			"	° ' "			"
2071	ω Eridani	5.0	4 46 0.94	61.6	3	+ 2.946	− 5 41 23.9	68.0	2	+ 6.36
2072	Anonymous.	. .	46 7.56	69.1	2	3.101	+ 1 17 37.1	62.5	2	6.35
2073	B. A. C. 1511 . . .	5.7	46 22.57	62.6	2	2.179	− 35 8 38.5	66.4	3	6.33
2074	Lalande 9207 . . .	8.0	46 41.04	67.1	3	3.102	+ 1 20 11.1	61.8	4	6.31
2075	B. A. C. 1513 . . .	6.5	46 45.01	69.0	2	2.200	− 34 28 32.0	65.6	2	6.30
2076	Lacaille 1631 . . .	7.2	4 46 55.28	70.1	2	+ 2.050	− 38 50 50.3	68.6	2	+ 6.29
2077	B. A. C. 1510 . . .	6.0*	47 3.55	66.6	2	7.458	+ 73 51 6.0	70.5	2	6.28
2078	Weisse (2) IV, 1047 .	8.6	47 11.40	65.4	3	3.736	+ 27 36 35.9	65.0	3	6.26
2079	Anonymous . . .	7.4	47 14.31	64.3	4	2.312	− 30 53 43.5	68.1	2	6.26
2080	Weisse IV, 1028 . .	7.5	47 19.66	65.3	3	3.259	+ 8 22 9.5	64.6	2	6.25
2081	B. A. C. 1518 . . .	6.0*	4 47 44.06	65.0	2	+ 3.648	+ 24 21 53.3	54.0	3	+ 6.22
2082	ι Aurigæ	3.4	47 52.82	63.0	41	3.896	+ 32 56 25.1	61.6	4	6.21
2083	Anonymous . . .	9.0	48 20.00	65.6	2	3.806	+ 29 59 55.4	69.6	2	6.17
2084	Lacaille 1642 . . .	6.8	48 27.28	64.1	2	2.064	− 38 22 36.5	68.1	2	6.16
2085	o^2 Orionis	4.8	48 30.03	69.1	2	3.373	+ 13 17 22.6	58.1	2	6.16
2086	Weisse (2) IV, 1079 .	8.8	4 48 32.92	63.4	3	+ 3.805	+ 29 57 3.5	61.6	2	+ 6.15
2087	Lalande 9261 . . .	7.5	48 46.08	66.1	2	3.103	+ 1 23 52.4	67.1	2	6.13
2088	Anonymous . . .	. .	48 46.48	69.6	2	4.298	+ 43 55 7.4	59.0	2	6.13
2089	O. Arg. S. 3488. . .	8.0	48 53.02	67.1	2	2.424	− 26 57 32.1	66.1	2	6.12
2090	O. Arg. S. 3492. . .	8.0	49 5.52	63.6	2	2.455	− 25 52 51.3	65.1	2	6.11
2091	Weisse (2) IV, 1098 .	8.0	4 49 7.39	60.1	2	+ 3.804	+ 29 54 13.5	55.2	4	+ 6.10
2092	O. Arg. S. 3494. . .	7.7	49 9.41	64.3	4	2.363	− 29 6 37.9	70.0	2	6.10
2093	Lacaille 1652 . . .	6.3	49 15.28	64.1	3	2.063	− 38 23 39.9	68.1	3	6.09
2094	Lalande 9291 . . .	8.0	49 35.14	67.7	3	3.101	+ 1 17 46.3	61.8	4	6.06
2095	*k* Tauri	6.0*	49 35.53	59.8	3	3.662	+ 24 49 45.9	61.1	3	6.06
2096	4 Aurigæ	5.0*	4 49 45.38	46.0	1	+ 4.056	+ 37 40 29.0	46.3	4	+ 6.05
2097	O. Arg. S. 3506. . .	7.2	49 46.17	64.1	3	2.518	− 23 28 20.5	68.6	2	6.05
2098	B. A. C. 1531 . . .	6.8	49 46.54	31.6	2	2.451	− 25 57 16.5	58.6	5	6.05
2099	O. Arg. S. 3513. . .	8.1	50 14.13	64.4	3	2.396	− 27 55 39.8	68.1	1	6.01
2100	Schjellerup 1589 . .	9.5	50 20.31	67.4	3	3.102	+ 1 20 37.2	67.1	1	6.00
2101	O. Arg. S. 3516 . .	7.2	4 50 34.06	67.0	2	+ 2.517	− 23 30 45.7	68.6	2	+ 5.98
2102	Lacaille 1659, (1st *) .	7.8	50 39.34	64.6	2	2.002	− 39 59 4.1	70.9	1	5.98
2103	Anonymous. . . .	9.5	50 40.50	65.1	1	2.453	− 25 51 48.9	68.1	2	5.97
2104	Lacaille 1659, (2d *) .	7.6	50 44.58	64.6	2	2.002	− 39 58 53.3	70.9	2	5.97
2105	Weisse (2) IV, 1138 .	9.0	50 50.61	64.1	2	3.598	+ 22 22 15.9	69.6	2	5.96
2106	Weisse IV, 1105 . .	8.0	4 50 50.67	69.1	1	+ 3.104	+ 1 27 19.9	69.1	2	+ 5.96
2107	β Camelopardi . . .	4.5*	50 58.54	69.1	2	5.304	+ 60 13 54.5	64.4	6	5.95
2108	π^6 Orionis	6.0	51 17.68	45.8	2	3.105	+ 1 29 45.5	69.5	2	5.92
2109	Weisse (2) IV, 1165 .	8.3	51 45.11	61.0	4	3.598	+ 22 22 41.6	61.0	6	5.88
2110	Anonymous . . .	. .	51 45.52	69.5	2	4.091	+ 38 34 37.2	46.1	1	5.88

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			h. m. s.			"	° ′ ″			"
2111	ε Aurigæ	4.5	4 51 55.73	64.6	2	+ 4.290	+ 43 36 40.8	54.1	4	+ 5.87
2112	Weisse (2) IV, 1172 .	8.6	52 8.77	60.7	5	3.599	+ 22 24 10.0	61.3	4	5.85
2113	Anonymous . . .	. .	52 17.12	49.0	1	4.325	+ 44 25	. .	.	5.84
2114	Lacaille 1666 . . .	7.5	52 41.52	67.1	2	2.172	− 35 6 40.7	70.1	2	5.81
2115	Anonymous . . .	7.1	53 2.53	64.1	3	2.359	− 29 6 10.4	70.0	2	5.78
2116	Anonymous . . .	6.0	4 53 2.66	63.1	2	+ 2.369	− 28 47	. .	.	+ 5.78
2117	64 Eridani	6.0*	53 25.	. .	. .	2.782	− 12 44 47.8	47.1	2	5.74
2118	Lacaille 1673 . . .	6.8	53 36.45	63.6	6	2.372	− 28 39 21.3	67.8	3	5.73
2119	Anonymous . . .	8.8	53 42.60	67.1	2	3.208	+ 6 2 8.4	68.1	2	5.72
2120	O. Arg. N. 5439. . .	7.5	54 0.86	61.1	2	4.380	+ 45 34 37.8	68.6	2	5.70
2121	Lacaille 1675 . . .	7.0	4 54 2.58	63.6	2	+ 2.257	− 32 27 10.7	65.6	2	+ 5.69
2122	Lalande 9474 . . .	6.9	54 12.09	69.0	2	2.467	− 25 16 2.7	64.1	2	5.68
2123	Anonymous . . .	9.0	54 13.92	67.6	2	3.204	+ 5 51 21.7	69.1	1	5.68
2124	Anonymous . . .	10.0	54 14.05	70.0	1	2.366	− 28 49 16.2	69.1	1	5.68
2125	Lacaille 1678 . . .	7.0	54 26.40	64.6	2	2.102	− 37 5 15.1	70.9	2	5.66
2126	Anonymous . . .	8.7	4 54 28.62	63.1	1	+ 2.367	− 28 47	. .	.	+ 5.66
2127	O. Arg. S. 3576. . .	8.3	54 29.03	65.8	4	2.338	− 29 47 16.9	68.6	2	5.65
2128	(* 129) Washington .	8.7	54 38.08	65.3	4	3.205	+ 5 55	. .	.	5.64
2129	ι Tauri	4.5*	54 43.79	59.4	19	3.574	+ 21 23 7.8	64.0	3	5.63
2130	Weisse (2) IV, 1249 .	7.0	55 18.24	66.1	2	3.822	+ 30 17 34.5	68.1	2	5.59
2131	Weisse (2) IV, 1257 .	8.3	4 55 37.14	61.8	4	+ 3.820	+ 30 12 12.4	62.1	5	+ 5.56
2132	Weisse (2) IV, 1258 .	8.3	55 38.41	61.8	4	3.819	+ 30 10 42.7	64.5	5	5.56
2133	Anonymous . . .	9.0	55 52.	. .	.	3.742	+ 27 32 47.4	70.1	1	5.54
2134	Weisse (2) IV, 1261 .	8.0	55 53.08	65.9	2	3.741	+ 27 29 48.2	67.6	2	5.54
2135	Anonymous . . .	9.0	55 59.80	66.4	3	4.370	+ 45 16 30.1	62.0	2	5.53
2136	Weisse (2) IV, 1266 .	7.5	4 56 0.47	67.5	2	+ 3.577	+ 21 26 33.0	69.1	2	+ 5.53
2137	B. A. C. 1555 . . .	7.0*	56 1.20	59.6	2	3.567	+ 21 4 39.6	54.1	3	5.53
2138	Anonymous . . .	7.5	56 1.51	66.8	4	2.282	− 31 36 3.8	68.1	2	5.52
2139	Anonymous . . .	9.0	56 2.77	62.0	1	4.370	+ 45 16 34.3	69.6	2	5.52
2140	Anonymous . . .	8.5	56 12.96	67.7	3	2.282	− 31 36 41.8	69.1	1	5.51
2141	Anonymous . . .	. .	4 56 27.99	49.0	2	+ 4.337	+ 44 32	. .	.	+ 5.49
2142	B. A. C. 1559 . . .	5.0*	56 28.17	65.5	2	2.432	− 26 28 40.1	66.6	2	5.49
2143	11 Orionis	5.0	56 34.30	65.5	24	3.422	+ 15 12 20.8	64.9	2	5.48
2144	Radcliffe 1377 . . .	6.2	56 41.05	62.6	1	19.537	+ 85 31 58.8	67.1	2	5.47
2145	Lacaille 1693 . . .	7.0	56 47.56	64.1	3	2.282	− 31 33 7.6	68.1	2	5.46
2146	B. A. C. 1561 . . .	6.0*	4 56 54.98	60.1	2	+ 1.995	− 39 55 27.9	54.0	2	+ 5.45
2147	Anonymous . . .	8.6	56 57.26	69.1	3	4.366	+ 45 9 27.5	49.0	1	5.45
2148	Weisse (2) IV, 1299 .	7.8	57 10.72	60.4	2	3.615	+ 22 51 50.8	55.0	2	5.43
2149	B. A. C. 1562 . . .	6.0	57 13.51	59.1	2	3.706	+ 26 14 1.1	68.0	2	5.43
2150	Anonymous . . .	7.9	57 19.17	69.1	4	4.362	+ 45 3 50.2	60.5	4	5.42

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			h. m. s.			"	° ' "			"
2151	Lacaille 1704 . . .	5.7	4 58 5.22	65.0	2	+ 2.482	− 24 35 7.4	68.6	2	+ 5.35
2152	O. Arg. S. 3630. . .	8.5	58 21.00	64.4	3	2.391	− 27 51 22.9	68.1	1	5.33
2153	*m* Tauri.	5.5*	59 10.83	67.1	2	3.502	+ 18 27 11.8	70.1	2	5.26
2154	γ^1 Cœli	5.2	59 22.50	67.1	2	2.145	− 35 40 38.3	68.1	2	5.24
2155	Weisse (2) IV, 1364 .	8.5	59 31.05	60.9	3	3.825	+ 30 15 38.1	59.8	3	5.23
2156	*l* Tauri.	5.5	4 59 31.37	66.6	2	+ 3.547	+ 20 13 48.9	68.6	2	+ 5.23
2157	ε Leporis	3.3	59 32.18	61.7	43	2.536	− 22 33 42.6	60.9	5	5.23
2158	B. A. C. 1565 . . .	5.0*	59 33.60	69.1	4	9.750	+ 79 3 36.3	70.2	4	5.23
2159	103 Tauri.	5.5	59 34.87	59.2	3	3.649	+ 24 4 34.2	69.0	2	5.23
2160	B. A. C. 1578 . . .	7.0	59 35.29	66.1	2	2.433	− 26 20 38.9	68.7	3	5.23
2161	Anonymous . . .	8.7	4 59 37.89	69.1	1	+ 2.501	− 23 50 26.8	65.0	2	+ 5.22
2162	B. A. C. 1582 . . .	5.5	5 0 17.86	65.0	2	4.447	+ 46 47 3.7	54.2	2	5.19
2163	O. Arg. S. 3662. . .	7.5	0 30.21	69.1	2	2.423	− 26 40 46.1	67.0	2	5.15
2164	Anonymous . . .	8.5	0 44.26	69.7	3	3.806	+ 29 36 19.5	46.1	1	5.13
2165	Weisse (2) IV, 1414 .	7.7	0 48.94	69.7	3	3.809	+ 29 36 51.5	46.1	1	5.12
2166	Anonymous . . .	9.5	5 0 50.	. .	.	+ 2.363	− 28 44 3.7	69.1	1	+ 5.12
2167	Weisse IV, 1379 . .	7.3	0 54.09	69.1	1	2.781	− 12 40 30.5	62.1	2	5.11
2168	O. Arg. S. 3670. . .	9.0	1 0.94	67.8	3	2.363	− 28 44 56.7	70.1	2	5.10
2169	Weisse IV, 1394 . .	7.8	1 20.71	69.1	2	2.779	− 12 46 33.7	62.1	2	5.08
2170	O. Arg. S. 3680. . .	9.5	1 28.11	65.0	1	2.362	− 28 45 7.0	70.0	1	5.07
2171	15 Orionis	5.0	5 1 41.22	53.9	4	+ 3.429	+ 15 24 51.7	58.5	2	+ 5.05
2172	Rumker, N. F., 2553 .	8.0	2 9.06	61.1	1	3.823	+ 30 7 16.7	66.1	2	5.01
2173	O. Arg. S. 3691 . .	8.2	2 9.20	64.1	3	2.349	− 29 9 46.2	67.6	2	5.01
2174	Weisse (2) V, 22 . .	6.2	2 43.60	69.5	2	3.812	+ 29 43 36.4	57.6	2	4.96
2175	O. Arg. S. 3710 . .	8.3	3 7.24	67.5	2	2.449	− 25 41 4.0	68.6	2	4.93
2176	Anonymous . . .	9.2	5 3 11.34	67.6	2	+ 3.170	+ 4 14 46.3	70.0	2	+ 4.92
2177	Anonymous . . .	. .	3 20.	. .	.	3.826	+ 30 11 34.3	55.0	1	4.91
2178	Weisse (2) V, 49 . .	8.8	3 39.17	64.6	10	3.829	+ 30 15 44.3	61.3	4	4.88
2179	O. Arg. S. 3717. . .	8.6	3 40.55	64.1	1	2.457	− 25 23 24.4	69.1	2	4.88
2180	Weisse (2) V, 54 . .	8.0	3 41.66	55.3	4	3.712	+ 26 17 8.3	56.1	12	4.88
2181	O. Arg. S. 3720. . .	8.7	5 3 44.02	66.1	3	+ 2.452	− 25 33 55.7	70.1	1	+ 4.87
2182	μ Aurigæ	5.0*	3 51.07	58.0	2	4.097	+ 38 18 52.5	46.3	4	4.86
2183	Weisse V, 48 . . .	9.0*	4 1.90	58.0	3	3.400	+ 14 11 16.6	68.7	2	4.85
2184	Weisse V, 56 . . .	9.0	4 20.76	65.1	1	3.166	+ 4 9 46.4	70.5	2	4.82
2185	Weisse V, 55 . . .	7.8	4 20.86	65.4	2	3.166	+ 4 14 0.7	65.6	2	4.82
2186	Anonymous . . .	9.3	5 4 33.70	67.1	2	+ 2.449	− 25 39 11.8	70.1	1	+ 4.80
2187	Anonymous . . .	9.0	4 39.23	60.1	1	3.829	+ 30 16	. .	.	4.79
2188	Anonymous . . .	9.4	4 55.37	64.1	1	2.456	− 25 23 17.3	69.1	2	4.77
2189	Lacaille 1738 . . .	6.9	5 3.38	63.7	3	2.436	− 26 5 15.9	66.1	1	4.76
2190	Anonymous . . .	9.0	5 5.23	67.4	3	3.831	+ 30 17 37.4	70.1	1	4.76

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			h. m. s.			"	° ′ "			"
2191	Anonymous	. .	5 5 11.	. .	.	+ 2.448	− 25 39 10.6	71.0	1	+ 4.75
2192	Weisse (2) V, 111	7.3	5 17.50	63.2	11	3.829	+ 30 13 49.9	63.5	8	4.74
2193	Anonymous	9.3	5 25.	. .	.	2.449	− 25 36 18.3	70.1	1	4.73
2194	12 Aurigæ	6.0*	6 5.40	65.5	2	4.430	+ 46 15 5.4	59.7	5	4.67
2195	B. A. C. 1615	7.0	6 6.37	63.4	3	2.309	− 30 23 58.0	68.0	2	4.67
2196	α Aurigæ	1.0	5 6 21.06	53.2	102	+ 4.412	+ 45 51 6.3	52.1	72	+ 4.65
2197	(* 130) Washington	8.8	6 28.85	65.8	2	3.122	+ 2 12 15.4	69.6	2	4.64
2198	Lacaille 1754	6.5	6 45.64	64.4	3	2.071	− 37 34 1.0	65.1	2	4.62
2199	Weisse V, 136	5.5	6 49.53	59.4	3	2.882	− 8 18 55.3	65.6	2	4.61
2200	Lacaille 1753	6.6	7 15.73	63.7	3	2.398	− 27 21 48.6	67.0	2	4.57
2201	Weisse V, 145	8.8	5 7 18.88	68.1	3	+ 3.126	+ 2 23 53.0	68.1	2	+ 4.57
2202	Anonymous.	7.0	7 19.77	63.7	3	2.399	− 27 19 41.5	67.0	2	4.57
2203	Weisse V, 153	9.0	7 42.88	68.1	3	3.127	+ 2 25 28.8	68.6	2	4.54
2204	Weisse V, 156	9.0	7 47.12	68.1	3	3.128	+ 2 26 42.6	68.6	2	4.53
2205	Anonymous.	. .	7 48.43	65.1	3	2.880	− 8 22	. .	.	4.53
2206	β Orionis	1.0	5 7 48.67	57.7	159	+ 2.880	− 8 21 59.0	52.9	37	+ 4.53
2207	Anonymous	8.0	7 49.57	69.1	2	3.831	+ 30 13 6.3	66.1	1	4.52
2208	O. Arg. S. 3790.	9.0	8 37.99	67.7	3	2.394	− 27 28 33.9	67.6	2	4.46
2209	Lacaille 1763	6.8	8 50.26	63.1	2	2.426	− 26 22 11.2	67.1	2	4.44
2210	Anonymous.	7.2	9 31.33	69.1	2	3.832	+ 30 13 20.7	68.0	2	4.38
2211	Lacaille 1770	6.8	5 9 39.80	64.1	3	+ 2.364	− 28 29 46.9	68.1	2	+ 4.37
2212	Lacaille 1774	7.6	9 55.33	64.4	3	2.321	− 29 55 11.1	69.1	2	4.35
2213	O. Arg. S. 3812	9.2	10 10.48	65.8	3	2.391	− 27 32 45.2	67.6	2	4.34
2214	Lacaille 1780	6.5	10 15.06	65.6	2	2.095	− 36 48 45.7	65.1	2	4.33
2215	B. A. C. 1641	5.5	10 45.38	69.1	2	2.154	− 35 5 7.7	67.6	2	4.28
2216	n Tauri	6.0	5 10 52.02	61.1	9	+ 3.598	+ 21 56 52.6	57.5	5	+ 4.27
2217	Lacaille 1779	7.0*	10 52.20	67.8	3	2.449	− 25 29 20.7	68.1	2	4.27
2218	Weisse (2) V, 287	8.5	11 2.77	66.1	2	3.837	+ 30 21 36.3	68.1	1	4.25
2219	Weisse (2) V, 296	7.0	11 6.36	62.8	4	3.712	+ 26 6 31.3	57.9	12	4.25
2220	O. Arg. S. 3830.	7.8	11 40.18	64.4	5	2.394	− 27 23 56.6	67.6	2	4.20
2221	Lacaille 1787	7.5	5 11 41.79	63.1	2	+ 2.273	− 31 26 13.4	68.1	2	+ 4.20
2222	O. Arg, S. 3846.	9.0	12 6.58	69.1	2	2.387	− 27 38 16.1	68.6	2	4.17
2223	(* 131) Washington	9.1	12 12.30	65.5	2	3.094	+ 0 58 20.7	67.1	2	4.14
2224	o Columbæ	5.0	12 25.93	65.4	2	2.155	− 35 2 6.5	66.5	2	4.13
2225	Anonymous	. .	12 26.80	65.0	1	2.390	− 27 32	. .	.	4.13
2226	Anonymous	6.8	5 12 32.44	66.1	3	+ 2.451	− 25 24 8.0	67.6	4	+ 4.12
2227	Anonymous	7.8	12 33.41	66.1	3	2.450	− 25 25 59.5	67.6	4	4.12
2228	Anonymous	6.8	13 3.23	69.1	3	4.078	+ 37 32 1.2	46.1	3	4.08
2229	Anonymous	7.0	13 7.50	59.1	2	2.762	− 13 19 26.3	56.1	2	4.07
2230	O. Arg. S. 3862.	8.3	13 17.32	64.1	2	2.346	− 29 1 13.3	68.1	2	4.06

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2231	B. A. C. 1655 . . .	5.7	5 13 48.92	63.9	4	+ 2.390	− 27 30 56.7	66.6	2	+ 4.01
2232	Anonymous . . .	9.0	14 0.30	65.0	1	2.450	− 25 24 2.8	69.1	2	4.01
2233	Lacaille 1798 . . .	6.7	14 5.47	62.7	3	2.431	− 26 4 33.2	64.1	2	3.99
2234	Anonymous . . .	. .	14 30.63	49.1	1	3.726	+ 26 31	. .	.	3.95
2235	B. A. C. 1661 . . .	7.5	14 44.03	66.4	3	3.151	+ 3 25 51.0	66.1	2	3.94
2236	Lacaille 1806 . . .	7.2	5 15 17.41	63.4	6	+ 2.335	− 29 20 55.9	66.4	3	+ 3.89
2237	*m* Orionis	7.0	15 28.64	62.2	2	3.150	+ 3 24 22.1	66.1	2	3.87
2238	Santini 345	8.5	15 29.61	66.8	3	3.150	+ 3 24 51.9	67.1	2	3.87
2239	Lalande 9884 . . .	8.0*	15 53.07	71.0	4	9.384	+ 78 15 20.5	70.9	2	3.85
2240	B. A. C. 1670, (1st *) .	6.2	16 1.54	63.1	3	2.462	− 24 54 41.5	67.6	2	3.82
2241	B. A. C. 1670, (2d *) .	9.0	5 16 1.80	63.1	2	+ 2.462	− 24 54 57.7	67.6	2	+ 3.82
2242	Weisse (2) V, 430 . .	8.1	16 4.15	69.1	2	4.094	+ 37 54 46.5	46.1	2	3.82
2243	Weisse (2) V, 431 . .	7.6	16 4.37	69.1	2	4.094	+ 37 54	. .	.	3.82
2244	B. A. C. 1673 . . .	5.5	16 12.75	65.4	2	2.170	− 34 29 7.6	67.1	2	3.81
2245	Anonymous . . .	9.0	16 33.78	64.9	2	2.589	− 20 10 38.7	69.1	2	3.78
2246	Weisse (2) V, 451 . .	8.2	5 16 36.69	61.2	7	+ 3.848	+ 30 34 3.8	57.0	2	+ 3.77
2247	Weisse (2) V, 452 . .	8.7	16 38.65	61.4	4	3.847	+ 30 33 20.7	62.6	2	3.77
2248	β Tauri	1.0	17 26.64	56.1	197	3.785	+ 28 29 8.0	52.6	28	3.70
2249	Weisse (2) V, 478 . .	8.3	17 30.41	65.3	3	3.576	+ 21 0 13.3	65.1	2	3.79
2250	B. A. C. 1662 . . .	7.2	17 30.59	65.8	2	18.439	+ 85 6 43.1	62.1	2	3.70
2251	B. A. C. 1688 . . .	6.1	5 17 34.48	62.4	3	+ 2.407	− 26 50 25.7	65.1	2	+ 3.69
2252	γ Orionis	2.0*	17 37.42	47.4	5	3.215	+ 6 13 9.8	57.0	2	3.69
2253	Anonymous . . .	. .	17 48.82	70.2	2	4.134	+ 38 55 45.3	50.1	1	3.65
2254	O. Arg. S. 3917. . .	9.0	17 49.12	67.1	2	2.690	− 16 11 24.8	68.1	1	3.67
2255	O. Arg. S. 3920. . .	8.4	17 57.42	67.8	3	2.691	− 16 10 27.9	68.0	2	3.66
2256	Lacaille 1827 . . .	7.4	5 17 57.47	63.8	3	+ 2.255	− 31 52 48.8	67.6	4	+ 3.66
2257	Weisse (2) V, 513 . .	8.5	18 25.10	60.1	2	3.726	+ 26 27 29.8	56.0	10	3.62
2258	115 Tauri	5.5*	19 0.19	64.4	2	3.496	+ 17 50 16.1	65.5	2	3.57
2259	Weisse (2) V, 530 . .	7.7	19 10.93	69.1	2	3.848	+ 30 31 21.8	63.5	2	3.56
2260	Weisse V, 449 . . .	7.0*	19 12.27	59.1	2	2.762	− 13 15 23.7	52.5	5	3.56
2261	*o* Tauri	5.8	5 19 13.74	58.4	3	+ 3.599	+ 21 48 48.1	68.2	2	+ 3.56
2262	Anonymous . . .	. .	19 25.04	49.1	1	3.728	+ 26 31	. .	.	3.53
2263	Σ Cat. Gen. 577, (1st *) .	. .	19 59.24	71.1	1	4.921	+ 54 33 5.8	71.0	2	3.48
2264	Σ Cat. Gen. 577, (2d *) .	7.0	20 0.42	71.1	3	4.921	+ 54 33 5.8	71.0	2	3.48
2265	Anonymous . . .	9.2	20 14.33	71.1	2	4.136	+ 38 56 23.2	50.1	1	3.46
2266	B. A. C. 1708 . . .	6.8	5 20 33.61	62.8	3	+ 2.792	− 12 1 16.7	65.1	3	+ 3.43
2267	Schjellerup 1787 . .	8.0	20 34.08	65.0	1	3.063	− 0 22 49.7	68.6	2	3.43
2268	Lacaille 1840 . . .	7.0	20 47.18	61.9	2	2.238	− 32 20 0.4	66.5	2	3.42
2269	Lacaille 1844 . . .	7.0	20 47.46	65.1	1	2.229	− 32 37 32.7	68.1	2	3.42
2270	B. A. C. 1711 . . .	7.0	20 55.76	60.1	2	3.563	+ 20 26 13.6	54.1	3	3.41

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2271	Anonymous.	. .	5 20 59.93	49.1	1	+ 3.729	+ 26 31	. .	.	+ 3.40
2272	B. A. C. 1706	6.1	21 1.49	64.4	7	7.970	+ 74 56 31.2	63.9	8	3.39
2273	B. A. C. 1713	7.5	21 47.24	63.8	3	2.409	− 26 42 14.7	66.6	2	3.33
2274	Groombridge 980	6.0	21 50.37	69.1	2	4.110	+ 38 12 31.0	46.1	1	3.33
2275	Anonymous	9.0	21 55.69	65.6	2	3.734	+ 26 39 12.2	68.1	2	3.32
2276	β Leporis	4.0*	5 22 14.77	45.9	1	+ 2.569	− 20 52 26.2	69.6	2	+ 3.29
2277	Weisse (2) V, 630	8.5	22 20.26	60.6	2	3.729	+ 26 28 19.6	57.4	12	3.28
2278	Anonymous.	8.2	22 26.96	67.5	2	2.320	− 29 41 33.5	68.6	2	3.27
2279	Anonymous	9.5	22 36.10	63.0	1	6.750	+ 70 16	. .	.	3.26
2280	Weisse (2) V, 647	9.0	22 52.91	60.8	3	3.859	+ 30 48 59.3	68.7	2	3.23
2281	Anonymous	9.0	5 22 54.94	67.6	2	+ 2 410	− 26 37 26.6	68.6	2	+ 3.23
2282	O. Arg. N. 5930	8.2	22 55.18	69.1	2	6.751	+ 70 15 59.2	69.1	1	3.23
2283	Anonymous.	8.5	22 58.76	64.1	2	2.326	− 29 28 36.2	68.6	2	3.23
2284	Anonymous	8.4	23 4.76	64.1	2	2.326	− 29 28 1.4	68.6	2	3.23
2285	Rumker 1450	8.0	23 13.49	63.1	2	3.732	+ 26 34 32.4	61.6	4	3.20
2286	Anonymous.	9.0	5 23 31.53	63.1	1	+ 3.062	− 0 26 7.0	70.1	2	+ 3.18
2287	χ Aurigæ	4.5	23 37.05	64.6	2	3.900	+ 32 5 4.6	70.1	2	3.17
2288	O. Arg. S. 4003	8.5	23 44.25	65.6	2	2.303	− 30 13 50.3	66.2	2	3.16
2289	119 Tauri.	6.5	24 10.42	65.3	3	3.514	+ 18 29 11.6	70.0	2	3.12
2290	Anonymous	8.1	24 42.86	64.5	2	2.352	− 28 32 52.8	67.6	2	3.08
2291	Weisse V, 603	9.0	5 24 51.31	64.0	4	+ 3.063	− 0 23 29.3	47.1	2	+ 3.06
2292	δ Orionis	2.5	24 51.33	55.2	185	3.063	− 0 24 22.2	49.3	57	3.06
2293	120 Tauri	6.0*	25 19.39	67.2	2	3.512	+ 18 26 11.5	70.0	2	3.02
2294	Lalande 10426	7.0	25 27.99	67.1	2	3.070	− 0 5 33.5	68.1	2	3.01
2295	Anonymous	7.7	25 32.09	67.0	2	2.350	− 28 38 28.1	68.2	2	3.00
2296	B. A. C. 1736	6.0	5 25 41.78	60.2	2	+ 4.521	+ 47 37 2.8	54.2	3	+ 2.99
2297	Anonymous	8.5	25 54.84	69.1	2	2.759	− 13 19 33.1	56.1	2	2.97
2298	Anonymous	9.0	25 54.86	59.1	2	2.752	− 13 37	. .	.	2.97
2299	Anonymous	8.0	26 14.79	70.0	2	2.946	− 5 26 42.7	67.1	1	2.92
2300	α Leporis	2.8	26 33.40	55.0	33	2.644	− 17 55 30.5	56.2	6	2.92
2301	121 Tauri	5.5	5 26 54.11	61.1	2	+ 3.660	+ 23 56 31.7	61.4	4	+ 2.89
2302	Weisse (2) V, 782	9.0	27 0.94	60.1	2	3.869	+ 31 3 21.7	64.7	3	2.88
2303	Anonymous	. .	27 3.22	70.1	2	2.940	− 5 39	. .	.	2.87
2304	Rumker 1473	7.8	27 3.37	66.4	4	3.583	+ 21 6 29.5	66.6	2	2.87
2305	Anonymous.	9.3	27 5.63	65.8	1	3.581	+ 21 2	. .	.	2.87
2306	Groombridge 990	7.0*	5 27 16.53	71.1	2	+ 4.727	+ 51 20 56.1	71.0	1	+ 2.85
2307	O. Arg. S. 4060	6.8	27 19.49	64.1	3	2.442	− 25 28 6.5	67.6	2	2.85
2308	Anonymous	7.5	27 28.88	67.1	2	2.645	− 17 53 6.6	70.1	2	2.84
2309	Anonymous	. .	27 55.00	70.0	1	2.940	− 5 40 36.1	67.1	2	2.80
2310	Σ Cat. Gen. 599	9.1	28 1.06	65.7	4	3.583	+ 21 5 35.4	65.1	1	2.79

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2311	Anonymous	. .	5 28 7.35	69.1	1	+ 3.736	+ 26 37 50.5	67.1	1	+ 2.70
2312	θ^1 Orionis, (1st *)	. .	28 23.37	70.8	4	2.945	− 5 28 59.7	67.6	2	2.76
2313	θ^1 Orionis, (2d *)	. .	28 23.69	71.1	3	2.945	− 5 29	. .	.	2.76
2314	θ^1 Orionis, (3d *)	5.5	28 23.99	69.1	5	2.945	− 5 29 8.3	67.6	2	2.76
2315	θ^1 Orionis, (4th *)	. .	28 24.64	70.8	3	2.945	− 5 29 2.2	67.6	2	2.76
2316	B. A. C. 1761	6.8	5 28 28.48	62.6	2	+ 2.309	− 29 56 51.7	66.1	4	+ 2.75
2317	θ^2 Orionis, (1st *)	5.5	28 30.45	66.0	2	2.944	− 5 30 39.9	71.0	1	2.74
2318	θ^2 Orionis, (2d *)	. .	28 34.02	70.1	1	2.944	− 5 30 43.9	69.0	2	2.74
2319	Anonymous	8.5	28 46.98	69.1	3	3.734	+ 26 33 43.8	56.0	6	2.72
2320	Anonymous	9.0	28 56.63	65.6	2	3.738	+ 26 40 32.8	68.6	2	2.71
2321	Lalande 10567	6.8	5 29 2.32	69.6	4	+ 2.939	− 5 43 18.8	66.8	3	+ 2.70
2322	ε Orionis	2.0	29 6.65	56.1	153	3.042	− 1 17 40.3	50.3	23	2.69
2323	Anonymous	. .	29 12	. . .	.	3.705	+ 25 31 12.6	69.1	2	2.69
2324	O. Arg. N. 6031	8.0	29 15.56	63.6	6	6.487	+ 68 47 33.6	63.9	2	2.68
2325	Anonymous	. .	29 16.69	61.1	1	3.705	+ 25 32	. .	.	2.68
2326	ζ Tauri	2.5	5 29 16.76	61.1	20	+ 3.582	+ 21 3 12.2	61.2	2	+ 2.68
2327	Anonymous	6.0	29 23.35	69.4	3	2.939	− 5 44 24.1	66.8	3	2.67
2328	Anonymous	9.0	29 25.53	64.6	2	3.041	− 1 19 40.1	69.1	2	2.67
2329	O. Arg. S. 4102	8.3	29 49.65	66.2	2	2.389	− 27 15 41.6	67.6	2	2.63
2330	B. A. C. 1769	6.0*	29 58.98	60.1	2	4.858	+ 53 25 10.2	54.1	3	2.62
2331	Anonymous	9.0	5 30 2.08	65.6	2	+ 3.738	+ 26 40 24.7	68.1	2	+ 2.61
2332	Weisse (2) V, 912	7.0	30 13.92	62.9	4	3.734	+ 26 31 56.9	58.1	15	2.60
2333	O. Arg. N. 6052	8.6	30 22.82	63.5	4	6.488	+ 68 47 12.9	69.2	1	2.58
2334	Lacaille 1906	7.2	30 35.88	64.0	2	2.287	− 30 37 37.5	68.6	2	2.57
2335	B. A. C. 1775	6.0*	30 41.84	65.6	2	2.343	− 28 47 52.5	66.6	2	2.56
2336	125 Tauri	5.5	5 31 3.57	69.1	1	+ 3.714	+ 25 48 52.5	58.2	2	+ 2.53
2337	Weisse V, 776	6.8	31 7.52	64.5	2	3.043	− 1 15 18.0	68.6	2	2.52
2338	Anonymous	9.0	31 12.01	63.0	1	6.756	+ 70 12	. .	.	2.51
2339	Weisse (2) V, 955	9.2	31 14.92	67.1	3	3.738	+ 26 39 30.5	67.1	2	2.51
2340	Anonymous	. .	31 35.	. . .	.	6.775	+ 70 17 19.7	70.1	2	2.48
2341	O. Arg. N. 6082	8.0	5 31 43.49	66.3	5	+ 6.756	+ 70 11 38.6	66.1	4	+ 2.47
2342	B. A. C. 1783	6.8	31 44.69	63.1	3	2.368	− 27 57 20.4	67.6	2	2.47
2343	Lalande 10621	8.0*	31 54.	. . .	.	4.112	+ 38 6 35.2	70.2	1	2.45
2344	Lacaille 1913	7.4	32 5.37	66.6	2	2.402	− 26 48 15.2	68.5	2	2.44
2345	O. Arg. S. 4142	9.0	32 8.92	67.6	2	2.269	− 31 11 25.4	68.1	2	2.43
2346	B. A. C. 1786	6.0*	5 32 10.92	65.6	2	+ 2.345	− 28 42 38.2	68.1	1	+ 2.43
2347	Lacaille 1916	7.0	32 13.25	65.7	5	2.270	− 31 8 50.0	67.8	3	2.42
2348	B. A. C. 1787	6.5	32 16.79	62.2	2	2.343	− 28 46 34.7	66.3	4	2.42
2349	Anonymous	7.3	32 23.48	64.5	2	2.336	− 29 1 21.8	70.2	2	2.41
2350	Anonymous	8.0	32 25.93	69.1	2	2.750	− 13 37 52.1	63.1	2	2.40

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2351	Lacaille 1918	7.1	5 32 32.64	66.5	2	+ 2.387	− 27 17 41.4	69.8	4	+ 2.40
2352	Lalande 10650	6.0	32 42.26	69.1	2	4.114	+ 38 7 18.4	56.5	3	2.38
2353	Anonymous	8.5	32 44.62	69.1	2	3.588	+ 21 14 51.8	66.7	2	2.38
2354	Lacaille 1924	7.0*	32 46.80	68.1	2	2.150	− 34 46 23.2	62.2	3	2.38
2355	Anonymous	7.0	32 53.47	69.1	2	3.735	+ 26 32 18.4	56.0	9	2.37
2356	Lalande 10666	6.0	5 33 10.76	69.1	2	+ 4.114	+ 38 7 25.2	55.8	3	+ 2.34
2357	Weisse (2) V, 1064	7.2	33 32.51	58.1	2	3.832	+ 29 46 37.4	46.2	5	2.31
2358	ζ Orionis	5.0	33 41.72	46.8	4	3.025	− 2 1 12.6	68.0	2	2.30
2359	Anonymous	7.0	33 54.62	69.1	2	4.120	+ 38 16 56.4	49.1	1	2.28
2360	Weisse V, 874	8.0	34 20.54	59.0	2	2.747	− 13 45 30.6	56.4	3	2.24
2361	α Columbæ	2.0*	5 34 34.86	55.3	64	+ 2.171	− 34 9 3.9	50.0	49	+ 2.22
2362	B. A. C. 1803	5.5	34 39.25	65.4	2	2.219	− 32 42 18.9	66.1	2	2.21
2363	Anonymous	8.2	35 21.27	64.1	2	2.436	− 25 34 56.1	67.6	2	2.15
2364	O. Arg. S. 4213	6.8	35 28.70	63.9	5	2.311	− 29 47 45.7	66.0	1	2.14
2365	Weisse (2) V, 1147	8.5*	35 38.35	69.1	1	3.879	+ 31 14 17.5	67.1	2	2.13
2366	Weisse (2) V, 1149	8.7	5 35 38.48	65.6	2	+ 3.879	+ 31 14 17.5	67.1	2	+ 2.13
2367	Lacaille 1946	7.9	35 40.48	64.6	3	2.411	− 26 25 16.6	67.0	2	2.12
2368	O. Arg. N. 6159	7.1	35 56.70	63.2	9	6.986	+ 71 14 6.1	63.2	4	2.11
2369	B. A. C. 1809	6.0	36 19.70	65.6	2	2.193	− 33 28 21.4	67.6	2	2.07
2370	Lalande 10797	8.0*	36 24.74	71.0	2	4.083	+ 37 14 21.4	69.9	2	2.06
2371	Weisse (2) V, 1180	7.0	5 36 25.90	59.1	3	+ 3.879	+ 31 15 39.5	61.1	4	+ 2.06
2372	O. Arg. S. 4237	7.8	36 47.92	63.6	6	2.371	− 27 46 36.0	67.1	2	2.02
2373	B. A. C. 1812	5.8	36 51.52	63.2	2	2.285	− 30 36 20.4	67.8	3	2.02
2374	Lacaille 1964	5.5	37 14.10	67.1	2	2.149	− 34 44 17.5	62.2	3	1.99
2375	Lacaille 1967	7.2	37 48.98	67.1	2	2.174	− 34 1 29.9	68.1	2	1.94
2376	B. A. C. 1817	6.0	5 38 7.46	61.9	2	+ 2.191	− 33 29 28.7	66.6	2	+ 1.91
2377	Lalande 10871	6.5	38 34.79	69.1	2	4.008	+ 35 6 9.9	47.1	1	1.87
2378	O. Arg. S. 4263	7.7	38 39.60	64.1	3	2.567	− 20 45 33.8	67.6	2	1.86
2379	O. Arg. S. 4264	7.0	38 39.72	67.1	2	2.374	− 27 36 30.9	68.6	2	1.86
2380	129 Tauri	6.0*	38 42.49	62.0	5	3.448	+ 15 45 49.4	58.7	5	1.86
2381	Anonymous	8.0	5 38 43.86	64.7	3	+ 2.282	− 30 40 25.8	67.6	2	+ 1.86
2382	Anonymous	9.0	38 48.	. .	.	2.567	− 20 47 4.6	69.1	2	1.85
2383	131 Tauri	6.0	39 14.77	60.1	4	3.415	+ 14 25 57.2	66.6	2	1.82
2384	O. Arg S. 4282	8.0	39 28.26	63.9	2	2.488	− 23 41 22.9	67.1	2	1.79
2385	Weisse (2) V, 1296	7.0	39 41.84	69.1	2	4.138	+ 38 41 14.6	46.2	3	1.77
2386	O. Arg. S. 4294	7.3	5 39 57.57	64.1	2	+ 2.377	− 27 32 37.9	68.0	2	+ 1.75
2387	Lacaille 1977	7.1	39 58.23	63.9	5	2.248	− 31 43 44.7	68.1	2	1.75
2388	Anonymous	8.0	39 58.43	69.1	2	3.832	+ 29 41 49.1	46.2	1	1.75
2389	Weisse (2) V, 1301	7.5	40 1.69	69.1	2	4.137	+ 38 38 46.7	46.2	2	1.74
2390	Weisse (2) V. 1325	8.0	40 20.50	69.1	2	3.831	+ 29 40 31.8	46.2	3	1.72

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			h. m. s.			″	° ′ ″			″
2391	Lacaille 1978	7.1	5 40 25.53	63.3	4	+ 2.487	− 23 42 5.7	67.1	2	+ 1.71
2392	Rumker 1576	9.2	40 49.41	65.1	3	3.653	+ 23 34 34.4	68.1	2	1.68
2393	κ Orionis	4.0	41 7.14	53.2	6	2.844	− 9 43 21.1	51.6	8	1.65
2394	Anonymous	8.5	41 11.05	67.1	2	3.656	+ 23 39 37.9	69.1	2	1.64
2395	Weisse V, 1034	9.0*	41 22.	. .	.	3.303	+ 9 50 35.7	69.1	2	1.63
2396	Anonymous	9.2	5 41 22.10	63.6	6	+ 3.716	+ 25 47 46.5	69.4	3	+ 1.63
2397	Anonymous	9.0	41 22.71	61.1	1	3.303	+ 9 49	. .	.	1.63
2398	Lacaille 1987	7.0	41 26.26	62.1	2	2.335	− 28 56 23.2	66.6	2	1.62
2399	Weisse V, 1045	8.0	41 27.02	66.0	2	2.750	− 13 34 39.7	61.7	2	1.62
2400	υ Aurigæ	5.5*	41 29.53	69.1	2	4.086	+ 37 15 40.2	47.1	2	1.62
2401	Lacaille 1990	6.0	5 41 36.50	63.0	6	+ 2.342	− 28 41 31.1	67.6	2	+ 1.61
2402	Lacaille 1991	7.6	41 47.14	63.5	2	2.388	− 27 11 11.4	68.6	2	1.59
2403	Anonymous	8.5	42 5.01	59.1	2	2.747	− 13 42 16.9	69.1	2	1.57
2404	Anonymous	9.2	42 16.45	65.4	3	7.100	+ 71 41 9.8	70.1	2	1.55
2405	Anonymous	8.8	42 18.92	66.0	2	7.082	+ 71 36 44.5	70.1	2	1.55
2406	O. Arg. N. 6250	8.9	5 42 19.25	64.0	8	+ 7.064	+ 71 32 1.3	62.6	3	+ 1.55
2407	B. A. C. 1851	6.0*	42 20.00	61.3	3	3.303	+ 9 49 30.5	66.5	2	1.54
2408	Lacaille 1993	6.5	42 22.61	65.6	2	2.113	− 35 43 36.8	68.6	2	1.54
2409	(* 94) Washington	9.1	43 41.86	64.3	3	3.716	+ 25 45 23.1	69.1	2	1.43
2410	O. Arg. S. 4355	7.9	43 58.50	64.3	4	2.408	− 26 23	. .	.	1.40
2411	B. A. C. 1860	6.6	5 44 2.72	64.0	2	+ 2.505	− 23 1 1.5	64.8	3	+ 1.39
2412	136 Tauri	4.5*	44 31.71	60.8	8	3.769	+ 27 34 30.6	61.5	3	1.35
2413	Anonymous	. .	44 46.11	70.0	2	3.565	+ 20 16 34.9	67.1	2	1.33
2414	B. A. C. 1867	6.5	44 59.82	61.7	6	3.564	+ 20 15 44.0	61.8	5	1.31
2415	Lacaille 2015	7.0	44 59.86	67.8	3	2.210	− 32 51 4.9	68.1	2	1.31
2416	Weisse V, 1143	8.0	5 45 11.12	59.1	2	+ 2.743	− 13 50 33.2	56.8	3	+ 1.30
2417	Anonymous	. .	45 26.05	69.1	2	3.737	+ 26 28 57.9	56.0	3	1.28
2418	Lacaille 2018	5.5	45 37.52	65.6	2	2.506	− 22 57 50.5	65.1	2	1.26
2419	χ^1 Orionis	5.0*	46 5.57	62.3	17	3.564	+ 20 14 46.5	57.1	8	1.22
2420	Weisse V, 1176	8.0	46 10.90	64.1	2	2.724	− 14 35 35.2	68.7	2	1.21
2421	Lacaille 2023	6.5	5 46 12.24	62.6	2	+ 2.442	− 25 15 21.7	66.1	2	+ 1.21
2422	O. Arg. S. 4395	6.6	46 26.46	64.1	2	2.422	− 25 58 53.0	67.1	1	1.19
2423	Lacaille 2033	6.5	46 34.00	64.1	4	2.317	− 29 29 9.5	68.0	2	1.17
2424	Anonymous	. .	46 44.93	70.1	2	7.290	+ 72 26 25.0	69.2	1	1.16
2425	B. A. C. 1881	6.0*	46 47.79	61.9	1	6.199	+ 66 52 59.0	67.1	2	1.16
2426	Weisse (2) V, 1534	8.8	5 46 55.97	62.9	4	+ 3.736	+ 26 26 59.7	56.0	10	+ 1.15
2427	α Orionis	1.0	47 35.60	56.0	215	3.245	+ 7 22 39.0	50.2	85	1.08
2428	Weisse V, 1204	8.0*	47 35.74	59.5	2	2.735	− 14 9 34.1	65.1	2	1.08
2429	Weisse V, 1200	7.0	47 37.86	60.1	3	2.976	− 4 5 40.7	65.7	3	1.08
2430	δ Aurigæ	3.5*	47 59.72	45.9	2	4.928	+ 54 16 5.5	58.2	2	1.05

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2431	λ Columbæ	4.5	5 48 2.05	63.4	2	+ 2.177	− 33 50 4.8	67.1	2	+ 1.05
2432	Weisse V, 1220. . .	9.0	48 19.27	69.1	2	2.977	− 4 4 53.3	67.1	2	1.02
2433	Anonymous . . .	9.0	48 23.18	69.6	2	3.245	+ 7 22 17.9	69.1	1	1.02
2434	Anonymous . . .	9.0	48 40.09	70.0	1	3.243	+ 7 17 38.8	68.1	1	0.99
2435	B. A. C. 1894 . . .	5.8	48 48.40	63.5	3	2.326	− 29 10 27.4	68.6	2	0.98
2436	O. Arg. N. 6356 . .	8.0	5 48 59.00	65.9	6	+ 7.280	+ 72 23 30.1	68.6	2	+ 0.96
2437	Anonymous . . .	. .	49	. .	.	7.292	+ 72 26 15.0	62.6	1	0.96
2438	Anonymous . . .	. .	49	. .	.	7.335	+ 72 36 10.4	62.6	1	0.96
2439	Weisse (2) V, 1598. .	8.2	49 0.01	61.1	2	3.611	+ 21 57 41.1	58.1	2	0.96
2440	Lacaille 2048 . . .	6.5	49 3.11	62.7	3	2.401	− 26 41 23.3	68.1	2	0.96
2441	Anonymous . . .	. .	5 49 9.37	64.6	2	+ 2.333	− 28 56 45.8	69.6	2	+ 0.95
2442	β Aurigæ	3.0	49 15.48	57.7	2	4.404	+ 44 55 42.0	68.2	2	0.94
2443	139 Tauri	5.5	49 18.45	64.0	2	3.722	+ 25 55 56.6	68.1	2	0.94
2444	O. Arg. N. 6362 . .	7.8	49 35.98	65.9	6	7.334	+ 72 35 56.7	63.3	4	0.91
2445	Weisse (2) V, 1621. .	8.6	49 39.50	69.1	2	3.613	+ 22 2 48.9	67.5	3	0.91
2446	η Leporis	4.5	5 50 1.74	64.1	2	+ 2.735	− 14 11 47.8	49.2	3	+ 0.87
2447	O. Arg. S. 4453. . .	7.7	50 7.86	64.6	4	2.332	− 28 58 41.4	68.1	1	0.86
2448	Anonymous . . .	9.0	50 7.92	65.1	1	2.327	− 29 9 40.3	68.1	1	0.86
2449	Anonymous . . .	. .	50 10.	. .	.	3.247	+ 7 28 43.9	70.0	1	0.86
2450	θ Aurigæ	4.5	50 10.36	65.6	2	4.086	+ 37 11 55.7	47.3	6	0.86
2451	B. A. C. 1879 . . .	7.4	5 50 13.05	62.0	8	+26.667	+ 86 45 35.0	68.2	2	+ 0.86
2452	O. Arg. S. 4457 . .	8.0	50 13.42	70.4	3	2.327	− 29 9 38.6	68.1	2	0.87
2453	Anonymous . . .	7.3	50 14.11	65.8	4	2.302	− 29 56 36.2	69.1	2	0.85
2454	Anonymous . . .	9.0	50 14.61	65.1	1	3.243	+ 7 18 4.3	68.1	1	0.85
2455	Anonymous . . .	7.7	50 15.89	67.1	2	2.301	− 29 58 57.2	68.2	1	0.85
2456	Anonymous	. .	5 50 16.	. .	.	+ 2.302	− 29 56 26.9	70.0	1	+ 0.85
2457	Anonymous . . .	9.0	50 18.72	70.0	2	3.244	+ 7 20 58.0	68.6	2	0.85
2458	36 Aurigæ	7.0	50 21.31	64.6	2	4.550	+ 47 53 16.7	54.1	3	0.85
2459	Anonymous	. .	50 28.64	69.2	2	3.562	+ 20 9 5.7	56.2	1	0.83
2460	Lacaille 2065 . . .	6.3	50 43.68	67.6	2	2.251	− 31 33 18.7	70.1	1	0.81
2461	Lacaille 2062 . . .	6.6	5 50 44.40	63.0	3	+ 2.498	− 23 14 16.3	70.0	1	+ 0.81
2462	σ Columbæ	5.9	51 4.96	64.6	2	2.256	− 31 24 16.1	66.1	2	0.78
2463	Anonymous . . .	8.0	51 12.11	66.7	3	3.552	+ 19 45 50.4	62.7	2	0.77
2464	Anonymous . . .	7.8	51 24.08	59.3	5	2.733	− 14 13 42.2	56.1	2	0.75
2465	O. Arg. N. 6390 . .	8.8	51 25.42	63.4	9	7.262	+ 72 18 51.8	69.1	1	0.75
2466	O. Arg. S. 4474. . .	7.7	5 51 31.50	64.4	3	+ 2.338	− 28 46 39.2	70.5	2	+ 0.74
2467	Weisse (2) V, 1686. .	8.5	51 43.98	65.1	2	3.560	+ 20 3 38.7	67.1	1	0.72
2468	Anonymous . . .	7.0	51 45.56	62.1	1	2.386	− 27 10	. .	.	0.72
2469	O. Arg. S. 4481 . .	8.3	51 46.32	64.1	2	2.335	− 28 53 45.9	68.1	2	0.72
2470	Weisse (2) V, 1701. .	8.0	51 58.62	61.1	1	3.560	+ 20 2 32.5	67.1	1	0.70

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2471	Anonymous . . .	8.0	5 52 8.54	69.2	1	+ 4.061	+ 36 30 21.0	47.1	1	+ 0.69
2472	Anonymous . . .	9.0	52 9.07	69.2	1	4.061	+ 36 30 13.8	47.1	1	0.69
2473	Weisse V, 1335. . .	8.3	52 27.48	59.4	3	2.733	− 14 13 16.0	56.2	2	0.66
2474	γ Columbæ	4.5	52 34.40	67.3	3	2.126	− 35 18 3.1	66.1	2	0.65
2475	Anonymous . . .	9.0	52 34.99	65.0	2	3.648	+ 23 19 42.3	68.6	2	0.65
2476	Anonymous	8.0	5 52 36.93	69.1	2	+ 3.553	+ 19 48 14.2	62.7	2	+ 0.65
2477	Lalande 11343 . . .	8.0	52 36.95	66.5	2	3.648	+ 23 17 39.5	68.6	2	0.64
2478	B. A. C. 1915 . . .	7.1	52 42.62	67.0	2	2.238	− 31 59	. .	.	0.64
2479	O. Arg. S. 4499. . .	7.7	52 48.68	64.5	5	2.328	− 29 7 30.1	69.2	2	0.63
2480	Lacaille 2085 . . .	7.0	52 50.77	67.5	2	2.154	− 34 29 33.1	70.2	1	0.63
2481	Weisse V, 1368, (1st *)	8.5	5 53 39.34	66.1	3	+ 2.739	− 13 58 23.2	68.9	3	+ 0.55
2482	Weisse V, 1368, (2d *)	9.0	53 39.78	70.0	1	2.739	− 13 58 23.2	68.9	3	0.55
2483	Anonymous . . .	7.8	53 44.29	66.8	3	3.736	+ 26 25 32.6	65.1	2	0.55
2484	Weisse V, 1372. . .	8.5	53 52.35	59.1	3	2.734	− 14 11 9.5	47.2	2	0.54
2485	Lacaille 2090 . . .	7.3	53 54.38	64.9	1	2.158	− 34 22 19.7	69.1	1	0.53
2486	Weisse V, 1378. . .	9.0*	5 53 58.67	69.1	1	+ 2.738	− 14 1 33.1	56.1	2	+ 0.53
2487	Lacaille 2092 . . .	7.5	54 5.56	67.1	2	2.176	− 33 49 54.1	68.2	1	0.52
2488	O. Arg. S. 4527. . .	7.5	54 37.20	64.3	6	2.324	− 29 13 0.9	68.6	2	0.47
2489	Anonymous . . .	. .	54 40.	. . .	.	3.736	+ 26 24 56.6	65.1	1	0.47
2490	μ Orionis	4.8	54 40.87	57.5	4	3.298	+ 9 38 34.8	69.1	2	0.47
2491	Lacaille 2094 . . .	7.0	5 54 41.72	69.6	2	+ 2.123	− 35 21 53.8	68.2	2	+ 0.46
2492	Rumker 1673 . . .	8.5	54 44.86	60.1	2	3.732	+ 26 16 35.3	59.0	11	0.46
2493	Weisse (2) V, 1783 . .	7.8	54 45.19	62.1	5	3.986	+ 34 22 21.1	68.2	2	0.46
2494	B. A. C. 1930 . . .	7.5	54 47.50	60.6	2	3.498	+ 17 39 42.9	62.8	3	0.46
2495	Weisse (2) V, 1795. .	7.0*	54 50.43	69.1	2	3.739	+ 26 31 36.4	65.1	2	0.45
2496	O. Arg. S. 4534 . .	7.6	5 54 57.40	64.3	6	+ 2.364	− 27 53 47.0	67.7	2	+ 0.46
2497	Rumker 1680 . . .	8.5	55 9.44	67.4	3	3.735	+ 26 21 5.6	56.9	12	0.42
2498	χ^3 Orionis	5.0*	55 10.16	60.9	5	3.550	+ 19 41 20.6	60.1	5	0.42
2499	B. A. C. 1935 . . .	6.5	55 26.22	69.1	2	4.115	+ 37 57 56.4	47.0	7	0.40
2500	Lacaille 2096 . . .	6.6	55 31.93	63.1	4	2.436	− 25 25 22.9	65.6	2	0.39
2501	χ^4 Orionis	5.0*	5 55 36.36	62.6	5	+ 3.562	+ 20 8 16.0	61.4	4	+ 0.38
2502	1 Geminorum. . . .	5.0	55 36.66	61.3	8	3.647	+ 23 16 0.9	61.9	4	0.38
2503	B. A. C. 1941 . . .	6.0	56 11.79	63.4	2	2.173	− 33 54 54.0	67.4	3	0.33
2504	Lacaille 2105 . . .	7.0	56 19.87	62.1	2	2.380	− 27 21 35.5	62.2	2	0.32
2505	Anonymous. . . .	9.0	56 30.39	62.4	3	7.599	+ 73 32 56.4	69.1	2	0.31
2506	Lacaille 2107 . . .	7.0	5 56 33.48	62.1	2	+ 2.378	− 27 25 34.1	65.2	2	+ 0.30
2507	Lalande 11471 . . .	6.0	56 46.71	69.1	2	4.022	+ 35 24 20.4	47.1	3	0.28
2508	40 Aurigæ	6.0*	56 55.94	59.6	2	4.135	+ 38 29 26.3	54.1	4	0.27
2509	B. A. C. 1946 . . .	5.8	57 37.19	63.4	4	2.412	− 26 17 13.1	66.6	2	0.21
2510	Rumber 1700 . . .	7.0	57 40.50	69.1	2	3.739	+ 26 31 59.5	66.6	2	0.20

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2511	(* 116) Washington .	9.2	5 57 45.47	63.7	7	+ 7.609	+ 73 34 53.2	69.1	2	+ 0.20
2512	Weisse V, 1479. . .	7.0*	57 49.74	59.1	3	2.737	− 14 4 56.9	50.2	3	0.19
2513	B. A. C. 1947 . . .	6.5	57 54.46	69.1	2	4.120	+ 38 5 32.5	47.1	1	0.18
2514	Lalande 11513 . . .	6.5	57 58.22	62.2	3	4.054	+ 36 17 0.2	66.1	2	0.18
2515	Anonymous . . .	9.0	58 4.04	65.0	2	2.718	− 14 49 10.9	68.1	2	0.17
2516	Weisse V, 1487. . .	8.0*	5 58 11.91	69.1	2	+ 2.738	− 14 1 39.2	52.5	5	+ 0.16
2517	Anonymous	. .	58 23.70	69.1	1	3.562	+ 20 6 50.9	56.2	1	0.13
2518	Anonymous . . .	8.5	58 23.79	69.1	1	3.562	+ 20 8 21.5	68.2	1	0.14
2519	Lalande 11528 . . .	6.6	58 29.37	62.3	4	4.046	+ 36 4 40.4	62.2	2	0.13
2520	Weisse V, 1500. . .	7.8	58 30.64	69.1	1	2.736	− 14 6 49.0	47.2	3	0.13
2521	Lalande 11529 . . .	6.5	5 58 35.37	69.1	2	+ 4.116	+ 37 59 41.1	49.1	1	+ 0.12
2522	Lacaille 2124 . . .	5.5	59 7.92	68.1	3	2.231	− 32 10 17.2	68.1	2	0.08
2523	Anonymous . . .	8.8	59 8.51	64.4	5	2.343	− 28 35 12.3	67.1	1	0.08
2524	Anonymous . . .	7.8	59 10.98	64.4	5	2.343	− 28 36 40.8	68.1	3	0.07
2525	O. Arg. S. 4613 . .	7.7	59 12.80	62.8	4	2.360	− 28 3 12.8	65.1	2	0.07
2526	Anonymous . . .	9.0	5 59 27.36	65.1	3	+ 3.426	+ 14 48 43.4	69.1	2	+ 0.06
2527	ν Orionis	4.5	59 34.76	61.4	61	3.425	+ 14 46 51.9	60.2	6	0.04
2528	Weisse V, 1530. . .	6.0	59 42.24	59.1	2	2.974	− 4 10 57.7	68.7	2	0.03
2529	Weisse (2) V, 1980 . .	8.8	59 46.80	65.2	1	3.724	+ 25 58 51.8	69.1	2	0.02
2530	O. Arg. S. 4625. . .	7.6	59 55.	. .	.	2.341	− 28 39 56.4	67.1	2	0.01
2531	O. Arg. N. 6525 . .	9.0	5 59 56.82	66.5	2	+ 7.660	+ 73 45 9.8	69.1	2	+ 0.01
2532	Lacaille 2126 . . .	6.5	5 59 59.38	66.6	2	2.472	− 24 11 7.3	68.2	2	0.00
2533	Lacaille 2130 . . .	5.8	6 0 42.18	67.1	2	2.308	− 29 44 44.6	68.0	1	− 0.06
2534	Anonymous . . .	7.5	0 50.21	69.1	2	2.488	− 23 31 41.3	67.1	2	0.07
2535	Lacaille 2131 . . .	7.0	1 1.46	65.6	2	2.451	− 24 54 56.8	67.9	3	0.09
2536	3 Geminorum . . .	6.0*	6 1 13.92	60.3	4	+ 3.643	+ 23 7 55.9	58.1	2	− 0.11
2537	Anonymous	. .	2 4.	. .	.	3.881	+ 31 9 46.3	70.1	1	0.18
2538	O. Arg. S. 4680 . .	7.8	2 6.13	64.1	2	2.281	− 30 36 38.4	68.7	2	0.18
2539	Lalande 11684 . . .	7.6	2 11.53	63.9	4	3.725	+ 26 2 14.5	60.9	5	0.19
2540	Anonymous . . .	8.0	2 20.	. .	.	3.890	+ 31 26 57.2	70.0	1	0.20
2541	π¹ Columbæ	6.0	6 2 21.33	69.1	2	+ 1.856	− 42 16 58.4	66.6	2	− 0.20
2542	Lacaille 2151 . . .	7.0	2 37.88	66.8	3	2.090	− 36 17 29.6	68.4	3	0.23
2543	Weisse (2) VI, 12 . .	8.0	2 38.94	62.8	4	3.900	+ 31 11 51.7	59.3	6	0.23
2544	Weisse VI, 44 . . .	7.5	2 46.71	59.1	3	2.738	− 14 2 41.7	56.1	2	0.24
2545	Lalande 11714 . . .	8.5	3 3.25	64.3	5	3.725	+ 26 0 39.5	57.0	3	0.27
2546	Anonymous . . .	8.5	6 3 11.90	67.1	2	+ 3.890	+ 31 27 4.7	69.2	1	− 0.28
2547	Weisse VI, 55 . . .	8.7	3 12.23	68.7	5	2.850	− 9 24 38.0	70.1	2	0.28
2548	Anonymous . . .	8.8	3 21.00	67.1	2	3.889	+ 31 26 23.3	69.2	1	0.29
2549	22 Camelopardi . . .	5.5	3 24.83	67.1	2	6.622	+ 69 21 40.8	66.1	3	0.30
2550	Weisse VI, 73 . . .	8.2	3 45.60	69.4	3	2.852	− 9 19 50.0	69.1	2	0.33

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			h. m. s.			″	° ′ ″			″
2551	Lacaille 2159 . . .	6.5	6 4 11.12	62.1	2	+ 2.400	− 26 40 41.1	65.6	2	− 0.37
2552	Lacaille 2163 . . .	7.0	4 12.17	64.1	4	2.269	− 31 0 5.3	67.1	2	0.37
2553	Weisse (2) VI, 79 . .	9.0	4 25.49	62.3	5	3.890	+ 31 26 33.6	71.2	1	0.39
2554	Anonymous . . .	8.5	4 26.10	67.1	2	3.626	+ 22 29 34.5	68.1	2	0.39
2555	Lacaille 2166 . . .	7.3	4 44.50	62.2	2	2.307	− 29 47 38.7	66.1	2	0.41
2556	B. A. C. 1995 . . .	7.5	6 5 0.44	62.7	4	+ 2.387	− 27 7 32.5	64.6	2	− 0.44
2557	B. A. C. 1994 . . .	5.0*	5 3.14	64.6	2	2.919	− 6 31 17.5	54.1	2	0.44
2558	Lacaille 2178 . . .	6.5	5 31.66	65.0	2	2.143	− 34 47 24.4	68.1	2	0.48
2559	B. A. C. 1997 . . .	6.6	5 36.59	63.8	3	2.407	− 26 27 12.2	66.1	2	0.49
2560	Lacaille 2177 . . .	6.7	5 53.26	67.4	3	2.390	− 27 1 41.3	66.8	3	0.51
2561	Anonymous . . .	9.0	6 6 10.48	65.1	1	+ 2.400	− 26 42 7.1	67.1	2	− 0.54
2562	Lacaille 2183 . . .	7.0	6 10.58	65.6	2	2.176	− 33 50 31.0	66.1	2	0.54
2563	Weisse (2) VI, 136 . .	9.0	6 10.76	70.0	2	3.891	+ 31 30 32.4	70.4	3	0.54
2564	η Geminorum . . .	4.0	6 25.62	62.5	37	3.627	+ 22 32 36.2	61.2	7	0.56
2565	Anonymous . . .	8.5	6 25.75	60.1	1	4.232	+ 40 57 50.8	68.2	2	0.56
2566	κ Aurigæ	4.0*	6 6 27.38	59.6	6	+ 3.830	+ 29 32 43.5	55.9	7	− 0.57
2567	Anonymous . . .	. .	6 28.13	69.1	2	4.150	+ 38 53 23.7	50.2	1	0.57
2568	Lacaille 2180 . . .	6.5	6 29.04	66.5	2	2.420	− 26 1 7.2	67.7	2	0.57
2569	Anonymous . . .	7.5	6 29.06	63.1	1	2.374	− 27 33 34.7	69.1	2	0.57
2570	71 Orionis	5.5	6 36.65	63.8	3	3.537	+ 19 11 58.5	68.6	2	0.58
2571	Anonymous . . .	6.5	6 7 8.82	66.8	4	+ 2.370	− 27 41 32.3	68.3	4	− 0.62
2572	Anonymous . . .	6.8	7 10.36	68.0	3	2.370	− 27 42 41.0	68.3	4	0.63
2573	Anonymous . . .	7.2	7 23.00	66.8	4	2.370	− 27 41 59.6	70.1	2	0.65
2574	Weisse (2) VI, 168 . .	8.0	7 27.04	62.3	3	4.231	+ 40 55 48.8	64.6	2	0.65
2575	Lacaille 2189 . . .	6.8	7 30.13	63.8	4	2.348	− 28 25 45.3	66.1	2	0.66
2576	Lacaille 2190 . . .	7.2	6 7 58.22	64.1	3	+ 2.482	− 23 49 45.8	64.1	2	− 0.70
2577	5 Monocerotis . . .	5.0	8 1.72	69.1	2	2.926	− 6 14 6.5	56.2	2	0.70
2578	Lacaille 2195 . . .	7.0	8 8.70	62.2	3	2.320	− 29 21 29.8	62.2	3	0.71
2579	O. Arg. N. 6682 . .	7.7	8 9.84	63.8	6	7.581	+ 73 29 35.5	65.0	3	0.71
2580	O. Arg. S. 4851 . . .	8.5	8 59.31	67.4	3	2.343	− 28 36 15.8	67.1	2	0.79
2581	Lacaille 2198 . . .	7.0	6 9 6.33	66.1	2	+ 2.314	− 29 33 53.1	65.6	2	− 0.80
2582	B. A. C. 2014 . . .	6.5*	9 11.19	69.6	2	4.014	+ 35 11 28.9	65.2	2	0.81
2583	*l* Orionis	5.0	9 23.54	65.5	2	3.307	+ 9 59 19.0	68.1	2	0.82
2584	O. Arg. S. 4861 . .	8.0	9 26.87	66.6	2	2.340	− 28 42 1.7	67.1	2	0.82
2585	Anonymous . . .	9.0	9 30.47	66.6	2	2.356	− 28 10 7.1	68.2	2	0.83
2586	B. A. C. 2021 . . .	5.5	6 9 31.66	69.1	2	+ 4.016	+ 35 15 28.9	65.2	2	− 0.83
2587	B. A. C. 2023 . . .	6.5	9 34.36	69.2	2	3.762	+ 27 15 36.0	58.1	2	0.84
2588	Weisse VI, 264 . . .	9.0	9 34.79	59.0	4	2.729	− 14 23 6.5	56.1	3	0.84
2589	Lacaille 2200 . . .	7.2	9 36.55	62.2	3	2.322	− 29 19 21.2	62.2	2	0.84
2590	Lalande 11959 . . .	7.0	10 4.84	69.6	2	4.134	+ 38 29 11.9	50.2	1	0.88

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			h. m. s.			″	° ′ ″			″
2591	B. A. C. 2027 . . .	6.6	6 10 33.78	63.1	2	+ 2.309	− 29 44 38.3	66.1	2	− 0.92
2592	Lacaille 2208 . . .	7.3	11 25.84	67.5	3	2.475	− 24 1 29.1	64.5	3	1.00
2593	Lacaille 2211 . . .	6.5	11 38.79	66.9	2	2.395	− 26 53 5.3	67.1	4	1.02
2594	Weisse VI, 334. . .	8.5	11 50.43	69.1	2	2.732	+ 44 28 13.1	65.2	2	1.03
2595	Weisse (2) VI, 301 . .	7.6	12 5.36	63.1	2	4.383	− 14 16 52.4	56.1	2	1.05
2596	Lalande 12053 . . .	7.5	6 12 9.72	65.6	2	+ 3.588	+ 21 8 46.5	68.4	4	− 1.06
2597	Weisse VI, 348. . .	8.0	12 13.37	62.4	3	2.731	− 14 18 27.2	56.1	2	1.07
2598	Anonymous . . .	. .	12 31.	. .	.	2.554	− 21 12 43.0	70.1	1	1.09
2599	Weisse (2) VI, 328 . .	7.5	12 43.75	68.5	2	3.906	+ 32 0 19.9	62.0	2	1.11
2600	Anonymous . . .	9.5	12 46.43	66.6	2	2.334	− 28 55 27.6	68.1	2	1.11
2601	B. A. C. 2038 . . .	7.0	6 12 52.06	60.4	3	+ 3.590	+ 21 11 23.5	66.2	2	− 1.13
2602	B. A. C. 2039 . . .	6.5	12 59.41	60.1	3	3.591	+ 21 15 29.8	66.7	2	1.14
2603	Anonymous . . .	8.3	13 12.	. .	.	2.884	+ 31 18 12.6	67.1	1	1.15
2604	Lacaille 2219 . . .	6.7	13 12.40	62.7	2	2.451	− 24 57 30.9	66.1	2	1.15
2605	Lacaille 2220 . . .	7.1	13 32.01	62.7	2	2.452	− 24 55 11.8	66.1	2	1.18
2606	O. Arg. S. 4961. . .	7.3	6 13 43.23	66.6	2	+ 2.334	− 28 57 34.5	68.1	3	− 1.20
2607	μ Geminorum. . . .	3.0*	14 29.44	59.6	99	3.627	+ 22 34 54.8	54.1	27	1.27
2608	Lacaille 2226 . . .	8.0	14 46.75	63.1	2	2.490	− 23 34 33.0	67.0	3	1.29
2609	Anonymous . . .	9.0	14 54.12	69.6	2	2.316	− 29 33	. .	.	1.30
2610	Anonymous . . .	8.1	14 54.59	69.6	2	2.316	− 29 33 17.1	65.1	2	1.30
2611	Lalande 12134 . . .	6.8	6 14 56.54	69.1	2	+ 4.092	+ 37 23 2.3	49.1	1	− 1.30
2612	Weisse VI, 446 . .	8.3	15 17.97	70.2	1	2.731	− 14 20 13.2	56.1	2	1.34
2613	Lacaille 2232 . . .	6.8	15 31.78	69.6	2	2.314	− 29 26 18.0	62.2	1	1.36
2614	Weisse (2) VI, 421 . .	9.3	15 59.05	62.2	2	3.381	+ 44 27 58.9	65.6	2	1.40
2615	Lalande 12173 . . .	7.0	16 6.70	69.1	2	4.118	+ 38 7 14.0	47.2	2	1.34
2616	8 Monocerotis . . .	5.5	6 16 21.03	66.6	2	+ 3.181	+ 4 39 37.3	66.8	4	− 1.43
2617	B. A. C. 2060 . . .	7.5	16 21.38	66.6	2	3.181	+ 4 39 49.3	68.1	2	1.43
2618	Lalande 12237 . . .	8.8	17 27.73	70.1	4	3.710	+ 25 35 6.9	57.5	2	1.53
2619	Lacaille 2254 . . .	6.8	18 6.30	66.6	2	2.309	− 29 47 27.6	66.1	2	1.58
2620	Anonymous . . .	. .	18 20.38	69.1	1	3.674	+ 24 18 9.3	57.0	3	1.60
2621	O. Arg. N. 6888 . .	7.7	6 18 17.09	69.1	2	+ 4.473	+ 46 25 58.5	65.2	2	− 1.60
2622	O. Arg. N. 6864 . .	9.0	18 40.02	63.0	1	8.612	+ 76 28 25.6	64.7	2	1.63
2623	Weisse VI, 544 . .	8.0	18 41.56	59.0	2	2.729	− 14 25 42.8	55.2	3	1.63
2624	O. Arg. S. 5082. . .	6.3	19 17.53	63.4	3	2.342	− 28 42 5.6	67.2	3	1.69
2625	O. Arg. N. 6886 . .	7.2	19 22.51	69.1	2	8.341	+ 75 48 34.2	66.1	2	1.68
2626	Weisse (2) VI, 533 . .	8.5	6 19 25.21	67.1	2	+ 3.675	+ 24 20 14.2	57.8	2	− 1.70
2627	48 Aurigæ	5.0	19 34.09	64.1	2	3.859	+ 30 34 28.7	68.0	2	1.71
2628	47 Aurigæ	6.0	19 35.37	60.1	2	4.489	+ 46 46 10.7	54.1	4	1.71
2629	Lacaille 2271 . . .	6.2	20 16.36	63.1	2	2.315	− 29 37 26.9	62.2	2	1.77
2630	Anonymous . . .	8.3	20 34.89	66.1	2	3.565	+ 20 19 25.8	67.1	2	1.80

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			h. m. s.			"	° ' "			"
2631	ν Geminorum. . . .	4.0	6 20 39.00	62.4	9	+ 3.564	+ 20 17 47.4	67.1	2	− 1.81
2632	Anonymous . . .	9.0	21 11.47	69.1	2	3.707	+ 25 31 8.1	63.1	2	1.85
2633	B. A. C. 2100 . . .	5.5	21 33.04	66.2	2	2.430	− 25 45 57.3	66.1	2	1.88
2634	11 Monocerotis, (1st *) .	6.9	22 1.77	64.8	4	2.910	− 6 56 46.1	65.7	2	1.93
2635	11 Monocerotis, (2d *) .	5.7	22 2.25	64.8	4	2.910	− 6 56 52.2	65.7	2	1.93
2636	Weisse (2) VI, 626. .	8.5*	6 22 8.02	59.1	2	+ 3.654	+ 23 37 42.4	56.1	2	− 1.93
2637	B. A. C. 2095 . . .	6.0	22 15.67	70.1	4	10.397	+ 79 42 13.0	66.6	8	1.95
2638	Weisse (2) VI, 631. .	8.0	22 17.05	69.1	2	3.707	+ 25 30 53.9	62.6	2	1.95
2639	Anonymous. . . .	. .	22 28.56	69.1	1	2.429	− 25 48	. .	.	1.96
2640	B. A. C. 2110 . . .	6.0*	23 19.	. .	.	3.921	+ 32 33 2.3	47.1	1	2.04
2641	Anonymous . . .	. .	6 23 26.32	70.1	2	+ 2.429	− 25 48	. .	.	− 2.05
2642	O. Arg. S. 5176. . .	8.0	23 27.20	69.1	1	2.429	− 25 47 47.5	67.7	4	2.05
2643	O. Arg. S. 5198. . .	8.5*	24 26.	. .	.	2.429	− 25 47 27.8	68.2	2	2.14
2644	O. Arg. S. 5199. . .	8.5	24 27.	. .	.	2.429	− 25 47 48.6	67.5	3	2.14
2645	O. Arg. N. 7006 . .	8.0	24 37.87	65.7	2	4.551	+ 48 3 6.0	65.6	2	2.15
2646	Lacaille 2306 . . .	7.2	6 24 42.69	63.6	2	+ 2.271	− 31 4 56.7	66.1	2	− 2.16
2647	Groombridge 1183. .	6.5	24 43.29	69.1	2	4.117	+ 38 10 35.9	46.3	2	2.16
2648	O. Arg. N. 7009 . .	7.7	24 59.72	66.1	2	4.655	+ 49 59 7.9	68.1	2	2.18
2649	B. A. C. 2127 . . .	6.7	25 13.68	63.4	3	2.375	− 27 40 27.8	65.1	2	2.20
2650	O. Arg. S. 5215. . .	9.0	25 13.77	66.6	2	2.307	− 29 55 54.8	68.6	2	2.20
2651	Anonymous . . .	8.2	6 25 44.40	65.2	2	+ 5.482	+ 61 8 11.0	61.3	5	− 2.25
2652	Anonymous . . .	7.7	25 48.15	69.6	4	4.103	+ 37 49 15.1	49.1	1	2.25
2653	Anonymous . . .	9.0	25 48.45	69.6	4	4.103	+ 37 49 20.6	49.1	1	2.25
2654	ξ^1 Canis Majoris . . .	4.3	26 1.41	63.1	3	2.499	− 23 19 13.9	65.2	2	2.27
2655	Weisse VI, 782. . .	8.5	26 5.41	61.6	2	2.722	− 14 44 29.8	66.1	2	2.28
2656	O. Arg. N. 7032 . .	8.2	6 26 21.20	63.0	2	+ 4.558	+ 48 12 44.6	66.1	2	− 2.30
2657	49 Aurigæ	5.0	26 22.92	59.1	2	3.782	+ 28 7 36.5	68.1	2	2.30
2658	Lalande 12557 . . .	7.8	26 27.45	69.1	3	3.684	+ 24 44 22.4	63.1	2	2.31
2659	O. Arg. S. 5251. . .	7.4	26 30.16	64.4	3	2.329	− 29 12 34.5	68.2	2	2.31
2660	Anonymous . . .	7.5	26 39.41	65.1	1	2.269	− 31 9 3.1	68.1	1	2.33
2661	Anonymous . . .	. .	6 26 46.	. .	.	+ 2.271	− 31 5 50.8	69.1	1	− 2.34
2662	B. A. C. 2139 . . .	5.5	26 55.23	69.6	2	4.130	+ 38 33 14.7	47.7	5	2.35
2663	Weisse VI, 809. . .	8.0	26 56.86	60.1	2	2.723	− 14 42 41.1	58.8	3	2.35
2664	Lacaille 2323 . . .	7.5	27 10.87	62.5	2	2.386	− 27 18 22.9	65.7	2	2.37
2665	Lalande 12614 . . .	7.1	27 46.70	64.3	5	3.466	+ 16 33 17.7	67.6	2	2.42
2666	23 Geminorum. . . .	6.5	6 27 55.67	69.1	2	+ 3.475	+ 16 54 24.2	69.1	1	− 2.43
2667	O. Arg. S. 5289. . .	7.0	28 1.20	64.7	3	2.418	− 26 13 32.8	68.0	2	2.45
2668	Weisse (2) VI, 809 . .	9.0	28 1.48	69.5	3	3.678	+ 24 32 22.5	57.0	3	2.45
2669	Weisse (2) VI, 826 . .	8.5	28 33.27	69.5	3	3.677	+ 24 30 38.3	57.0	3	2.49
2670	Weisse (2) VI, 838 . .	7.2	28 52.19	69.1	3	3.682	+ 24 42 10.5	62.6	2	2.52

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			h. m. s.			s.	° ′ ″			″
2671	51 Aurigæ	5.5*	6 28 57.15	60.6	2	+ 4.166	+ 39 30 35.0	60.1	4	— 2.53
2672	Anonymous.	7.3	29 31.16	65.1	2	2.307	— 29 59 2.3	68.1	2	2.58
2673	Lacaille 2342	7.7	29 32.38	67.2	3	2.433	— 25 43 49.9	66.1	2	2.58
2674	γ Geminorum.	2.0	29 37.44	63.4	107	3.465	+ 16 30 54.0	63.3	10	2.59
2675	Lalande 12678	7.5*	30 1.	. .	.	3.903	+ 32 4 48.2	69.2	2	2.62
2676	O. Arg. S. 2343, (1st *)	8.2	6 30 15.34	69.6	2	+ 2.482	— 24 0	. .	.	— 2.64
2677	Weisse (2) VI, 891.	9.0	30 16.87	68.1	4	3.465	+ 16 31 25.9	68.1	2	2.64
2678	O. Arg. S. 2343, (2d *)	8.0	30 17.44	69.4	3	2.482	— 24 0 23.6	64.1	1	2.64
2679	Lacaille 2355	7.5	30 40.96	64.1	5	2.346	— 28 43 23.5	66.8	3	2.68
2680	54 Aurigæ	6.0*	30 43.32	60.1	2	3.788	+ 28 22 56.6	54.2	2	2.68
2681	Weisse (2) VI, 909.	5.9	6 30 56.13	69.1	1	+ 3.682	+ 24 42 57.5	64.5	3	— 2.70
2682	Weisse (2) VI, 935.	7.8	31 33.82	64.1	7	3.656	+ 23 47 45.3	61.6	7	2.75
2683	Lacaille 2366	7.5	31 34.28	63.6	4	2.350	— 28 35 20.7	67.1	2	2.75
2684	Weisse (2) VI, 943.	8.5	31 55.33	64.5	5	3.655	+ 23 46 7.3	58.1	3	2.78
2685	O. Arg. S. 5410	8.0	32 26.26	64.6	2	2.378	— 27 40 44.3	67.6	2	2.83
2686	Lacaille 2372	7.0	6 32 29.24	67.1	2	+ 2.357	— 28 22 39.3	68.2	2	— 2.83
2687	O. Arg. S. 5415.	7.3	32 33.18	63.6	4	2.498	— 23 27 37.3	66.1	2	2.84
2688	Weisse VI, 990.	7.5	32 52.84	66.2	2	2.741	— 14 1 23.0	59.9	5	2.87
2689	55 Aurigæ	5.0*	32 53.82	46.1	2	4.379	+ 44 39 16.0	49.1	4	2.87
2690	O. Arg. S. 5434.	8.2	33 15.74	67.1	2	2.380	— 27 37 10.9	67.6	2	2.90
2691	B. A. C. 2185	5.0	6 33 16.06	69.1	2	+ 3.306	+ 10 1 18.3	65.2	2	— 2.90
2692	Lalande 12805	6.0	33 36.74	69.1	1	3.921	+ 32 41 19.9	47.1	1	2.93
2693	51 Cephei	5.0*	33 39.48	65.2	54	30.592	+ 87 14 54.1	55.7	122	2.94
2694	Lalande 12798	6.5	33 43.16	69.6	2	4.079	+ 37 16 45.5	47.1	1	2.94
2695	O. Arg. S. 5450.	7.0	33 46.82	65.8	4	2.496	— 23 34 14.8	67.7	2	2.94
2696	Anonymous	7.0	6 33 56.03	67.2	2	+ 2.360	— 28 18 59.9	68.1	2	— 2.96
2697	O. Arg. S. 5463.	8.5	34 6.54	67.1	2	2.495	— 23 34 43.1	68.4	4	2.97
2698	Lacaille 2388	6.1	34 20.95	64.1	3	2.298	— 30 20 20.9	68.1	1	2.99
2699	Weisse (2) VI, 1027	6.5	34 34.78	69.1	2	4.378	+ 44 38 26.1	46.1	2	3.01
2700	Lalande 12849	7.0	34 46.53	69.1	1	4.041	+ 36 14 35.9	47.1	1	3.03
2701	Lacaille 2392	6.7	6 35 3.14	66.2	2	+ 2.365	— 28 8 12.5	65.2	3	— 3.06
2702	ε Geminorum.	5.0	35 19.05	61.7	7	3.696	+ 25 15 52.5	66.1	2	3.08
2703	Weisse VI, 1069	7.7	35 25.81	69.1	2	2.734	— 14 20 36.3	63.1	2	3.09
2704	Anonymous	9.0	35 40.82	65.1	1	3.655	+ 23 49	. .	.	3.11
2705	Lacaille 2399	7.0	35 46.72	69.1	2	2.294	— 30 30 55.5	65.6	2	3.12
2706	28 Geminorum.	6.0*	6 35 53.11	66.0	2	+ 3.807	+ 29 6 29.6	54.8	4	— 3.13
2707	O. Arg. S. 5519.	7.5	36 4.18	67.1	2	2.377	— 27 45 55.9	68.0	2	3.14
2708	O. Arg. S. 5522.	8.0*	36 9.	. .	.	2.381	— 27 36 36.0	69.1	2	3.15
2709	Anonymous	7.7	36 36.38	64.1	1	2.503	— 23 19	. .	.	3.19
2710	56 Aurigæ	6.0	36 38.62	69.1	2	4.334	+ 43 42 42.9	46.2	1	3.19

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			h. m. s.			″	° ′ ″			″
2711	Anonymous	8.5	6 36 40.18	69.1	2	+ 4.334	+ 43 43 31.4	46.2	1	− 3.19
2712	O. Arg. S. 5543	7.7	36 40.61	69.6	2	2.506	− 23 12 58.2	69.1	2	3.19
2713	Anonymous	7.7	37 2.26	64.1	2	2.262	− 31 31 54.9	68.7	2	3.23
2714	Anonymous	9.0	37 9.18	65.1	1	3.655	+ 23 50 42.2	69.2	2	3.24
2715	ξ Geminorum	5.0	37 25.90	65.1	3	3.377	+ 13 2 31.5	69.4	3	3.26
2716	Anonymous	8.0	6 37 34.43	69.1	2	+ 2.729	− 14 33 28.2	56.2	3	− 3.27
2717	O. Arg. S. 5574	7.7	37 38.68	66.6	2	2.338	− 29 6 6.1	69.8	3	3.28
2718	Lacaille 2413	6.5	37 38.89	66.7	2	2.364	− 28 12 59.1	62.6	2	3.28
2719	Anonymous	. .	37 44.35	69.6	2	4.129	+ 38 42 15.0	69.2	2	3.29
2720	Lalande 12951	7.2	37 46.73	69.6	2	4.128	+ 38 40 53.1	61.5	3	3.29
2721	Weisse (2) VI, 1163	8.8	6 38 8.83	68.1	2	+ 3.658	+ 23 58 29.0	69.2	2	− 3.32
2722	Weisse (2) VI, 1198	8.5	38 18.11	69.1	2	2.729	− 14 35 11.7	56.2	3	3.34
2723	Lacaille 2420	7.5	38 19.30	63.2	1	2.381	− 27 28	. .	.	3.34
2724	Weisse (2) VI, 1172	7.9	38 19.69	65.2	3	3.654	+ 23 49 27.7	66.1	3	3.34
2725	Anonymous	8.6	38 35.88	68.2	2	3.378	+ 13 5 13.8	69.1	2	3.36
2726	Weisse (2) VI, 1171	8.1	6 38 42.24	69.1	2	+ 4.344	+ 43 59 1.4	46.1	2	− 3.37
2727	α Canis Majoris	1.0	38 58.84	54.9	210	2.681	− 16 31 33.6	57.8	109	3.39
2728	Weisse (2) VI, 1189	8.0*	39 15.49	46.1	3	4.332	+ 43 43 39.8	46.1	2	3.42
2729	O. Arg. S. 5615	6.3	39 16.72	63.8	3	2.394	− 27 12 37.8	66.1	2	3.42
2730	B. A. C. 2210	5.5	39 34.96	67.6	2	8.844	+ 77 8 45.0	68.2	2	3.45
2731	Weisse VI, 1199	8.5	6 39 38.71	69.1	2	+ 2.730	− 14 33 54.8	56.2	3	− 3.45
2732	Lacaille 2434	7.0*	39 40.82	69.1	2	2.298	− 30 26 35.9	65.2	2	3.46
2733	Anonymous	. .	39 50.01	70.1	1	2.265	− 31 30 38.8	67.2	1	3.47
2734	Anonymous	9.0	40 20.36	69.1	2	3.647	+ 23 36 30.6	67.1	2	3.52
2735	11 Canis Majoris	6.0*	40 27.96	60.1	2	2.737	− 14 16 42.6	59.0	7	3.52
2736	O. Arg. S. 5654	8.4	6 40 28.50	64.0	2	+ 2.352	− 28 40 58.5	68.2	2	− 3.52
2737	O. Arg. S. 5665	8.2	40 50.14	64.1	3	2.330	− 29 24 49.6	68.6	2	3.55
2738	O. Arg. N. 7251	8.6	40 50.44	65.1	2	9.151	+ 77 47 7.7	64.4	2	3.56
2739	O. Arg. N. 7274	8.0	40 54.37	62.4	3	4.765	+ 52 8 55.3	68.6	2	3.56
2740	Weisse (2) VI, 1254	8.2	41 45.03	69.1	2	4.334	+ 43 49 43.5	46.1	2	3.63
2741	Lacaille 2448, (1st *)	7.8	6 41 56.84	66.1	4	+ 2.361	− 28 24 29.3	69.1	2	− 3.65
2742	Lacaille 2448, (2d *)	8.5	41 57.88	67.1	3	2.360	− 28 25 21.3	69.1	2	3.65
2743	O. Arg. S. 5704	8.5	42 19.78	64.1	3	2.420	− 26 22 57.9	68.1	1	3.68
2744	O. Arg. N. 7298	7.5	42 25.41	62.2	1	4.735	+ 51 40 51.3	68.9	3	3.69
2745	O. Arg. N. 7299	8.0	42 28.94	66.1	2	4.742	+ 51 48 28.9	63.2	4	3.70
2746	O. Arg. N. 7308	9.0	6 42 51.88	62.2	1	+ 4.733	+ 51 39 30.6	68.2	1	− 3.73
2747	O. Arg. S. 5718	8.4	42 59.34	71.1	2	2.396	− 27 13 34.8	71.2	1	3.74
2748	Lacaille 2454	7.0	43 5.22	63.1	2	2.372	− 28 3 35.7	68.7	2	3.75
2749	O. Arg. S. 5725	8.6	43 6.59	66.6	2	2.367	− 28 12 52.7	68.7	2	3.75
2750	Anonymous	7.3	43 16.	. .	.	2.356	− 28 35 39.5	70.1	2	3.76

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2751	59 Aurigæ	6.0*	6 43 23.12	61.1	2	+ 4.137	+ 39 1 53.3	56.8	4	− 3.77
2752	O. Arg. S. 5732. . .	7.5	43 24.90	64.6	2	2.326	− 29 35 18.3	68.6	2	3.77
2753	θ Geminorum. . . .	4.5	43 33.50	65.6	2	3.962	+ 34 7 30.2	58.2	4	3.79
2754	60 Aurigæ	6.2	43 37.13	68.7	2	4.120	+ 38 36 32.4	46.2	3	3.79
2755	Anonymous . . .	7.0	43 49.09	64.1	1	2.357	− 28 34	. .	.	3.81
2756	Lacaille 2461 . . .	7.3	6 43 49.68	63.3	3	+ 2.488	− 23 59 6.0	64.0	2	− 3.81
2757	Lacaille 2462 . . .	6.2	43 55.41	63.3	3	2.490	− 23 55 1.6	64.0	2	3.82
2758	O. Arg. S. 5745. . .	7.0	43 56.24	65.0	7	2.360	− 28 29 42.3	69.3	4	3.82
2759	Anonymous . . .	7.5	43 59.27	63.2	1	2.396	− 27 15	. .	.	3.82
2760	Anonymous . . .	. .	44 4.	. .	.	2.357	− 28 34 6.3	70.1	1	3.83
2761	Anonymous . . .	6.5	6 44 18.23	67.1	2	+ 2.240	− 32 23 2.8	69.1	2	− 3.85
2762	61 Aurigæ	6.0*	44 20.96	68.7	2	4.122	+ 38 40 20.7	46.2	2	3.86
2763	Weisse VI, 1351 . .	8.0	44 24.77	60.1	4	2.731	− 14 34 51.0	58.4	4	3.86
2764	B. A. C. 2244 . . .	7.5	44 30.08	69.7	6	2.399	− 27 10 28.0	69.2	2	3.87
2765	κ Canis Majoris . . .	5.0	44 36.73	67.1	2	2.241	− 32 20 58.2	69.1	2	3.88
2766	O. Arg. S. 5772. . .	9.0	6 44 44.77	67.4	4	+ 2.400	− 27 8 51.8	68.7	2	− 3.89
2767	Lacaille 2473 . . .	6.8	44 54.87	63.2	2	2.443	− 25 37 5.0	68.1	2	3.90
2768	Anonymous . . .	. .	44 55.65	61.2	1	2.399	− 27 10	. .	.	3.90
2769	Lacaille 2480 . . .	6.8	45 3.30	66.6	2	2.197	− 33 43 32.6	66.7	2	3.92
2770	B. A. C. 2251 . . .	6.5	45 5.82	64.6	2	2.267	− 31 32 44.1	69.7	2	3.92
2771	Anonymous . . .	8.5	6 45 8.18	59.0	2	+ 2.735	− 14 24	. .	.	− 3.92
2772	Anonymous . . .	8.0	45 8.88	64.6	2	2.267	− 31 32 24.0	69.7	2	3.92
2773	Anonymous . . .	9.0	45 19.23	68.1	2	2.304	− 30 21	. .	.	3.94
2774	Anonymous . . .	8.4	45 28.39	64.8	3	2.359	− 28 32 11.5	69.2	1	3.95
2775	O. Arg. S. 5790. . .	8.0	45 34.70	64.6	2	2.401	− 27 5 52.2	68.2	2	3.96
2776	Anonymous . . .	9.5	6 45 35.64	67.1	2	+ 2.359	− 28 32 39.2	70.1	2	− 3.96
2777	Anonymous. . . .	9.5	45 35.87	67.1	2	2.358	− 28 34 16.7	69.8	3	3.96
2778	Groombridge 1241 . .	7.0*	45 58.	. .	.	4.099	+ 38 5 17.6	46.2	3	4.00
2779	O. Arg. S. 5809. . .	6.5	45 58.29	66.2	2	2.422	− 26 22 44.1	66.2	2	4.00
2780	Anonymous . . .	9.0	46 5.	. .	.	2.445	− 25 35 25.3	70.1	1	4.01
2781	O. Arg. S. 5814. . .	6.7	6 46 10.32	66.2	1	+ 2.421	− 26 25 3.2	66.2	2	− 4.01
2782	Anonymous . . .	8.0	46 46.38	64.8	3	2.308	− 30 15 42.0	67.7	2	4.06
2783	Anonymous . . .	9.0	46 47.04	67.1	2	2.362	− 28 28 3.4	67.1	1	4.07
2784	Lacaille 2494 . . .	6.8	46 54.83	70.1	2	2.197	− 33 45 4.9	68.6	2	4.08
2785	Anonymous . . .	8.4	47 8.08	69.1	2	2.735	− 14 25 59.1	56.1	2	4.10
2786	16 Lyncis	6.0*	6 47 23.80	59.6	4	+ 4.393	+ 45 16 16.0	58.1	6	− 4.12
2787	Lacaille 2496 . . .	7.5	47 35.47	70.0	2	2.479	− 24 21 58.5	66.1	3	4.13
2788	θ Canis Majoris . . .	5.0*	47 41.12	62.0	5	2.797	− 11 51 59.6	68.1	2	4.14
2789	Anonymous . . .	. .	47 42.	. .	.	2.483	− 24 14 45.5	69.2	1	4.14
2790	Anonymous . . .	7.5	47 52.79	62.8	3	2.484	− 24 12 53.2	68.8	3	4.16

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2791	B. A. C. 2266	6.7	6 47 59.77	64.7	10	+ 2.366	− 28 21 10.3	70.1	5	− 4.17
2792	O. Arg. S. 5864	7.5	48 1.54	62.2	2	2.488	− 24 3 31.7	65.6	2	4.17
2793	Lalande 13393	5.0	48 8.31	62.8	3	2.480	− 24 21 58.3	65.5	2	4.18
2794	o^1 Canis Majoris	4.0	48 19.44	62.5	5	2.490	− 24 0 42.1	65.6	2	4.20
2795	Lacaille 2507	6.6	48 23.57	63.1	2	2.497	− 23 45 20.0	69.6	2	4.20
2796	Anonymous	8.5	6 48 42.	. .	.	+ 2.354	− 28 46 20.8	70.1	1	− 4.23
2797	Anonymous	8.0	48 49.	. .	.	2.021	− 38 48 29.3	70.1	1	4.23
2798	Anonymous	8.0	48 51.49	68.1	3	2.354	− 28 47 23.7	68.2	1	4.24
2799	O. Arg. S. 5887	8.0	48 57.81	65.1	1	2.396	− 27 23 5.8	69.6	2	4.25
2800	Lacaille 2519	7.3	49 2.75	64.3	8	2.268	− 31 37 39.2	68.1	1	4.26
2801	62 Aurigæ	5.8	6 49 30.16	68.8	3	+ 4.101	+ 38 14 26.6	47.1	2	− 4.30
2802	Anonymous	8.0	49 32.	. .	.	2.272	− 31 31 36.7	69.1	1	4.32
2803	Anonymous	6.5	49 42.	. .	.	2.019	− 38 53 38.9	70.1	1	4.32
2804	O. Arg. S. 5906	7.0	49 45.25	63.7	5	2.353	− 28 51	. .	.	4.32
2805	Lacaille 2526	7.2	50 9.13	63.1	2	2.454	− 25 20 26.0	68.6	2	4.35
2806	Lacaille 2528	6.5	6 50 37.14	64.6	11	+ 2.269	− 31 36 39.3	68.1	2	− 4.39
2807	O. Arg. N. 7442	8.5	50 46.34	60.1	2	5.406	+ 60 47 50.1	55.8	2	4.41
2808	Lalande 13427	8.0	50 56.48	71.1	2	4.550	+ 48 35 1.3	71.2	2	4.42
2809	Anonymous	7.8	51 7.79	63.2	1	2.470	− 24 47 15.1	67.2	2	4.44
2810	Weisse VI, 1579	8.7	51 27.24	69.4	3	2.729	− 14 45 25.2	63.6	4	4.46
2811	Weisse VI, 1587	9.0	6 51 37.09	69.4	3	+ 2.728	− 14 45 58.3	71.1	2	− 4.48
2812	Anonymous.	7.0	51 38.34	62.1	1	2.297	− 30 44	. .	.	4.48
2813	Weisse VI, 1589	8.5*	51 38.89	64.1	2	2.732	− 14 38 6.3	55.9	3	4.48
2814	Anonymous.	8.0	51 39.	. .	.	2.298	− 30 42 39.8	69.7	2	4.48
2815	O. Arg. S. 5961	6.3	52 6.92	63.7	3	2.398	− 27 21 11.7	69.0	2	4.52
2816	Lalande 13504	8.6	6 52 19.67	62.5	3	+ 3.670	+ 24 40 19.1	60.2	4	− 4.54
2817	Lacaille 2543	5.3	52 30.23	63.1	3	2.409	− 26 58 41.6	64.2	2	4.55
2818	Weisse VI, 1618	7.5	52 40.42	59.1	2	2.729	− 14 46 25.7	59.0	5	4.57
2819	Lacaille 2544	7.5	52 45.65	64.0	3	2.501	− 23 41 37.0	68.6	2	4.57
2820	Lacaille 2549	7.0	52 45.87	64.2	3	2.303	− 30 33 30.2	68.1	2	4.57
2821	ε Canis Majoris	2.1*	6 53 7.48	56.3	118	+ 2.357	− 28 47 3.1	48.9	53	− 4.61
2822	Anonymous	7.5	53 21.78	65.0	1	2.435	− 26 4 32.8	68.6	2	4.63
2823	Lacaille 2553	6.0	53 22.25	64.1	4	2.296	− 30 48 37.3	66.2	2	4.63
2824	Anonymous	7.5	53 30.46	69.1	2	2.728	− 14 49 49.6	56.1	2	4.64
2825	O. Arg. S. 6004	8.0*	53 34.76	64.7	3	2.358	− 28 46	. .	.	4.65
2826	ω Geminorum.	6.0*	6 53 52.90	61.4	7	+ 3.662	+ 24 24 39.5	64.4	4	− 4.67
2827	Lacaille 2558	7.0	54 0.78	62.1	1	2.390	− 27 42 0.8	65.1	2	4.68
2828	O. Arg. S. 6022	7.0	54 12.06	62.6	2	2.375	− 28 12 28.3	65.6	2	4.70
2829	Anonymous	7.9	54 14.00	70.1	2	2.502	− 23 41 36.0	67.2	1	4.70
2830	Lacaille 2562	7.0	54 16.25	67.2	2	2.336	− 29 30 41.4	69.5	3	4.71

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2831	Lalande 13569 . . .	6.2	6 54 39.55	69.1	2	+ 4.034	+ 36 30 50.0	47.1	2	− 4.74
2832	Lacaille 2566 . . .	6.8	54 48.43	64.3	4	2.293	− 30 56 59.9	69.4	3	4.75
2833	Anonymous . . .	8.1	54 52.74	64.3	4	2.295	− 30 52 33.8	69.1	2	4.77
2834	Lacaille 2571 . . .	6.9	55 10.49	62.8	2	2.373	− 28 17 37.3	66.1	2	4.78
2835	Lacaille 2570 . . .	4.2	55 20.68	63.1	2	2.466	− 25 1 14.9	66.2	2	4.80
2836	Lalande 13601 . . .	7.5	6 55 25.46	69.6	2	+ 4.006	+ 35 44 4.4	47.1	2	− 4.81
2837	Anonymous . . .	8.3	55 45.	. .	.	2.310	− 30 25 47.5	70.2	1	4.83
2838	Anonymous . . .	9.0	55 47.	. .	.	2.310	− 30 25 0.8	69.7	2	4.83
2839	Weisse (2) VI, 1675 .	8.0	55 47.19	70.1	2	3.565	+ 20 47 53.5	67.1	2	4.83
2840	O. Arg, S. 6073. . .	7.1	55 47.42	64.2	1	2.308	− 30 28 9.5	68.8	3	4.83
2841	ζ Geminorum. . . .	4.0	6 55 48.23	61.7	22	+ 3.564	+ 20 46 18.3	61.1	4	− 4.83
2842	Anonymous . . .	8.3	55 51.	. .	.	2.310	− 30 26 19.1	69.2	1	4.84
2843	Anonymous . . .	9.0	55 53.	. .	.	2.310	− 30 25 32.9	69.2	1	4.84
2844	Lacaille 2577 . . .	6.0	55 56.11	67.1	3	2.410	− 27 1 31.4	65.2	2	4.84
2845	22 Canis Majoris . . .	5.0	56 8.65	69.1	1	2.390	− 27 44 12.3	66.5	2	4.86
2846	44 Geminorum. . . .	6.2	6 56 52.58	64.3	5	+ 3.618	+ 22 50 36.4	59.6	8	− 4.93
2847	Weisse (2) VI, 1704 .	8.0	57 0.97	69.1	2	4.284	+ 43 4 36.2	46.2	2	4.94
2848	17 Lyncis, (1st *) . . .	6.8	57 4.40	65.4	4	5.410	+ 61 0 23.0	61.7	6	4.94
2849	17 Lyncis, (2d *) . . .	8.5	57 11.42	64.1	3	5.405	+ 60 57 28.1	66.1	2	4.95
2850	γ Canis Majoris . . .	3.6	57 25.53	61.4	61	2.714	− 15 25 46.5	65.6	2	4.97
2851	Weisse (2) VI, 1728 .	9.0	6 57 41.53	69.5	3	+ 4.278	+ 42 57 4.0	53.4	3	− 5.00
2852	Weisse (2) VI, 1747 .	8.3	57 51.68	65.1	1	3.619	+ 22 53 42.6	68.1	2	5.01
2853	O. Arg. S. 6164. . .	7.0	58 57.34	67.1	2	2.309	− 30 33 5.3	68.1	2	5.10
2854	Piazzi VI, 328 . . .	8.0*	59 10.41	64.1	2	2.734	− 14 39 43.9	55.9	6	5.12
2855	B. A.C. 2331 . . .	6.0	7 0 23.92	61.2	2	3.828	+ 30 21 58.7	66.7	2	5.22
2856	Lacaille 2610 . . .	6.2	7 0 36.60	64.0	2	+ 2.313	− 30 26 36.6	66.6	2	− 5.24
2857	Lacaille 2615 . . .	5.0	1 5.75	68.7	2	2.478	− 24 44 46.2	66.1	2	5.30
2858	O. Arg. S. 6232. . .	7.2	1 19.66	66.6	2	2.431	− 26 26 27.5	68.1	2	5.30
2859	(* 79) Washington . .	7.8	1 19.81	63.9	12	3.608	+ 22 35 6.3	65.2	2	5.30
2860	B. A. C. 2326 . . .	4.8	1 22.91	65.7	2	13.093	+ 82 40 5.1	64.3	4	5.31
2861	Lacaille 2617 . . .	6.2	7 1 31.52	63.0	2	+ 2.508	− 23 37 28.3	67.1	2	− 5.32
2862	Anonymous . . .	8.0	1 46.07	67.6	2	2.440	− 26 7 44.1	68.1	1	5.34
2863	Lacaille 2623 . . .	8.0	1 54.38	65.1	4	2.440	− 26 8 33.3	69.1	2	5.35
2864	Anonymous. . . .	. .	1 57.39	69.1	1	2.735	− 14 41	. .	.	5.36
2865	Anonymous . . .	9.0	1 57.68	69.1	1	2.442	− 26 2 39.7	69.2	2	5.36
2866	Weisse (2) VI, 1894 .	7.5*	7 1 58.09	48.1	2	+ 4.319	+ 44 4 8.0	48.2	4	− 5.36
2867	Anonymous . . .	8.5	2 1.48	69.1	1	2.735	− 14 40 2.3	61.8	5	5.36
2868	Anonymous . . .	9.2	2 8.85	69.1	1	2.734	− 14 41 18.6	70.2	2	5.37
2869	τ Geminorum. . . .	5.0*	2 13.49	61.0	8	3.830	+ 30 28 13.7	60.0	5	5.38
2870	O. Arg. S. 6262. . .	8.5	2 19.93	65.1	2	2.442	− 26 3 47.7	68.6	2	5.39

Number.	Name of Star.	Magnitude.	Mean Right Ascension, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.	Mean Declination, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.
			h. m. s.			″	° ′ ″			″
2871	B. A. C. 2341 . . .	5.5*	7 2 27.81	60.8	3	+ 4.700	+ 51 39 20.8	57.4	4	− 5.40
2872	O. Arg. S. 6270 . . .	7.0	2 36.70	62.1	1	2.503	− 23 51 27.1	65.0	2	5.41
2873	Anonymous . . .	8.5	2 36.93	69.2	1	2.734	− 14 41	. .	.	5.41
2874	Anonymous . . .	8.4	2 38.32	68.1	3	2.293	− 31 11 24.7	69.6	2	5.41
2875	δ Canis Majoris . . .	3.0	2 41.99	66.3	18	2.439	− 26 10 24.7	65.8	3	5.42
2876	Lacaille 2637 . . .	7.3	7 2 49.50	67.1	2	+ 2.293	− 31 11 22.3	69.6	2	− 5.43
2877	Lalande 13873 . . .	7.0	2 57.36	69.2	2	4.019	+ 36 21 15.7	49.1	1	5.44
2878	Lacaille 2634 . . .	6.2	2 58.92	64.2	5	2.504	− 23 49 20.7	65.0	2	5.44
2879	Weisse VII, 63 . . .	8.5	3 14.07	61.0	1	2.738	− 14 33 40.7	69.7	2	5.46
2880	Σ Cat. Gen. 825, (1st *) .	8.0	3 36.76	62.5	5	3.605	+ 22 30 26.4	65.2	2	5.49
2881	Σ Cat. Gen. 825, (2d *) .	8.0	7 3 37.12	62.6	2	+ 3.605	+ 22 30 34.4	65.8	3	− 5.50
2882	O. Arg. S. 6311 . .	8.5	3 52.43	66.9	2	2.507	− 23 43 4.4	66.2	2	5.52
2883	O. Arg. N. 7623 . .	7.0	3 53.33	64.1	3	9.394	+ 78 30 23.1	65.4	2	5.52
2884	48 Geminorum. . . .	6.0	3 55.86	65.1	2	3.654	+ 24 21 32.4	68.6	2	5.52
2885	Lacaille 2641 . . .	7.0	3 56.89	68.6	4	2.472	− 25 0 26.0	70.2	2	5.53
2886	Anonymous . . .	. .	7 3 58.	. .	.	+ 2.473	− 24 58 52.1	70.1	1	− 5.53
2887	Weisse VII, 93 . . .	8.0	3 58.50	62.4	3	2.738	− 14 32 27.7	63.4	4	5.53
2888	Anonymous . . .	. .	3 58.68	65.1	1	2.477	− 24 51	. .	.	5.53
2889	O. Arg. S. 6317 . .	8.4	3 58.83	70.1	2	2.473	− 24 59 2.9	70.5	3	5.53
2890	Anonymous . . .	8.2	4 18.18	66.1	2	4.239	+ 42 14 52.5	67.2	1	5.55
2891	Lacaille 2643 . . .	7.0	7 4 28.18	62.7	4	+ 2.374	− 28 31 20.8	65.6	2	− 5.56
2892	Lacaille 2647 . . .	4.2	4 42.01	63.7	3	2.410	− 27 15 55.4	69.2	2	5.59
2893	22 Monocerotis . . .	5.0	4 42.88	45.8	1	3.066	− 0 15 49.1	69.2	2	5.59
2894	O. Arg. S. 6343 . .	7.3	5 6.02	67.0	2	2.318	− 30 26 10.8	68.1	1	5.62
2895	Rumker 2131 . . .	8.9	5 10.09	62.2	1	3.511	+ 18 53 0.3	70.2	2	5.63
2896	Anonymous . . .	8.2	7 5 14.	. .	.	+ 2.733	− 14 47 11.5	70.2	1	− 5.63
2897	51 Geminorum. . . .	5.0*	5 19.83	60.9	5	3.450	+ 16 23 34.3	56.7	5	5.64
2898	Weisse (2) VII, 135 .	8.5	5 23.22	71.1	2	3.677	+ 25 14 53.3	71.2	2	5.64
2899	O. Arg. S. 6364 . .	8.8	5 39.08	69.6	2	2.508	− 23 44 25.0	66.2	2	5.67
2900	Weisse VII, 164 . .	8.5	5 43.04	69.4	3	2.739	− 14 34 11.9	56.1	1	5.67
2901	B. A. C. 2363 . . .	6.5	7 5 53.80	61.2	2	+ 3.668	+ 24 56 47.3	70.7	2	− 5.69
2902	Weisse (2) VII, 153 .	7.3	6 4.45	63.8	4	4.233	+ 42 10 24.6	64.7	2	5.70
2903	Anonymous . . .	. .	6 6.	. .	.	4.232	+ 42 9 16.0	62.2	1	5.70
2904	Anonymous . . .	8.2	6 8.07	64.6	2	2.746	− 14 15 34.8	69.1	2	5.71
2905	Lacaille 2655 . . .	7.0	6 27.19	63.8	5	2.416	− 27 6 8.9	62.2	3	5.73
2906	26 Canis Majoris . . .	5.5	7 6 28.44	66.7	2	+ 2.455	− 25 42 38.6	66.2	2	− 5.73
2907	Anonymous . . .	9.0	6 30.	. .	.	2.743	− 14 23 11.9	70.2	1	5.74
2908	Anonymous . . .	8.0	6 37.91	69.7	2	2.736	− 14 39 0.2	56.2	3	5.75
2909	B. A. C. 2371 . . .	6.9	6 40.52	62.2	3	2.315	− 30 35 24.7	68.2	2	5.75
2910	Lacaille 2659 . . .	6.5	6 46.55	63.4	4	2.412	− 27 14 29.5	69.1	2	5.76

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			h. m. s.			"	° ' "			"
2911	Weisse VII, 196 . .	8.0	7 6 54.02	64.5	2	+ 2.744	− 14 20 44.2	70.2	1	− 5.77
2912	O. Arg. N. 7681 . .	8.6	7 10.17	64.8	4	9.746	+ 79 8 34.7	63.5	3	5.79
2913	53 Geminorum. . . .	6.0*	7 12.38	64.6	2	3.756	+ 28 8 12.5	69.7	2	5.80
2914	O. Arg. S. 6431. . .	6.1	7 58.11	63.6	5	2.417	− 27 7 9.7	64.5	4	5.86
2915	Anonymous . . .	8.5	8 2.28	60.3	4	2.746	− 14 19 16.1	68.1	3	5.87
2916	O. Arg. S. 6442. . .	9.0	7 8 14.67	68.1	2	+ 2.420	− 27 3 24.1	69.1	1	− 5.88
2917	Anonymous. . . .	8.4	8 21.04	68.7	2	4.215	+ 41 47 56.5	46.2	1	5.89
2918	B. A. C. 2383 . . .	7.0*	8 22.74	66.2	2	3.721	+ 26 56 15.5	65.6	2	5.90
2919	Anonymous. . . .	7.7	8 29.08	69.1	1	4.092	+ 38 36 34.5	46.2	5	5.90
2920	27 Canis Majoris . . .	4.5*	8 32.96	66.0	2	2.446	− 26 6 48.1	66.1	2	5.91
2921	Weisse VII, 250 . .	7.4	7 8 44.75	60.3	4	+ 2.745	− 14 22 7.3	56.4	5	− 5.92
2922	Anonymous . . .	8.5	9 11.	. .	.	2.748	− 14 15 18.2	70.2	1	5.96
2923	B. A. C. 2393 . . .	6.5*	9 11.75	67.1	2	2.427	− 26 47 47.7	68.1	2	5.96
2924	B. A. C. 2394 . . .	7.4	9 12.24	67.1	2	2.323	− 30 24 57.1	66.6	2	5.96
2925	Weisse VII, 274 . .	7.5	9 26.79	66.9	4	2.747	− 14 15 59.2	70.2	1	5.98
2926	O. Arg. N. 7753 . .	8.7	7 9 36.37	61.1	3	+ 5.304	+ 60 14 28.5	63.2	2	− 6.00
2927	Anonymous . . .	8.3	9 40.32	70.0	1	2.518	− 23 27 17.3	69.1	1	6.00
2928	Weisse VII, 283 . .	7.6	9 41.50	69.1	3	2.748	− 14 15 57.0	53.5	3	6.00
2929	O. Arg. S. 6490. . .	7.3	9 44.44	63.8	3	2.390	− 28 7 20.3	69.1	2	6.01
2930	Weisse VII, 290 . .	9.0	9 51.13	69.1	1	2.739	− 14 36 47.6	62.7	2	6.02
2931	Lacaille 2684 . . .	7.0	7 9 54.87	70.0	1	+ 2.518	− 23 29 49.7	66.6	2	− 6.02
2932	B. A. C. 2399 . . .	5.5	9 56.02	63.7	2	2.322	− 30 26 38.5	66.6	2	6.02
2933	Lalande 14120 . . .	7.0	9 59.58	69.1	1	4.030	+ 36 55 33.9	49.2	1	6.03
2934	47 Camelopardi . . .	7.0	10 0.23	61.2	3	5.294	+ 60 9 20.5	56.5	3	6.03
2935	λ Geminorum. . . .	5.5	10 2.75	63.3	13	3.457	+ 16 47 19.7	66.1	1	6.03
2936	Weisse VII, 300 . .	9.0	7 10 7.44	69.1	2	+ 2.739	− 14 37 46.0	56.0	5	− 6.04
2937	B. A. C. 2320 . . .	6.0*	10 8.84	62.8	9	77.792	+ 89 1 20.3	64.4	2	6.04
2938	Anonymous. . . .	8.5	10 26.65	62.2	1	2.382	− 28 25	. .	.	6.06
2939	Lacaille 2695 . . .	8.5	10 40.65	65.1	2	2.331	− 30 11	. .	.	6.09
2940	Weisse VII, 316 . .	7.3	10 42.19	64.1	2	2.740	− 14 36 5.3	54.7	7	6.09
2941	Weisse (2) VII, 327 .	7.8	7 11 1.70	65.2	2	+ 3.594	+ 22 17	. .	.	− 6.12
2942	O. Arg. N. 7755 . .	8.0	11 9.48	64.1	3	9.600	+ 78 57 49.9	63.9	2	6.13
2943	Weisse VII, 320 . .	9.0	11 10.10	67.8	3	3.345	+ 12 5 34.4	57.1	2	6.13
2944	Anonymous . . .	8.5	11 22.99	69.7	2	2.740	− 14 36 16.9	56.2	3	6.15
2945	Anonymous. . . .	7.0	11 29.86	68.1	2	2.352	− 29 28 54.5	69.6	2	6.16
2946	O. Arg. S. 6553. . .	6.5	7 11 32.62	65.1	1	+ 2.318	− 30 38 50.3	68.2	1	− 6.16
2947	O. Arg. S. 6554. . .	8.0	11 32.64	65.1	1	2.318	− 30 39 29.3	68.2	1	6.16
2948	O. Arg. S. 6552. . .	8.0	11 33.30	66.7	2	2.385	− 28 21 6.9	66.1	2	6.16
2949	Anonymous. . . .	. .	11 44.	. .	.	4.202	+ 41 36 49.2	46.2	1	6.17
2950	δ Geminorum. . . .	3.4*	11 45.57	56.4	131	3.592	+ 22 14 11.3	50.6	65	6.18

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			h. m. s.			″	° ′ ″			″
2951	Anonymous. . . .	. .	7 11 50.32	71.2	1	+ 4.215	+ 41 56 7.5	58.2	2	− 6.18
2952	Anonymous. . . .	8.5	12 4.	. .	.	3.671	+ 25 13 56.4	70.2	1	6.20
2953	Anonymous . . .	9.0	12 7.	. .	.	3.671	+ 25 14 16.1	70.1	1	6.21
2954	Weisse (2) VII, 347 .	7.0	12 14.30	69.6	2	4.199	+ 41 34 12.7	52.2	4	6.22
2955	Anonymous . . .	. .	12 25.	. .	.	3.673	+ 25 18 15.9	58.2	1	6.23
2956	Anonymous . . .	8.5	7 12 25.91	69.2	2	+ 3.671	+ 25 14 46.6	70.1	1	− 6.23
2957	Anonymous . . .	8.8	12 34.97	69.2	2	3.671	+ 25 15 18.8	70.2	1	6.24
2958	Anonymous . . .	. .	12 35.	. .	.	3.673	+ 25 15 39.5	58.2	1	6.24
2959	65 Aurigæ	5.5	12 40.50	70.2	1	4.030	+ 37 1 12.3	47.2	6	6.25
2960	Anonymous . . .	. .	12 42.	. .	.	3.700	+ 26 18 0.1	71.2	1	6.25
2961	Anonymous . . .	8.1	7 12 47.98	64.2	2	+ 2.349	− 29 37 58.7	69.2	1	− 6.26
2962	Anonymous . . .	8.3	12 48.24	64.1	1	2.322	− 30 33 25.5	70.2	1	6.27
2963	30 Canis Majoris . . .	3.8	12 54.24	63.1	2	2.488	− 24 42 5.1	66.1	2	6.27
2964	Anonymous . . .	. .	12 56.47	46.2	1	4.353	+ 45 14 24.7	46.2	1	6.28
2965	Weisse VII, 368 . .	9.0	12 57.23	61.6	2	3.352	+ 12 24 48.9	62.2	2	6.28
2966	B. A. C. 2420 . . .	6.8	7 13 8.29	68.7	4	+ 2.323	− 30 32 45.5	66.8	3	− 6.29
2967	O. Arg. S. 6600. . .	6.0	13 9.26	68.1	4	2.444	− 26 19 56.2	68.2	2	6.29
2968	Anonymous . . .	9.0	13 21.04	68.1	2	2.310	− 30 58 20.4	70.5	3	6.31
2969	Lacaille 2726 . . .	7.0*	13 24.54	63.1	2	2.488	− 24 42 3.9	66.1	2	6.31
2970	Weisse VII, 387 . .	9.0	13 28.09	61.7	2	3.368	+ 13 6 34.8	66.1	2	6.32
2971	Weisse (2) VII, 389 .	7.5	7 13 43.24	69.1	2	+ 4.195	+ 41 31 34.9	46.2	4	− 6.34
2972	O. Arg. S. 6623. . .	8.0	13 57.86	68.1	2	2.445	− 26 18 52.5	69.2	2	6.36
2973	Anonymous . . .	7.5	14 1.04	69.1	2	2.742	− 14 36 40.4	56.2	4	6.36
2974	B. A. C. 2428 . . .	7.0	14 1.20	67.6	2	2.234	− 33 28 18.6	68.7	2	6.36
2975	Anonymous . . .	8.0	14 8.38	63.8	1	2.324	− 30 32	. .	.	6.37
2976	Anonymous . . .	8.8	7 14 13.30	69.8	3	+ 2.742	− 14 36 50.0	56.2	5	− 6.38
2977	Anonymous . . .	8.5	14 37.61	61.9	1	2.746	− 14 23 7.9	69.1	1	6.41
2978	Anonymous . . .	8.0	14 46.50	46.1	2	4.344	+ 45 7 9.7	69.1	1	6.42
2979	Lacaille 2741 . . .	6.6	14 50.97	67.6	2	2.442	− 26 26 31.4	67.2	2	6.43
2980	B. A. C. 2432 . . .	7.0	14 56.17	59.5	2	3.497	+ 18 32 18.7	54.1	2	6.44
2981	Lacaille 2747 . . .	6.5	7 15 13.92	62.7	2	+ 2.435	− 26 42 14.2	67.1	2	− 6.47
2982	O. Arg. S. 6666. . .	7.0	15 20.24	67.6	2	2.402	− 27 53 25.3	68.1	2	6.47
2983	Lacaille 2753 . . .	7.0	15 31.83	64.7	2	2.275	− 32 12 59.4	70.1	2	6.49
2984	Weisse VII, 461 . .	8.2	15 33.59	70.0	2	2.737	− 14 49 21.5	64.2	1	6.49
2985	Weisse VII, 464 . .	8.0	15 37.45	65.6	2	2.746	− 14 27 17.1	57.3	3	6.50
2986	O. Arg. S. 6678 . .	7.3	7 15 52.52	65.1	4	+ 2.402	− 27 55 46.4	69.1	2	− 6.52
2987	21 Lyncis	5.5*	16 8.48	60.1	2	4.551	+ 49 29 4.1	54.2	3	6.54
2988	Piazzi VII, 67 . . .	6.4	16 16.52	68.7	2	6.321	+ 68 44 41.3	62.6	3	6.55
2989	Weisse VII, 500 . .	8.5*	16 49.88	69.1	1	2.743	− 14 36 45.7	56.2	4	6.60
2990	B. A. C. 2443 . . .	7.0	16 50.02	63.2	2	2.273	− 32 19 21.8	66.1	2	6.60

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			h. m. s.			″	° ′ ″			″
2991	Anonymous	8.5	7 16 58.32	63.2	2	+ 2.273	− 32 19 47.7	66.1	2	− 6.61
2992	Lacaille 2762	6.9	16 58.56	62.5	2	2.463	− 25 44 44.2	66.2	2	6.61
2993	ι Geminorum	4.0*	17 1.69	59.8	8	3.745	+ 28 4 21.3	65.2	3	6.61
2994	Anonymous	9.0	17 8.25	64.1	2	2.746	− 14 29 46.2	69.1	1	6.62
2995	Lacaille 2767, (1st *)	8.5	17 13.39	69.1	1	2.166	− 35 39 16.0	69.3	5	6.63
2996	Lacaille 2767, (2d *)	6.8	7 17 13.46	69.1	2	+ 2.166	− 35 39 24.1	70.2	3	− 6.63
2297	Anonymous	8.1	17 14.50	68.8	3	2.735	− 14 56 43.0	67.7	2	6.63
2998	Anonymous	8.1	17 14.93	64.1	3	2.314	− 30 58 44.5	68.6	2	6.63
2999	Anonymous	9.0	17 23.52	61.6	4	3.304	+ 10 24 43.9	57.1	1	6.64
3000	*s* Puppis	5.0	17 39.51	66.2	2	2.294	− 31 39 23.4	67.6	2	6.67
3001	O. Arg. S. 6728.	8.0*	7 17 41.	. .	.	+ 2.492	− 24 41 8.3	65.1	2	− 6.67
3002	Weisse VII, 529	8.5	17 43.32	60.6	4	2.747	− 14 28 8.7	60.4	6	6.67
3003	O. Arg. S. 6734.	6.6	17 50.73	64.3	3	2.414	− 27 33 55.4	69.2	2	6.68
3004	Anonymous	7.0	17 55.	. .	.	2.170	− 35 34 3.3	67.1	2	6.69
3005	Anonymous	6.7	18 10.69	64.9	4	2.314	− 31 1 50.5	68.6	2	6.71
3006	B. A. C. 2453	6.7	7 18 13.23	61.2	3	+ 2.339	− 30 10 50.4	66.1	2	− 6.71
3007	O. Arg. S. 6748	7.2	18 20.34	64.9	5	2.373	− 29 1 12.0	67.7	2	6.72
3008	η Canis Majoris	3.3	18 33.47	64.9	5	2.373	− 29 1 58.6	67.7	2	6.74
3009	B. A. C. 2455	7.0*	18 33.60	63.8	2	3.576	+ 21 48 43.1	67.7	2	6.74
3010	O. Arg. S. 6762.	6.0	18 40.70	66.6	2	2.645	− 18 44 27.1	68.1	1	6.75
3011	Anonymous	7.5	7 18 42.96	59.1	4	+ 2.744	− 14 36 38.3	69.2	2	− 6.75
3012	Weisse VII, 551	7.2	18 44.78	61.6	6	3.314	+ 10 53 0.3	62.2	2	6.76
3013	Anonymous	7.2	19 1.62	68.7	2	2.736	− 14 57 51.4	67.7	2	6.78
3014	22 Lyncis	6.0*	19 17.58	60.4	3	4.569	+ 49 57 24.6	54.1	3	6.80
3015	B. A. C. 2461	4.5	19 22.06	63.1	2	2.300	− 31 32 12.8	66.2	1	6.81
3016	63 Geminorum	6.0*	7 19 25.64	63.6	3	+ 3.573	+ 21 43 38.7	69.2	2	− 6.81
3017	Weisse VII, 569	8.5	19 27.01	66.5	2	3.305	+ 10 28 50.0	70.2	2	6.81
3018	β Canis Minoris	3.0*	19 33.48	60.2	2	3.261	+ 8 34 5.4	71.2	1	6.82
3019	Lacaille 2792	5.1	19 37.13	62.2	2	2.487	− 24 56 35.5	64.8	3	6.82
3020	Anonymous	8.8	19 39.34	60.4	3	3.302	+ 10 21 56.2	65.5	3	6.83
3021	Lacaille 2797	7.1	7 19 50.63	63.5	3	+ 2.450	− 26 20 57.1	67.2	2	− 6.85
3022	B. A. C. 2463	6.5	19 57.96	70.0	1	3.735	+ 27 49 56.7	58.4	3	6.85
3023	Anonymous, (1st *)	9.0	19 58.01	70.1	1	2.742	− 14 41 55.4	67.1	2	6.85
3024	Anonymous, (2d *)	. .	19 58.41	70.1	1	2.742	− 14 39 55.7	70.1	1	6.85
3025	ρ Geminorum.	5.0*	20 6.10	65.1	2	3.859	+ 32 3 32.2	47.1	2	6.86
3026	Lalande 14465	8.0	7 20 14.97	68.7	2	+ 3.954	+ 35 5 9.8	49.2	1	− 6.87
3027	B. A. C. 2466	6.5	20 20.52	63.1	2	2.304	− 31 27 47.0	68.6	2	6.88
3028	O. Arg. S. 6810.	7.4	20 22.98	64.4	3	2.446	− 26 30 50.5	68.1	2	6.89
3029	Lalande 14473	7.0	20 32.18	70.2	1	4.168	+ 41 7 53.4	46.1	1	6.90
3030	Anonymous	8.6	20 35.18	66.1	2	3.424	+ 15 38 38.8	69.2	1	6.91

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3031	Lalande 14484	6.5	7 20 42.05	69.2	1	+ 4.069	+ 38 27 23.3	47.8	3	− 6.92
3032	Weisse VII, 625	8.7	20 45.94	63.2	2	2.823	− 11 12 43.5	70.1	2	6.92
3033	Lalande 14499	9.0*	21 1.	. .	.	4.019	+ 37 3 49.4	49.2	1	6.94
3034	b^2 Geminorum	5.5*	21 6.01	59.2	2	3.745	+ 28 12 4.0	51.1	12	6.95
3035	B. A. C. 2470	7.8	21 16.80	62.5	3	2.822	− 11 16 33.0	68.2	2	6.96
3036	Anonymous	8.5	7 21 17.	. .	.	+ 4.152	+ 40 44 1.7	70.1	1	− 6.96
3037	Weisse (2) VII, 594	8.2	21 24.93	69.8	3	4.148	+ 40 38 43.5	62.2	3	6.97
3038	B. A. C. 2472	6.5	21 57.09	69.1	2	3.744	+ 28 12 5.5	62.2	2	7.02
3039	6 Canis Minoris	5.5	21 59.96	68.1	3	3.345	+ 12 17 33.6	70.1	2	7.02
3040	Weisse (2) VII, 613	9.0*	22 0.97	46.2	1	4.190	+ 41 45 17.0	53.2	2	7.02
3041	Lacaille 2814	7.5	7 22 13.00	63.2	2	+ 2.404	− 28 5 19.8	68.7	2	− 7.04
3042	Weisse (2) VII, 625	8.5*	22 16.74	46.1	1	4.150	+ 40 43 35.1	46.1	1	7.05
3043	Lacaille 2813	6.6	22 19.37	64.6	6	2.446	− 26 33 21.8	68.1	2	7.05
3044	Anonymous.	8.5	22 44.	. .	.	2.743	− 14 44 58.4	70.1	1	7.08
3045	Anonymous	. .	22 54.87	71.1	1	2.652	− 18 35 23.9	63.2	2	7.10
3046	Anonymous	8.5	7 22 58.45	70.1	1	+ 3.592	+ 22 34 41.0	70.1	1	− 7.10
3047	Lalande 14619	6.0	22 59.50	69.2	2	2.744	− 14 42 13.6	67.2	2	7.10
3048	Weisse (2) VII, 667	8.0	23 18.98	62.2	2	3.420	+ 15 32 28.1	67.7	2	7.13
3049	Lacaille 2824	6.5	23 27.31	66.6	2	2.112	− 37 31 23.1	66.6	2	7.14
3050	Weisse (2) VII, 681	8.6	23 38.40	63.8	5	3.422	+ 15 38 11.2	68.2	2	7.16
3051	Weisse (2) VII, 682	8.3	7 23 38.70	64.2	8	+ 3.421	+ 15 36 12.8	62.2	1	− 7.16
3052	Lalande 14620	5.8	23 43.99	64.6	2	3.463	+ 17 22 50.0	67.2	2	7.16
3053	Anonymous.	7.8	23 45.93	64.1	1	2.608	− 20 24	. .	.	7.17
3054	O. Arg. S. 6907.	8.1	23 46.88	64.6	2	2.340	− 30 21 27.1	68.2	1	7.17
3055	Anonymous.	9.2	23 55.53	65.2	1	2.516	− 24 1 54.5	70.2	1	7.17
3056	Weisse (2) VII, 678	8.0	7 24 3.05	69.1	2	+ 4.175	+ 41 28 34.9	46.2	1	− 7.19
3057	Anonymous	8.0	24 13.06	69.1	2	2.494	− 24 51 25.1	64.6	2	7.20
3058	Weisse (2) VII, 705	9.0	24 22.63	68.1	3	3.420	+ 15 34 32.4	66.2	1	7.22
3059	O. Arg. S. 6941.	8.3	24 50.44	64.1	2	2.394	− 28 33 38.5	69.2	2	7.26
3060	O. Arg. S. 6946.	8.6	24 54.45	64.1	2	2.394	− 28 32 46.7	69.2	2	7.26
3061	Weisse VII, 756	8.8	7 24 57.21	59.1	2	+ 3.308	+ 10 43 1.8	64.2	2	− 7.27
3062	Weisse (2) VII, 727	8.0	25 6.62	67.1	2	3.436	+ 16 16 41.1	69.1	1	7.28
3063	O. Arg. S. 6948	7.5	25 8.10	63.7	7	2.415	− 27 48 16.9	66.1	3	7.28
3064	O. Arg. S. 6949	7.6	25 8.32	64.1	4	2.414	− 27 49 45.0	66.1	3	7.28
3065	Lalande 14637	7.0	25 15.92	60.5	2	3.568	+ 21 42 9.9	56.1	2	7.29
3066	B. A. C. 2484	5.5	7 25 16.05	66.2	2	+ 2.333	− 30 40 15.7	66.2	2	− 7.29
3067	68 Geminorum	5.0*	25 36.96	60.4	10	3.432	+ 16 7 25.0	68.1	2	7.32
3068	Weisse (2) VII, 728	7.0	25 37.59	69.2	1	4.147	+ 40 48 21.5	53.2	2	7.32
3069	a^1 Geminorum	3.0*	25 39.30	61.3	28	3.856	+ 32 11 27.7	51.0	16	7.32
3070	a^2 Geminorum	1.5*	25 39.83	55.2	160	3.856	+ 32 11 30.1	51.1	17	7.32

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3071	Weisse (2) VII, 730	9.0*	7 25 40.52	46.1	1	+ 4.184	+ 41 45 53.2	46.1	1	− 7.32
3072	Weisse VII, 816	9.0	27 4.62	59.1	2	3.366	+ 13 18 45.0	69.2	2	7.44
3073	*v* Geminorum	5.0*	27 17.50	59.7	11	3.710	+ 27 12 10.8	61.2	3	7.45
3074	Weisse VII, 835	7.5	27 22.12	59.2	2	2.757	− 14 13 25.8	55.9	3	7.46
3075	O. Arg. S. 7026.	7.0	27 24.21	65.6	2	2.411	− 28 1 36.4	66.5	2	7.47
3076	Weisse (2) VII, 789	7.5	7 27 41.11	68.6	2	+ 4.156	+ 41 9 3.0	62.6	2	− 7.49
3077	Weisse (2) VII, 791	8.0	27 42.36	68.6	2	4.154	+ 41 5 28.9	62.6	2	7.49
3078	Lacaille 2852	7.0	28 8.23	64.5	4	2.264	− 33 5 57.7	62.2	2	7.52
3079	Weisse VII, 871	8.5	28 29.96	64.1	2	2.748	− 14 38 43.0	55.5	3	7.55
3080	Groombridge 1343.	6.7	28 40.90	68.8	3	4.059	+ 38 34 7.1	46.2	3	7.57
3081	*g* Puppis	5.0	7 28 42.68	66.1	2	+ 2.473	− 25 48 46.4	66.5	3	− 7.57
3082	Lacaille 2857	6.5	28 52.44	62.5	2	2.449	− 26 42 38.5	68.2	2	7.58
3083	Lacaille 2859	6.2	28 56.47	64.2	3	2.263	− 33 9 47.0	67.7	2	7.59
3084	Anonymous	. .	29 1.	. .	.	3.566	+ 21 46 29.9	57.2	1	7.60
3085	O. Arg. S. 7063	7.7	29 14.01	64.4	6	2.383	− 29 6 17.1	68.2	1	7.61
3086	O. Arg. S. 7065	9.0	7 29 20.18	69.2	2	+ 2.474	− 25 48 50.9	66.6	2	− 7.62
3087	70 Geminorum	6.0*	29 21.09	60.1	3	3.950	+ 35 21 29.1	51.9	7	7.62
3088	Lacaille 2867	4.0	29 45.67	62.2	3	2.413	− 28 3 42.2	67.1	2	7.65
3089	Lacaille 2864	8.0	29 46.28	66.1	2	2.473	− 25 50 53.3	66.1	1	7.65
3090	Weisse (2) VII, 874	9.0	29 58.94	60.5	2	3.566	+ 21 46 32.2	55.1	2	7.67
3091	*o* Geminorum	5.7	7 30 1.18	69.6	2	+ 3.934	+ 34 54 7.5	49.2	1	− 7.68
3092	Anonymous	8.7	30 2.82	64.5	3	2.369	− 29 41 37.0	65.5	3	7.68
3093	Weisse VII, 924	7.5	30 9.73	69.2	1	2.760	− 14 11 8.7	55.5	3	7.69
3094	Anonymous	8.6	30 13.49	64.5	3	2.366	− 29 45 5.0	70.2	3	7.69
3095	O. Arg. S. 7100.	8.7	30 22.26	66.8	3	2.386	− 29 3 0 4	68.2	2	7.70
3096	O. Arg. S. 7101.	7.5	7 30 27.20	67.6	2	+ 2.438	− 27 11 44.2	70.1	2	− 7.71
3097	Lacaille 2873	6.5	30 33.11	66.6	2	2.268	− 33 5 3.7	62.2	2	7.72
3098	O. Arg. S. 7107.	7.5	30 35.46	67.6	2	2.390	− 28 56 22.8	70.2	2	7.72
3099	Lacaille 2870	6.5	30 42.33	67.1	2	2.496	− 25 1 23.0	67.6	2	7.73
3100	Groombridge 1352	7.0	30 48.80	68.8	3	4.059	+ 38 39 38.8	46.9	3	7.74
3101	Anonymous	9.1	7 31 7.26	67.6	2	+ 2.331	− 31 0 36.4	70.2	2	− 7.76
3102	Lacaille 2876	7.0	31 21.86	. .	.	2.537	− 23 27 48.8	67.6	2	7.78
3103	O. Arg. S. 7131	7.6	31 23.17	64.7	2	2.441	− 27 6 39.4	70.1	2	7.79
3104	*f* Geminorum	6.0*	31 23.34	60.8	6	3.472	+ 17 59 23.9	59.3	5	7.79
3105	Weisse (2) VII, 915	8.5	31 25.24	68.1	2	3.544	+ 20 56 46.7	65.1	1	7.79
3106	Anonymous	7.8	7 31 26.91	71.1	1	+ 2.331	− 31 1 26.5	70.2	2	− 7.79
3107	Weisse VII, 968	9.0*	31 47.15	59.1	2	3.305	+ 10 42 38.0	57.2	2	7.81
3108	Anonymous	. .	31 57.	. .	.	3.563	+ 21 46 7.6	56.5	3	7.83
3109	*α* Canis Minoris	1.0	31 58.47	57.3	234	3.192	+ 5 35 0.2	51.6	57	7.83
3110	Anonymous	. .	32 10.16	69.2	1	2.750	− 14 40 17.7	56.5	3	7.83

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3111	*m* Puppis	4.5	7 32 28.36	69.6	2	+ 2.497	− 25 2 56.1	64.7	2	− 7.87
3112	Anonymous	. .	32 35.	. .	.	3.423	+ 15 34 37.3	69.2	1	7.88
3113	B. A. C. 2526	6.0	32 40.71	64.8	4	3.191	+ 5 33 0.4	69.2	2	7.89
3114	O. Arg. S. 7167	7.6	32 44.66	69.2	3	2.329	− 31 8 15.0	69.1	2	7.90
3115	Anonymous	. .	32 51.	. .	.	3.299	+ 10 26 56.2	62.2	2	7.91
3116	B. A. C. 2521	6.0*	7 32 55.49	68.1	3	+10.499	+ 80 36 23.9	70.4	4	− 7.91
3117	k^1 Puppis	6.2	33 5.08	62.2	3	2.460	− 26 29 8.1	66.2	2	7.92
3118	k^2 Puppis	6.7	33 5.63	62.2	3	2.460	− 26 29 17.1	66.2	2	7.92
3119	51 Camelopardi	6.0*	33 15.10	62.2	2	5.802	+ 65 47 4.4	68.6	2	7.94
3120	Anonymous	8.8	33 24.08	64.1	3	3.298	+ 10 26 57.8	71.2	1	7.94
3121	Anonymous	9.4	7 33 25.99	65.2	1	+ 3.191	+ 5 31 0.5	68.6	2	− 7.94
3122	Anonymous	8.0	33 27.54	70.1	1	2.368	− 29 49 16.7	68.2	2	7.95
3123	Anonymous	7.7	33 35.48	69.6	2	2.528	− 23 54 40.3	67.2	2	7.95
3124	Anonymous	7.0	33 59.52	65.1	1	3.550	+ 21 18 2.7	68.1	1	8.00
3125	Anonymous	7.8	34 5.69	69.6	2	2.229	− 34 30 11.4	71.2	1	8.01
3126	Anonymous	7.8	7 34 6.	. .	.	+ 2.230	− 34 29 38.1	64.2	1	− 8.01
3127	Anonymous	. .	34 6.	. .	.	2.759	− 14 19 21.3	56.4	3	8.01
3128	O. Arg. S. 7224	7.3	34 32.76	64.1	3	2.369	− 29 50 53.7	66.7	2	8.04
3129	Weisse VII, 1053	9.0	34 37.71	61.1	2	3.368	+ 13 34 12.1	60.9	3	8.05
3130	Anonymous	9.2	34 48.11	69.1	1	2.231	− 34 28 33.4	71.2	1	8.06
3131	Lacaille 2908	7.5	7 34 54.25	67.9	3	+ 2.372	− 29 45 33.3	66.2	2	− 8.07
3132	Weisse (2) VII, 1022	9.1	34 55.86	68.3	4	3.547	+ 21 13 47.0	68.2	1	8.07
3133	Lalande 15006	7.1	34 56.45	69.2	2	2.528	− 23 57 5.1	67.6	3	8.07
3134	O. Arg. S. 7237	8.6	34 56.91	67.9	3	2.373	− 29 43 41.4	66.2	2	8.07
3135	B. A. C. 2544	7.0*	35 1.68	61.2	2	3.585	+ 22 43 33.1	65.6	2	8.08
3136	O. Arg. S. 7239	7.0	7 35 3.03	67.0	3	+ 2.432	− 27 37 22.0	68.2	2	− 8.08
3137	Anonymous	8.0	35 6.95	59.0	1	2.760	− 14 18	. .	.	8.09
3138	Lacaille 2916	5.5	35 26.53	69.1	1	2.328	− 31 20 14.5	65.2	2	8.12
3139	κ Geminorum	4.0*	35 59.53	58.7	13	3.635	+ 24 43 48.3	58.3	7	8.16
3140	O. Arg. S. 7286	7.0	36 34.66	64.0	4	2.372	− 29 51 32.4	66.5	3	8.20
3141	O. Arg. S. 7289	8.6	7 36 38.84	66.6	2	+ 2.434	− 27 36 16.2	69.6	2	− 8.21
3142	β Geminorum	1.0	36 44.77	57.9	197	3.730	+ 28 21 39.2	49.6	40	8.22
3143	O. Arg. S. 7296	8.3	36 47.43	70.1	1	2.370	− 29 54 46.2	67.2	1	8.22
3144	Lacaille 2923	6.5	37 1.47	65.7	2	2.477	− 26 1 15.8	67.2	2	8.24
3145	Lalande 15079	8.0	37 30.	. .	.	2.836	− 10 58 53.8	68.7	2	8.28
3146	Lacaille 2929	6.8	7 37 49.18	68.7	2	+ 2.500	− 25 10 19.9	64.6	2	− 8.30
3147	Lalande 15073	7.7	37 51.71	65.3	4	3.550	+ 21 27 28.5	68.7	2	8.31
3148	*g* Geminorum	5.7	38 0.98	62.9	5	3.487	+ 18 50 52.0	66.1	2	8.32
3149	π Geminorum	5.5*	38 28.39	62.0	5	3.884	+ 33 45 21.1	62.2	2	8.35
3150	11 Canis Minoris	6.0*	38 33.76	60.1	2	3.311	+ 11 6 21.1	54.2	3	8.36

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3151	Lacaille 2941 . . .	7.0	7 38 43.25	66.6	2	+ 2.332	− 31 20 49.3	67.7	2	− 8.37
3152	Radcliffe 2020 . . .	7.5	38 52.05	62.1	2	20.833	+ 86 5 16.8	67.2	2	8.39
3153	2 Puppis, (1st *) . . .	7.3	39 2.34	60.6	4	2.761	− 14 20 56.6	58.7	4	8.40
3154	2 Puppis, (2d *) . . .	7.0	39 2.80	61.1	6	2.761	− 14 21 11.3	57.4	6	8.40
3155	Rumker 2282 . . .	8.8	39 28.76	59.8	3	3.356	+ 13 9 33.0	56.2	2	8.43
3156	4 Puppis	4.5	7 39 30.04	65.6	2	+ 2.764	− 14 13 34.0	68.7	2	− 8.44
3157	O. Arg. S. 7376. . .	7.8	39 35.31	64.0	4	2.446	− 27 18 13.6	69.7	2	8.44
3158	Weisse (2) VII, 1143 .	7.9	39 40.57	65.2	5	3.547	+ 21 22 35.0	69.2	2	8.45
3159	Lacaille 2952 . . .	7.0	39 57.08	65.6	5	2.534	− 23 55 5.0	68.1	2	8.47
3160	B. A. C. 2581 . . .	6.5	40 21.69	66.7	2	2.258	− 33 53 41.9	69.7	2	8.50
3161	Anonymous . . .	9.1	7 40 30.96	66.7	2	+ 2.449	− 27 14 58.2	69.6	2	− 8.52
3162	Weisse VII, 1232 . .	8.0	40 44.38	65.1	2	2.818	− 11 51 34.1	68.2	2	8.53
3163	Anonymous . . .	8.0	40 58.17	69.2	2	2.765	− 14 16 7.8	57.5	3	8.54
3164	Anonymous . . .	8.0	41 0.12	64.1	2	2.761	− 14 26 24.0	56.1	2	8.56
3165	Anonymous . . .	. .	41 17.	. .	.	4.029	+ 38 22 1.7	70.1	1	8.57
3166	5 Puppis	8.0	7 41 23.32	66.5	3	+ 2.818	− 11 51 5.1	67.1	2	− 8.57
3167	Anonymous . . .	9.0	41 40.69	69.1	1	4.022	+ 38 10 42.7	46.2	1	8.61
3168	Rumker 2287 . . .	6.0	41 43.42	69.2	1	3.354	+ 13 9 42.4	56.2	2	8.61
3169	Weisse VII, 1259 . .	8.1	41 56.22	65.1	2	2.818	− 11 52 23.0	68.7	2	8.63
3170	O. Arg. S. 7442 . .	9.0	41 57.77	69.6	2	2.539	− 23 50 26.3	69.1	1	8.63
3171	Lalande 15196 . . .	6.0	7 41 57.84	69.6	2	+ 3.996	+ 37 25 59.5	47.1	2	− 8.63
3172	O. Arg. S. 7444. . .	7.5	42 3.60	67.1	2	2.370	− 30 12 17.0	68.7	2	8.64
3173	O. Arg. S. 7443. . .	9.0	42 4.15	68.4	3	2.537	− 23 54 53.9	70.2	1	8.64
3174	O. Arg. S. 7445. . .	9.0	42 4.71	67.7	2	2.450	− 27 16 37.6	69.7	2	8.64
3175	Anonymous. . . .	. .	43 10.	. .	.	2.381	− 29 47 27.7	69.1	1	8.65
3176	*o* Puppis	4.0	7 42 15.88	70.1	2	+ 2.494	− 25 35 32.3	67.6	2	− 8.66
3177	Anonymous. . . .	8.5	42 24.48	69.1	1	2.499	− 25 25 29.4	70.2	1	8.66
3178	Anonymous. . . .	8.5	42 24.80	68.8	3	4.019	+ 38 9 17.1	58.7	4	8.66
3179	Anonymous. . . .	. .	42 30.	. .	.	2.819	− 11 50 9.5	66.1	1	8.67
3180	Anonymous. . . .	8.5	42 30.	. .	.	2.550	− 23 25 19.5	70.1	1	8.67
3181	Anonymous. . . .	9.0	7 42 30.	. .	.	+ 2.550	− 23 24 27.4	70.1	1	− 8.67
3182	Anonymous. . . .	8.5	42 33.46	59.2	2	2.766	− 14 15 57.4	56.2	2	8.68
3183	B. A. C. 2590 . . .	6.0	42 35.39	69.2	1	9.806	+ 79 51 8.7	67.1	2	8.68
3184	Anonymous. . . .	9.2	42 36.	. .	.	2.500	− 25 24 37.6	67.6	2	8.68
3185	O. Arg. S. 7458. . .	8.8	42 36.94	71.1	1	2.537	− 23 54 55.9	70.2	1	8.68
3186	O. Arg. S. 7464. . .	8.1	7 42 48.36	64.2	3	+ 2.466	− 26 41 55.9	69.2	2	− 8.70
3187	O. Arg. S. 7465. . .	7.9	42 50.09	64.1	4	2.468	− 26 38 49.4	69.2	2	8.70
3188	B. A. C. 2585 . . .	7.0	42 53.12	62.5	2	15.465	+ 84 26 54.3	62.2	3	8.70
3189	Lalande 15235 . . .	7.0	43 1.43	69.2	1	3.967	+ 36 37 28.0	47.1	2	8.71
3190	O. Arg. S. 7470. . .	7.5	43 5.35	64.4	3	2.365	− 30 24 32.6	68.2	2	8.72

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			h. m. s.			"	° ′ "			"
3191	B. A. C. 2599 . . .	6.3	7 43 9.14	60.1	2	+ 2.522	− 24 32 55.5	66.2	2	− 8.73
3192	Anonymous . . .	. .	43 10.50	46.1	1	4.023	+ 38 17 40.3	46.2	3	8.73
3193	O. Arg. S. 7473. . .	7.8	43 11.94	68.8	3	2.379	− 29 54 48.9	68.2	2	8.73
3194	O. Arg. S. 7476. . .	8.5	43 21.58	71.2	1	2.550	− 23 27 3.1	70.7	2	8.74
3195	Anonymous . . .	8.5	43 24.02	69.1	1	2.500	− 25 25 25.6	65.1	1	8.74
3196	ξ Argus	4.3*	7 43 24.47	60.5	9	+ 2.523	− 24 30 40.5	68.1	2	− 8.74
3197	Anonymous . . .	8.0	43 39.63	62.2	1	2.548	− 23 31 49.2	70.2	1	8.77
3198	Anonymous . . .	7.0	43 42.47	69.1	1	3.081	+ 0 25 52.4	70.2	2	8.77
3199	Anonymous . . .	. .	43 45.	. .	.	3.082	+ 0 28 59.1	57.2	1	8.77
3200	B. A. C. 2605 . . .	6.0	43 48.02	69.2	1	3.502	+ 19 40 47.5	53.2	5	8.78
3201	O. Arg. S. 7505. . .	7.5	7 43 51.80	70.7	2	+ 2.372	− 30 12 29.2	68.7	2	− 8.78
3202	Lacaille 2998 . . .	6.5	44 2.69	65.2	3	2.551	− 23 26 52.5	68.2	2	8.79
3203	Anonymous . . .	9.0	44 4.81	69.2	1	3.082	+ 0 28 50.7	70.2	2	8.80
3204	Lacaille 3006 . . .	Var.	44 14.59	67.3	2	2.294	− 32 56 19.8	67.7	2	8.81
3205	25 Lyncis	6.5	44 17.53	65.4	3	4.394	+ 47 44 38.7	64.5	3	8.81
3206	Weisse (2) VII, 1263 .	8.5	7 44 36.58	71.2	1	+ 3.794	+ 31 1 41.2	71.2	2	− 8.84
3207	Lalande 15323 . . .	7.5	44 52.97	69.2	1	3.521	+ 20 32 10.4	56.2	2	8.86
3208	Anonymous . . .	. .	44 53.	. .	.	3.082	+ 0 31 48.1	57.1	1	8.86
3209	φ Geminorum. . . .	5.0*	44 55.46	65.5	32	3.686	+ 27 7 28.5	60.2	8	8.86
3210	52 Camelopardi . . .	5.5*	45 4.60	60.1	3	4.909	+ 56 52 4.0	54.1	3	8.88
3211	Anonymous . . .	9.0	7 45 4.74	68.2	1	+ 3.083	+ 0 30 37.2	70.2	1	− 8.88
3212	Lacaille 3012 . . .	6.5	45 5.40	62.8	3	2.534	− 24 10 25.7	65.6	2	8.88
3213	9 Puppis	5.0*	45 17.39	60.1	2	2.784	− 13 31 46.7	61.2	2	8.89
3214	Anonymous . . .	7.0	45 33.77	69.2	1	4.015	+ 38 12 24.7	46.2	3	8.91
3215	Anonymous . . .	. .	45 49.	. .	. .	3.083	+ 0 30 53.2	70.2	1	8.93
3216	Anonymous . . .	. .	7 45 58.	. .	.	+ 3.083	+ 0 32 8.6	57.1	1	− 8.95
3217	Weisse (2) VII, 1305 .	7.4	45 58.51	65.2	5	3.543	+ 21 27 57.5	67.1	2	8.95
3218	Anonymous . . .	9.0	45 58.60	62.2	3	3.520	+ 20 32 30.0	56.2	3	8.95
3219	Weisse VII, 1371 . .	7.5	46 21.75	68.7	2	3.365	+ 13 47 2.5	65.2	2	8.98
3220	Weisse (2) VII, 1312 .	7.0	46 28.20	60.2	3	4.063	+ 39 39 0.8	56.6	2	8.99
3221	Anonymous . . .	9.0	7 46 32.08	64.2	2	+ 2.487	− 26 4 16.7	68.1	2	− 8.99
3222	Anonymous . . .	7.6	47 16.31	64.4	5	2.489	− 26 3 16.9	67.8	3	9.05
3223	85 Geminorum. . . .	6.5*	47 29.44	59.8	3	3.512	+ 20 15 1.0	62.2	4	9.07
3224	Lacaille 3041 . . .	6.8	48 0.44	62.9	3	2.494	− 25 53 58.8	67.2	2	9.11
3225	Anonymous . . .	7.3	48 9.90	64.0	6	2.492	− 25 59 9.4	67.3	2	9.12
3226	Anonymous . . .	7.2	7 48 21.21	66.7	2	+ 2.497	− 25 47 21.0	68.2	2	− 9.13
3227	O. Arg. N. 8445 . .	8.5	48 23.22	67.5	2	4.357	+ 47 10 55.1	64.2	1	9.14
3228	Anonymous . . .	. .	48 25.99	48.2	1	4.235	+ 44 20 48.1	48.2	1	9.14
3229	Weisse (2) VII, 1366 .	7.8	48 26.09	69.1	2	3.511	+ 20 15 54.1	69.2	1	9.14
3230	Anonymous . . .	8.0	48 42.78	68.4	4	3.327	+ 12 7 0.3	68.2	2	9.16

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			h. m. s.			″	° ′ ″			″
3231	O. Arg. S. 7636. . .	6.5	7 48 43.08	66.7	2	+ 2.447	− 27 44 28.0	69.2	2	− 9.16
3232	Weisse (2) VII, 1362 .	7.0*	48 47.45	48.1	4	4.215	+ 43 52 31.9	48.2	9	9.17
3233	1 Cancri	5.8	49 2.35	61.8	4	3.416	+ 16 9 39.0	61.0	6	9.19
3234	(* 133) Washington .	7.9	49 12.15	65.2	5	3.326	+ 12 3 26.9	67.2	3	9.20
3235	Anonymous . . .	8.7	49 12.18	70.8	3	2.490	− 26 6 12.9	67.7	2	9.20
3236	Lacaille 3061 . . .	7.0	7 49 21.79	66.2	2	+ 2.354	− 31 10 7.2	66.2	2	− 9.21
3237	Weisse VII, 1459 . .	9.0	49 25.87	65.2	3	3.323	+ 11 55 40.5	65.2	2	9.22
3238	Anonymous . . .	7.5	49 27.23	67.1	2	2.491	− 26 3 32.4	67.7	4	9.22
3239	O. Arg. N. 8459 . .	7.6	49 36.19	65.0	2	4.345	+ 46 59 44.0	67.1	2	9.23
3240	Anonymous . . .	7.0	49 42.12	64.1	2	2.372	− 30 33 4.9	68.2	2	9.24
3241	53 Camelopardi . . .	5.5	7 49 43.29	69.2	2	+ 5.187	+ 60 42	. .	.	− 9.24
3242	O. Arg. S. 7669 . .	6.5	49 53.14	61.2	4	2.388	− 29 59 2.0	65.2	3	9.25
3243	Anonymous . . .	8.5	50 3.93	66.6	2	3.516	+ 20 31 46.3	56.7	3	9.27
3244	Weisse VII, 1477 . .	8.5	50 18.43	69.1	2	3.333	+ 12 24 11.7	67.6	2	9.28
3245	Anonymous . . .	8.8	50 25.62	67.2	2	3.324	+ 12 1 14.5	69.2	2	9.29
3246	Anonymous . . .	8.2	7 50 29.54	69.1	1	+ 5.192	+ 60 47 48.2	55.2	3	− 9.28
3247	Anonymous . . .	7.0	50 34.41	71.1	1	2.373	− 30 32 26.6	67.2	1	9.31
3248	B. A. C. 2651 . . .	5.5	50 47.92	63.6	7	2.391	− 29 54 48.7	67.8	6	9.32
3249	54 Camelopardi . . .	6.0*	51 10.23	60.1	6	4.940	+ 57 39 23.7	54.1	3	9.35
3250	Weisse VII, 1504 . .	8.5	51 16.74	67.2	2	3.325	+ 12 4 13.7	69.2	2	9.36
3251	Anonymous . . .	9.0	7 51 19.	. .	.	+ 2.389	− 30 0 19.8	70.2	1	− 9.36
3252	Lacaille 3078 . . .	6.5	51 44.46	63.2	2	2.275	− 34 0 21.8	68.2	3	9.40
3253	Anonymous . . .	7.7	51 47.98	64.1	2	2.312	− 32 45 59.3	70.1	2	9.40
3254	B. A. C. 2655 . . .	6.0	52 5.40	60.0	5	2.392	− 29 57 37.7	67.4	10	9.47
3255	Anonymous . . .	7.5	52 14.90	65.5	2	2 455	− 27 37	. .	.	9.43
3256	Lacaille 3086 . . .	6.0	7 52 16.19	69.2	2	+ 2.009	− 42 1 1.1	67.1	2	− 9.43
3257	3 Cancri	6.0*	52 45.74	59.6	2	3.448	+ 17 41 20.1	58.2	3	9.47
3258	O. Arg. S. 7758 . .	6.6	52 53.01	64.2	2	2.467	− 27 11 59.5	70.2	2	9.48
3259	Anonymous . . .	7.3	53 0.03	69.6	2	2.178	− 37 12 13.7	64.2	2	9.49
3260	O. Arg. S. 7769. . .	7.6	53 9.18	65.1	2	2.458	− 27 31 45.3	67.2	2	9.51
3261	Anonymous . . .	9.0	7 53 24.	. .	.	+ 2.394	− 29 57 44.6	70.2	1	− 9.52
3262	Lacaille 3093 . . .	6.5	53 29.28	69.1	2	2.197	− 36 38 6.1	62.2	2	9.53
3263	5 Cancri	6.0	53 31.38	64.2	4	3.428	+ 16 50 17.8	66.7	2	9.53
3264	O. Arg. N. 8531 . .	7.8	53 42.36	60.1	3	4.966	+ 58 9 54.1	61.2	4	9.55
3265	Anonymous . . .	7.3	53 47.75	64.2	2	2.446	− 28 3 6.4	67.3	2	9.55
3266	O. Arg. S. 7798. . .	7.7	7 54 21.62	68.6	2	+ 2.394	− 29 59 42.7	68.7	4	− 9.60
3267	6 Cancri	5.5*	54 54.86	61.6	37	3.700	+ 28 10 58.3	62.4	5	9.64
3268	Weisse (2) VII, 1521 .	8.5	55 15.89	67.1	2	3.700	+ 28 11 1.3	68.7	2	9.67
3269	B. A. C. 2679 . . .	7.5	55 35.36	60.2	3	3.285	+ 10 19 51.9	54.1	3	9.69
3270	Weisse VII, 1624 . .	8.4	55 37.17	65.4	3	3.315	+ 11 44 12.9	65.7	2	9.69

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			h. m. s.			″	° ′ ″			″
3271	Anonymous	7.7	7 56 17.80	69.2	2	+ 3.502	+ 20 11 20.8	63.1	2	− 9.74
3272	O. Arg. S. 7865	7.5	56 26.90	69.1	2	2.510	− 25 40 38.1	66.2	2	9.76
3273	Rumker 2390	7.0	56 52.56	59.1	3	3.941	+ 36 40 6.3	55.8	3	9.79
3274	B. A. C. 2689	6.5	56 57.31	69.2	2	2.203	− 36 39 45.5	65.7	2	9.80
3275	B. A. C. 2677	6.0*	57 3.94	61.4	5	12.375	+ 82 51 12.2	62.2	2	9.81
3276	O. Arg. N. 8586	8.7	7 57 7.77	69.3	1	+ 5.152	+ 60 43 35.9	55.2	3	− 9.81
3277	O. Arg. S. 7882	8.0	57 12.97	68.6	2	2.548	− 24 12 46.4	66.2	2	9.81
3278	8 Cancri	6.0	57 16.46	68.1	2	3.352	+ 13 30 48.8	69.2	2	9.82
3279	28 Lyncis	6.5*	57 27.33	60.1	2	4.184	+ 43 39 29.2	53.2	7	9.83
3280	Anonymous	7.8	57 51.66	69.1	1	2.513	− 25 37 53.3	66.2	2	9.86
3281	μ^1 Cancri	6.0	7 58 0.44	61.2	2	+ 3.567	+ 23 1 52.4	66.1	2	− 9.88
3282	Weisse (2) VII, 1597	9.0*	58 10.81	69.2	1	3.423	+ 16 46 53.0	56.7	2	9.89
3283	B. A. C. 2703	7.0*	58 18.19	70.6	2	3.562	+ 22 51 21.5	67.2	2	9.90
3284	Weisse (2) VII, 1601	9.1	58 35.14	71.2	2	3.975	+ 37 51 30.9	65.2	2	9.93
3285	Lacaille 3127	6.7	58 39.63	67.6	2	2.523	− 25 18 15.1	64.8	3	9.93
3286	Anonymous	8.5	7 58 43.06	69.6	2	+ 2.964	− 5 17 31.1	66.5	2	− 9.93
3287	55 Camelopardi	5.5	58 49.54	65.0	2	6.079	+ 68 52 50.1	64.0	7	9.94
3288	O. Arg. S. 7938	7.5	59 1.00	71.1	2	2.413	− 29 34 15.5	67.2	2	9.95
3289	O. Arg. S. 7951.	8.7	59 22.11	64.2	1	2.414	− 29 33 2.9	67.2	2	9.98
3290	μ^2 Cancri	4.8	59 31.26	63.5	2	3.540	+ 21 59 3.7	66.2	2	9.99
3291	Weisse (2) VII, 1752	8.5	7 59 50.64	68.7	2	+ 5.140	+ 60 44 16.8	55.2	2	− 10.01
3292	O. Arg. N. 8632	7.6	59 52.79	71.1	1	3.377	+ 14 45 45.6	68.2	2	10.02
3293	Weisse (2) VII, 1659	9.0	8 0 9.70	59.1	3	3.422	+ 16 49 1.4	56.9	3	10.04
3294	Weisse (2) VII, 1763	6.5	0 11.94	67.2	2	3.377	+ 14 45 13.6	68.2	2	10.04
3295	Weisse (2) VII, 1669	9.0	0 28.51	59.2	2	3.422	+ 16 51 14.7	63.2	2	10.06
3296	Lalande 15868	7.5	8 0 46.81	69.1	2	+ 4.114	+ 42 2 42.0	63.1	2	− 10.08
3297	12 Cancri	6.0*	0 52.84	61.3	5	3.361	+ 14 2 43.9	65.1	2	10.09
3298	Lalande 15882	7.0	1 4.37	68.6	2	3.907	+ 35 52 17.2	49.2	1	10.11
3299	ρ Argus	3.0*	1 35.01	54.6	77	2.561	− 23 54 11.8	50.9	47	10.15
3300	ψ^2 Cancri	6.0*	2 0.98	71.2	2	3.632	+ 25 55 40.3	71.2	4	10.18
3301	Weisse (2) VIII, 19	7.0	8 2 18.16	62.2	2	+ 2.850	− 10 55 58.2	62.3	2	− 10.20
3302	B. A. C. 2732	5.5*	2 39.41	60.2	1	4.834	+ 56 52 2.4	54.2	3	10.23
3303	O. Arg. S. 8072.	8.3	2 42.34	67.6	2	2.560	− 23 58 51.7	66.7	2	10.23
3304	Weisse (2) VIII, 22	7.6	2 58.46	69.2	2	3.418	+ 16 46 7.3	62.7	2	10.25
3305	O. Arg. S. 8108	7.2	3 28.80	64.7	2	2.412	− 29 54 52.8	67.3	2	10 29
3306	Lacaille 3168	6.2	8 3 29.67	69.1	2	+ 2.199	− 37 16 28.3	66.2	2	− 10.29
3307	O. Arg. N. 8698	8.6	3 36.29	66.7	2	5.335	+ 63 7 1.9	70.2	2	10.30
3308	ζ Cancri, (1st *)	6.8	4 10.78	62.3	13	3.446	+ 18 4 0.5	66.3	2	10.34
3309	ζ Cancri, (2d *)	7.5	4 11.07	63.7	8	3.446	+ 18 3 56.5	66.2	3	10.34
3310	Carrington 1186	9.0	4 26.78	68.7	2	10.272	+ 80 58 4.6	63.9	2	10.36

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			h. m. s.			″	° ′ ″			″
3311	Carrington 1187 . .	8.8	8 4 30.47	69.2	1	+10.246	+ 80 56 8.4	63.9	2	− 10.37
3312	O. Arg. S. 8165. . .	8.0	4 45.42	67.2	2	2.416	− 29 49 24.4	68.2	2	10.39
3313	O. Arg. S. 8169. . .	7.0	5 5.14	67.2	2	2.419	− 29 44 4.5	68.2	2	10.41
3314	Weisse (2) VIII, 83 .	8.1	5 13.74	65.2	2	3.504	+ 20 42 0.2	65.2	2	10.42
3315	Lalande 16069 . . .	9.0	5 25.60	62.2	2	2.909	− 8 7 12.0	66.2	2	10.44
3316	Weisse (2) VIII, 87 .	9.0*	8 5 29.	. .	.	+ 3.668	+ 27 32 51.2	69.3	2	− 10.44
3317	O. Arg. S. 8199 . .	7.0	6 15.80	63.1	2	2.421	− 29 47 46.6	66.2	2	10.50
3318	Anonymous . . .	8.0	6 19.36	65.1	2	2.452	− 28 35 11.7	68.1	2	10 50
3319	Lacaille 3201 . . .	6.0	6 55.	. .	.	2.070	− 41 22 16.6	66.2	2	10.55
3320	Weisse (2) VIII, 119 .	8.2	6 59.61	62.2	2	3.799	+ 32 36 2.5	62.2	2	10.55
3321	57 Camelopardi . . .	6.0*	8 7 3.90	66.0	2	+ 5.297	+ 62 56 5.7	67.8	2	− 10.56
3322	Lacaille 3192 . . .	6.0	7 6.11	69.1	2	2.429	− 29 29 38.1	63.2	1	10.56
3323	Weisse VIII, 162 . .	8.5	7 15.56	62.3	2	2.879	− 9 36 39.4	67.2	2	10.57
3324	O. Arg. S. 8225. . .	7.0	7 16.73	67.1	2	2.569	− 23 52 21.4	68.7	2	10.57
3325	Lalande 16130 . . .	7.5	7 54.60	59.1	2	3.465	+ 19 7 8.1	55.2	2	10.62
3326	Lacaille 3209 . . .	6.9	8 8 4.42	64.0	3	+ 2.382	− 31 19 10.5	66.1	2	− 10.63
3327	Lalande 16162 . . .	9.0	8 16.04	62.2	2	2.943	− 6 29 20.4	62.3	2	10.65
3328	Anonymous . . .	8.0	8 41.96	66.7	2	2.496	− 26 59 39.2	67.2	2	10.68
3329	Anonymous . . .	9.0	8 45.71	65.1	1	3.492	+ 20 21	. .	.	10.68
3330	β Cancri	4.0*	8 55.28	60.2	6	3.264	+ 9 36 52.0	68.8	2	10.70
3331	30 Lyncis	7.0	8 9 6.25	59.7	2	+ 4.894	+ 58 10 31.9	68.7	2	− 10.71
3332	O. Arg. S. 8280. . .	7.0	9 23.50	64.7	2	2.408	− 30 25 55.8	66.9	3	10.73
3333	Anonymous . . .	9.0	9 29.	. .	.	3.751	+ 31 1 1.6	71.2	1	10.74
3334	Anonymous . . .	9.3	9 29.	. .	.	3.752	+ 31 3 38.5	71.2	1	10.74
3335	O. Arg. S. 8291 . .	8.5	10 6.26	66.8	2	2.551	− 24 48 25.5	64.9	3	10.78
3336	Anonymous . . .	8.5	8 10 7.26	67.1	2	+ 2.417	− 30 9 7.1	69.2	2	− 10.78
3337	Anonymous . . .	8.5	10 11.09	69.2	1	2.417	− 30 10 25.3	69.2	2	10.79
3338	O. Arg. S. 8295. . .	5.8	10 15.75	69.1	3	2.408	− 30 29 54.6	66.7	4	10.79
3339	Lacaille 3229 . . .	7.0	10 19.01	63.7	4	2.428	− 29 45 23.5	70.1	2	10.80
3340	Lalande 16237 . . .	7.0	10 48.63	68.2	2	3.587	+ 24 36 28.1	56.3	2	10.83
3341	Weisse (2) VIII, 221 .	8.6	8 10 52.78	65.3	5	+ 3.490	+ 20 24 33.8	66.7	2	− 10.84
3342	Lacaille 3241 . . .	7.2	11 35.21	65.7	2	2.528	− 25 52 10.3	65.1	2	10.89
3343	O. Arg. S. 8338. . .	7.5	11 45.30	66.7	2	2.550	− 24 56 25.6	68.6	2	10.90
3344	Weisse VIII, 294 . .	7.0*	11 45.60	71.1	2	2.830	− 12 9 48.1	71.2	3	10.90
3345	O. Arg. S. 8343. . .	8.0	11 48.66	66.7	2	2.552	− 24 53 7.0	69.7	2	10.91
3346	O. Arg. S. 8345. . .	8.0	8 11 57.41	66.7	2	+ 2.551	− 24 55 42.0	67.6	2	− 10.92
3347	Lacaille 3248 . . .	6.6	11 58.06	63.7	2	2.359	− 32 26 20.5	67.7	2	10.92
3348	B. A. C. 2788 . . .	6.5	12 10.74	59.4	7	3.506	+ 21 11 10.7	57.3	9	10.94
3349	λ Cancri	6.0*	12 12.39	59.3	7	3.582	+ 24 27 35.3	62.7	2	10.94
3350	B. A. C. 2790 . . .	6.0	12 16.70	66.1	2	2.436	− 29 34 15.2	66.9	3	10.94

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3351	Lacaille 3249	7.7	8 12 26.14	62.2	1	+ 2.528	− 25 54 29.3	65.2	2	− 10.96
3352	Lacaille 3257	5.2	12 56.71	64.2	2	2.288	− 35 1 1.1	66.7	2	10.99
3353	Lacaille 3258	6.4	13 0.40	69.1	2	2.231	− 36 56 24.8	65.2	2	11.00
3354	31 Lyncis	5.5	13 14.34	64.7	2	4.137	+ 43 38 0.6	68.7	2	11.02
3355	Anonymous	7.8	13 19.62	63.0	2	2.435	− 29 42 4.9	66.7	2	11.02
3356	Anonymous	9.0	8 13 29.	. .	.	+ 2.435	− 29 43 7.4	66.1	1	− 11.03
3357	Anonymous	8.5	13 38.35	69.2	2	3.580	+ 24 27 55.2	56.3	2	11.04
3358	O. Arg. S. 8383.	7.5	13 43.52	68.7	2	2.552	− 24 59 10.5	65.2	2	11.05
3359	Anonymous	7.5	13 50.97	64.8	3	2.513	− 26 38 36.8	68.2	2	11.06
3360	Anonymous	7.2	14 0.22	63.0	2	2.435	− 29 44 48.1	66.7	2	11.07
3361	Lacaille 3262	6.5	8 14 5.31	69.2	2	+ 2.316	− 34 9 8.4	67.5	3	− 11.07
3362	Weisse (2) VIII, 309	7.0*	14 5.92	59.1	2	3.375	+ 15 12 36.4	55.2	3	11.07
3363	B. A. C. 2787	7.2	14 6.73	61.7	12	17.350	+ 85 32 10.4	68.8	2	11.08
3364	Lacaille 3267	6.8	14 27.25	64.0	3	2.412	− 30 39 31.7	67.5	3	11.10
3365	Anonymous	9.2	14 27.42	65.1	1	2.415	− 30 31 34.9	70.2	2	11.10
3366	Lacaille 3272	6.2	8 14 32.52	69.2	2	+ 2.234	− 36 58 44.7	65.2	2	− 11.11
3367	Lalande 16367	8.0	14 33.40	70.2	1	3.652	+ 27 32 16.4	69.3	1	11.11
3368	Lacaille 3266	7.2	14 35.30	68.7	2	2.452	− 29 6 4.6	65.2	3	11.11
3369	Weisse (2) VIII, 319	9.0	14 47.88	65.7	2	3.499	+ 21 0 48.8	59.5	3	11.13
3370	B. A. C. 2798	6.0*	15 13.32	60.1	3	4.088	+ 42 27 6.3	53.2	3	11.16
3371	d^1 Cancri	5.7	8 15 20.66	64.1	2	+ 3.450	+ 18 46 41.6	61.2	3	− 11.17
3372	Weisse VIII, 381	8.9	15 25.90	63.7	3	3.321	+ 12 37 55.5	65.3	1	11.17
3373	O. Arg. N. 8922	8.7	15 36.39	62.2	4	4.779	+ 56 58 32.8	62.7	2	11.19
3374	Weisse VIII, 389	9.0	15 39.23	64.1	3	3.309	+ 12 3 53.8	67.6	2	11.19
3375	*w* Puppis	5.1	15 52.30	63.3	3	2.363	− 32 36 42.7	68.2	3	11.21
3376	Lalande 16413	6.5	8 16 6.68	69.7	2	+ 3.861	+ 35 27 42.0	47.2	1	− 11.22
3377	21 Cancri	7.0*	16 15.65	59.2	5	3.289	+ 11 4 49.5	54.8	4	11.23
3378	Lacaille 3279	7.1	16 19.45	64.2	2	2.479	− 28 10 44.4	68.2	2	11.24
3379	Weisse VIII, 415	8.7	16 32.38	66.2	2	3.347	+ 13 57 16.7	70.1	2	11.26
3380	Weisse (2) VIII, 364	7.1	16 36.95	68.2	2	3.574	+ 24 23 35.1	56.3	2	11.26
3381	Weisse (2) VIII, 370	9.0*	8 16 45.65	66.7	2	+ 3.466	+ 19 37 11.9	56.2	2	− 11.27
3382	Anonymous	6.6	16 49.55	64.5	3	2.453	− 29 14 45.9	69.7	2	11.27
3383	B. A. C. 2811	6.5	16 54.94	68.7	2	2.535	− 25 54 6.7	67.2	2	11.28
3384	Lalande 16464	7.6	17 4.13	69.2	2	3.564	+ 24 0 1.8	62.2	2	11.29
3385	Lacaille 3290	7.0	17 9.06	64.3	3	2.404	− 31 9 38.8	66.6	2	11.30
3386	Rumker 2505	8.5	8 17 14.02	60.6	2	+ 4.777	+ 57 3 37.4	68.2	2	− 11.30
3387	Weisse (2) VIII, 381	9.0	17 28.19	71.1	1	4.011	+ 40 24 2.5	69.3	2	11.32
3388	Weisse (2) VIII, 382	7.5	17 28.53	67.5	3	4.009	+ 40 20 45.5	62.4	4	11.32
3389	Lacaille 3293	6.5	17 42.74	67.1	2	2.501	− 27 22 19.2	70.2	3	11.34
3390	O. Arg. S. 8484.	7.0	17 50.93	67.1	2	2.426	− 30 21 8.5	70.2	2	11.35

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3391	Rumker 2508	7.0	8 17 52.76	66.7	2	+ 4.778	+ 57 7 27.5	68.2	2	− 11.35
3392	α^2 Cancri	5.5	17 54.05	65.2	2	3.422	+ 17 36 15.3	70.2	2	11.35
3393	Lacaille 3299	6.7	18 0.67	63.2	2	2.437	− 29 56 36.5	68.7	2	11.36
3394	ϕ^2 Cancri, (1st *)	7.0	18 18.75	65.2	5	3.642	+ 27 23 19.7	69.2	3	11.38
3395	ϕ^2 Cancri, (2d *)	7.0	18 18.97	65.2	5	3.642	+ 27 23 23.4	69.2	3	11.38
3396	Santini 583	6.0	8 18 19.24	65.1	2	+ 3.121	+ 2 33 21.1	62.2	2	− 11.38
3397	υ^1 Cancri, (1st *)	7.0	18 19.86	60.3	6	3.585	+ 24 59 29.0	56.7	4	11.38
3398	υ^1 Cancri, (2d *)	7.5	18 20.14	60.7	4	3.585	+ 24 59 32.8	68.2	2	11.38
3399	Lacaille 3302	7.4	18 26.74	63.2	2	2.372	− 32 26 48.7	68.6	2	11.39
3400	Weisse (2) VIII, 408	8.5	18 28.38	61.2	2	4.005	+ 40 17 52.3	56.2	2	11.39
3401	o Ursæ Majoris	5.0	8 18 36.00	69.2	2	+ 5.072	+ 61 10 54.0	64.8	1	− 11.41
3402	Anonymous	9.5	18 43.98	67.1	2	2.502	− 27 22 59.2	69.7	2	11.41
3403	B. A. C. 2827	6.0	19 1.16	62.2	4	2.592	− 23 35 38.7	70.2	2	11.43
3404	Weisse (2) VIII, 429	8.5	19 1.16	64.8	3	3.466	+ 19 42 38.5	56.7	2	11.43
3405	Anonymous	. .	19 3.	. . .	.	2.607	− 22 57 1.3	62.0	1	11.43
3406	Weisse (2) VIII, 440	8.5	8 19 10.86	62.9	2	+ 3.466	+ 19 45 18.5	65.2	2	− 11.44
3407	Anonymous	9.5	19 12.59	62.2	1	4.007	+ 40 25 32.9	68.2	1	11.45
3408	Weisse (2) VIII, 438	8.5	19 27.04	62.2	2	4.006	+ 40 23 43.2	56.1	2	11.46
3409	Lacaille 3312	6.8	19 34.75	67.5	4	2.400	− 31 29 13.0	69.2	2	11.47
3410	Weisse (2) VIII, 458	7.7	20 10.34	66.6	2	3.582	+ 25 0 5.4	68.2	2	11.52
3411	Anonymous	6.9	8 20 24.05	64.6	5	+ 2.522	− 26 41 9.8	68.2	2	− 11.53
3412	Lacaille 3316	6.8	20 25.53	67.5	3	2.396	− 31 42 54.9	64.9	6	11.53
3413	29 Cancri	6.0*	20 48.39	62.0	10	3.358	+ 14 40 16.4	58.9	5	11.56
3414	B. A. C. 2838	5.8	20 57.98	69.2	2	2.099	− 41 41 49.5	66.2	2	11.57
3415	Anonymous	7.1	21 13.39	67.2	2	2.402	− 31 34 10.5	68.2	2	11.59
3416	Rumker 2533	8.5	8 21 21.01	60.2	3	+ 3.488	+ 20 53 28.5	55.2	2	− 11.60
3417	Lacaille 3321	6.0	21 28.46	68.3	2	2.398	− 31 43 29.6	64.2	4	11.61
3418	Weisse (2) VIII, 490	9.0	21 34.96	65.3	4	3.398	+ 16 40 19.2	67.2	2	11.62
3419	B. A. C. 2843	6.3	21 38.84	64.3	5	2.412	− 31 12 47.8	66.5	3	11.62
3420	Weisse VIII, 554	8.8	21 41.21	66.2	2	3.304	+ 12 2 39.0	67.3	2	11.62
3421	B. A. C. 2846	6.3	8 21 57.18	62.1	2	+ 2.549	− 25 40 18.5	68.7	2	− 11.64
3422	Santini 588	8.0	21 57.93	62.0	2	3.075	+ 0 9 46.2	62.2	2	11.64
3423	Lacaille 3331	6.6	22 1.00	63.8	2	2.404	− 31 32 0.2	68.3	2	11.65
3424	B. A. C. 2844	6.0*	22 1.71	53.4	4	4.547	+ 53 35 6.6	48.2	5	11.65
3425	Anonymous	8.5	22 8.50	69.1	2	2.322	− 34 34 3.0	70.1	1	11.66
3426	Weisse VIII, 569	8.8	8 22 10.80	66.2	2	+ 3.304	+ 12 3 48.2	68.2	2	− 11.66
3427	O. Arg. N. 9050	8.0	22 17.24	59.2	2	4.674	+ 55 49 32.5	55.8	2	11.67
3428	O. Arg. S. 8581	7.4	22 20.49	64.2	2	2.516	− 27 6 11.7	68.2	1	11.67
3429	Anonymous	9.0	22 42.88	64.7	2	2.489	− 28 14 39.0	69.7	2	11.70
3430	Anonymous	8.9	23 7.94	65.1	1	2.449	− 29 51 5.0	70.2	1	11.73

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3431	υ^3 Cancri	6.0	8 23 13.53	65.9	3	+ 3.567	+ 24 32 59.8	70.2	2	− 11.73
3432	Anonymous	7.0	23 16.20	64.7	2	2.490	− 28 13 31.2	68.2	2	11.74
3433	Lacaille 3341	6.8	23 22.13	64.7	2	2.491	− 28 12 7.3	68.2	2	11.74
3434	Anonymous	6.0	23 34.25	65.1	3	2.522	− 26 52 2.0	68.8	2	11.76
3435	O. Arg. S. 8610.	7.5	23 34.84	69.1	1	2.450	− 29 54 7.0	71.2	1	11.76
3436	θ Cancri	5.5*	8 23 36.57	60.4	3	+ 3.436	+ 18 33 52.2	61.0	4	− 11.76
3437	Anonymous	7.3	23 37.93	65.1	1	3.463	+ 19 51	. .	.	11.76
3438	Weisse VIII, 601	8.3	23 47.	. .	.	3.326	+ 13 13 9.9	70.1	1	11.78
3439	B. A. C. 2855	6.0*	23 48.22	59.7	2	3.933	+ 38 29 36.5	51.5	7	11.78
3440	O. Arg. S. 8620.	7.5	24 8.62	66.7	2	2.451	− 29 51 33.5	69.8	2	11.80
3441	Weisse (2) VIII, 560	9.0	8 24 17.34	62.2	2	+ 3.446	+ 19 4 28.6	56.9	3	− 11.81
3442	Weisse VIII, 618	9.0	24 26.59	59.1	2	3.327	+ 13 16 22.0	60.0	6	11.82
3443	η Cancri	5.3	24 36.49	61.9	76	3.485	+ 20 54 49.9	59.8	3	11.83
3444	Lacaille 3356	5.6	24 51.76	66.6	2	2.406	− 31 41 27.2	62.5	3	11.85
3445	Lacaille 3361	6.8	25 8.21	63.5	3	2.433	− 30 39 56.2	66.1	2	11.87
3446	Weisse (2) VIII, 579	9.0*	8 25 20.35	46.1	1	+ 3.728	+ 31 21 19.9	46.2	2	− 11.88
3447	Anonymous	7.8	25 23.81	66.7	2	2.418	− 31 16 32.5	69.2	2	11.89
3448	O. Arg. S. 8654.	7.3	25 28.94	68.2	2	2.565	− 25 12 41.7	64.9	3	11.89
3449	Anonymous	9.0	25 35.42	67.6	2	2.685	− 19 45 52.5	68.7	2	11.90
3450	O. Arg. S. 8660	8.2	25 40.86	68.2	2	2.567	− 25 8 16.3	65.2	2	11.91
3451	Anonymous	7.5	8 26 24.06	66.7	2	+ 2.425	− 31 5	. .	.	− 11.96
3452	Anonymous.	9.0	26 27.13	65.1	1	2.686	− 19 48 31.9	69.7	2	11.96
3453	Anonymous	8.0	26 52.59	66.6	2	2.408	− 31 45 40.1	69.2	2	12.00
3454	1 Præsepe, (Eq.)	10.0	27 0.05	69.7	6	3.462	+ 19 59 51.2	69.7	6	12.00
3455	35 Cancri	6.5*	27 16.20	65.1	1	3.463	+ 20 4 6.2	65.5	3	12.02
3456	Anonymous	7.6	8 27 17.09	64.5	3	+ 2.602	− 23 42 28.3	68.2	1	− 12.02
3457	3 Præsepe, (Eq.)	10.7	27 18.56	69.6	6	3.467	+ 20 16 8.6	69.6	6	12.02
3458	B. A. C. 2883	6.3	27 23.14	66.5	8	2.428	− 31 3 11.6	70.0	4	12.03
3459	Weisse (2) VIII, 629	7.0	27 25.04	68.3	1	3.702	+ 30 29 50.9	46.2	3	12.03
3460	B. A. C. 2885	6.0	27 30.14	71.2	2	2.346	− 34 9 35.7	71.3	1	12.03
3461	5 Præsepe, (Eq.)	9.0	8 27 37.75	69.2	6	+ 3.478	+ 20 48 35.2	69.2	6	− 12.04
3462	B. A. C. 2886	8.0	27 41.51	65.3	4	3.466	+ 20 15 3.4	67.2	2	12.05
3463	7 Præsepe, (Eq.)	10.0	27 51.36	67.6	6	3.460	+ 19 57 9.9	67.6	6	12.06
3464	Anonymous	9.0	27 53.74	63.2	1	3.264	+ 10 10 4.8	70.2	2	12.06
3465	Anonymous.	. .	27 58.	. .	.	3.546	+ 23 56 30.4	56.3	2	12.07
3466	8 Præsepe, (Eq.)	10.2	8 27 59.74	68.2	6	+ 3.474	+ 20 39 45.4	68.2	6	− 12.07
3467	Lacaille 3388	7.0	28 0.07	63.1	2	2.583	− 24 37 20.5	68.7	2	12.07
3468	9 Præsepe, (Eq.)	8.5	28 12.18	66.2	7	3.478	+ 20 49 21.6	66.2	7	12.08
3469	Anonymous	9.0	28 15.	. .	.	3.630	+ 27 37 26.5	70.1	1	12.09
3470	10 Præsepe, (Eq.)	9.7	28 15.52	66.9	9	3.474	+ 20 38 17.3	66.9	9	12.09

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3471	11 Præsepe, (Eq.)	10.5	8 28 17.87	68.2	5	+ 3.457	+ 19 51 31.4	68.2	5	− 12.09
3472	Weisse VIII, 721	9.0	28 18.16	62.2	2	3.268	+ 10 23 22.0	69.7	2	12.09
3473	B. A. C. 2889, (1st *)	6.5	28 24.23	63.4	4	3.205	+ 7 6 21.5	65.6	6	12.10
3474	B. A. C. 2889, (2d *)	7.5	28 24.52	63.4	4	3.205	+ 7 6 31.5	52.2	4	12.10
3475	Anonymous	. .	28 30.	. .	.	3.559	+ 24 32 41.9	56.3	1	12.10
3476	Anonymous	5.5	8 28 34.69	65.0	1	+ 2.538	− 26 37 12.3	68.2	2	− 12.11
3477	Anonymous	8.0	28 41.	. .	.	3.540	+ 23 43 59.1	62.8	2	12.12
3478	12 Præsepe, (Eq.)	11.0	28 43.14	67.7	8	3.465	+ 20 14 42.2	67.7	8	12.12
3479	Weisse VIII, 736	9.0*	28 46.19	59.2	2	3.305	+ 12 20 15.0	55.5	3	12.12
3480	13 Præsepe, (Eq.)	10.7	28 47.07	68.2	6	3.454	+ 19 44 23.2	68.2	6	12.12
3481	Weisse VIII, 738	8.5	8 28 50.12	64.2	2	+ 3.302	+ 12 11 8.0	69.2	2	− 12.13
3482	B. A. C. 2892	6.0*	28 54.00	60.0	4	4.495	+ 53 11 53.8	54.1	3	12.13
3483	Lacaille 3399	6.5	28 55.43	63.2	2	2.404	− 32 6 52.5	68.2	2	12.13
3484	14 Præsepe, (Eq.)	10.7	28 55.50	66.2	4	3.456	+ 19 50 42.5	66.2	4	12.13
3485	15 Præsepe, (Eq.)	8.2	28 59.14	66.3	4	3.461	+ 20 5 16.6	66.0	16	12.14
3486	16 Præsepe, (Eq.)	10.8	8 29 6.86	69.2	6	+ 3.476	+ 20 46 6.2	69.2	6	+ 12.15
3487	17 Præsepe, (Eq.)	10.7	29 8.14	67.7	8	3.465	+ 20 17 13.7	67.7	8	12.15
3488	18 Præsepe, (Eq.)	11.0	29 15.10	69.6	6	3.463	+ 20 10 56.9	69.6	6	12.16
3489	19 Præsepe.	10.0	29 25.25	68.7	2	3.460	+ 20 2 49.7	65.6	2	12.17
3490	Anonymous	7.0	29 25.31	70.1	1	2.585	− 24 37 40.5	67.2	1	12.17
3491	20 Præsepe, (Eq.)	9.5	8 29 26.63	65.3	9	+ 3.451	+ 19 38 47.4	65.3	9	− 12.17
3492	21 Præsepe, (Eq.)	10.7	29 28.82	66.3	6	3.456	+ 19 51 34.3	66.3	6	12.17
3493	22 Præsepe, (Eq.)	9.5	29 29.88	65.5	21	3.469	+ 20 29 53.5	65.5	21	12.17
3494	22 Præsepe	. .	29 29.	. .	.	3.469	+ 20 29 50.0	66.2	2	12.17
3495	c^1 Cancri	6.4	29 30.24	63.6	12	3.262	+ 10 8 21.4	65.2	4	12.17
3496	B. A. C. 2898	7.0	8 29 32.59	59.3	2	+ 2.546	− 26 21 47.1	69.8	2	− 12.18
3497	Weisse (2) VIII, 708	7.2	29 33.88	66.9	4	3.463	+ 20 13 2.4	66.3	6	12.18
3498	Anonymous	8.0	29 34.	. .	.	2.439	− 30 48 17.3	69.2	1	12.18
3499	24 Præsepe, (Eq.)	11.0	29 36.44	69.6	6	3.464	+ 20 14 23.6	69.6	6	12.18
3500	25 Præsepe, (Eq.)	10.7	29 37.58	69.6	6	3.464	+ 20 14 42.7	69.6	6	12.18
3501	Weisse (2) VIII, 713	9.0	8 29 38.19	66.7	7	+ 3.459	+ 20 0 14.0	66.6	3	− 12.18
3502	27 Præsepe, (Eq.)	9.5	29 40.87	65.4	10	3.450	+ 19 37 5.9	65.4	10	12.19
3503	28 Præsepe, (Eq.)	10.5	29 44.32	67.7	5	3.457	+ 19 55 27.2	67.7	5	12.19
3504	B. A. C. 2899	6.2	29 44.93	69.2	3	3.453	+ 19 45 8.7	65.2	5	12.19
3505	30 Præsepe, (Eq.)	11.0	29 46.30	69.2	6	3.475	+ 20 47 29.1	69.2	6	12.19
3506	31 Præsepe, (Eq)	11.0	8 29 52.73	66.3	6	+ 3.454	+ 19 46 7.5	66.3	6	− 12.20
3507	Anonymous	8.0	29 53.57	71.1	1	2.900	− 9 13 49.3	56.2	1	12.20
3508	32 Præsepe, (Eq.)	11.7	29 54.38	69.6	6	3.459	+ 20 2 7.2	69.6	6	12.21
3509	33 Præsepe, (Eq.)	10.0	30 0.21	65.5	14	3.471	+ 20 36 56.1	65.5	14	12.21
3510	Lalande 16960	7.6	30 4.48	64.6	2	3.206	+ 7 13	. .	.	12.21

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			h. m. s.			″	° ′ ″			″
3511	34 Præsepe, (Eq.) . . .	11.3	8 30 10.07	69.6	5	+ 3.463	+ 20 15 41.9	69.6	5	− 12.22
3512	35 Præsepe, (Eq.) . . .	10.6	30 11.53	67.0	12	3.459	+ 20 2 16.0	67.0	12	12.22
3513	36 Præsepe, (Eq.) . . .	10.5	30 12.28	67.6	7	3.455	+ 19 51 6.5	67.6	7	12.22
3514	δ Hydræ	4.0*	30 14.64	71.1	2	3.187	+ 6 11 21.3	71.2	1	12.23
3515	37 Præsepe	. .	30 18.30	68.7	2	3.472	+ 20 41 35.7	67.5	3	12.23
3516	Groombridge 1452 . .	8.5	8 30 18.95	61.1	1	+ 9.413	+ 80 30 45.5	69.3	2	− 12.23
3517	38 Præsepe, (Eq.) . . .	10.0	30 20.18	69.2	6	3.470	+ 20 35 35.9	69.2	6	12.23
3518	39 Præsepe, (Eq.) . . .	11.0	30 20.44	69.2	6	3.469	+ 20 32 49.8	69.2	6	12.23
3519	40 Præsepe, (Eq.) . . .	11.0	30 29.04	68.3	5	3.455	+ 19 52 51.6	68.3	5	12.24
3520	41 Præsepe, (Eq.) . . .	10.2	30 29.68	66.9	12	3.456	+ 19 57 8.0	66.9	12	12.24
3521	c^2 Cancri	7.0	8 30 30.06	62.2	3	+ 3.260	+ 10 3 38.0	70.2	2	− 12.24
3522	42 Præsepe, (Eq.) . . .	9.6	30 30.79	65.8	20	3.465	+ 20 20 52.5	65.8	20	12.24
3523	43 Præsepe.	8.5	30 34.25	68.5	3	3.467	+ 20 28 37.4	65.5	4	12.25
3524	44 Præsepe, (Eq.) . . .	10.3	30 34.73	67.7	9	3.460	+ 20 8 6.7	67.7	9	12.25
3525	Lacaille 3419 . . .	7.4	30 35.10	64.0	2	2.439	− 30 51 18.7	68.8	2	12.25
3526	Lacaille 3422 . . .	7.0	8 30 43.91	70.2	2	+ 2.416	− 31 46 45.9	62.2	2	− 12.26
3527	45 Præsepe.	9.7	30 44.66	66.5	5	3.457	+ 19 59 21.9	65.7	2	12.26
3528	46 Præsepe, (Eq.) . . .	10.3	30 46.12	67.9	7	3.469	+ 20 33 20.2	67.9	7	12.26
3529	Weisse VIII, 792 . .	8.0	30 49.10	69.3	1	3.200	+ 6 52 32.7	56.7	2	12.27
3530	47 Præsepe, (Eq.) . . .	9.7	30 53.40	64.9	10	3.450	+ 19 41 11.5	64.9	10	12.27
3531	48 Præsepe, (Eq.) . . .	10.4	8 30 57.06	66.3	12	+ 3.455	+ 19 54 46.4	66.3	12	− 12.27
3532	49 Præsepe.	9.1	30 59.88	65.2	2	3.467	+ 20 29 17.5	66.2	2	12.35
3533	Anonymous . . .	. .	31 0.	. . .	.	3.529	+ 23 22 44.3	56.3	1	12.28
3534	Weisse (2) VIII, 756 .	9.6	31 0.01	68.4	4	3.461	+ 20 12 48.5	65.7	2	12.35
3535	Weisse (2) VIII, 762 .	8.7	31 3.35	66.1	5	3.460	+ 20 9 54.5	66.2	4	12.28
3536	B. A. C. 2910 . . .	6.2	8 31 5.62	63.4	3	+ 2.558	− 25 55 48.5	70.2	1	− 12.28
3537	B. A. C. 2907 . . .	8.0*	31 6.63	66.9	4	3.458	+ 20 4 52.5	65.2	2	12.29
3538	54 Præsepe, (Eq.) . . .	9.7	31 7.50	65.1	2	3.460	+ 20 10 1.4	67.7	9	12.29
3539	55 Præsepe, (Eq.) . . .	10.3	31 11.00	68.2	6	3.448	+ 19 36 17.6	68.2	6	12.29
3540	O. Arg. S. 8776. . .	7.7	31 14.96	65.7	2	2.606	− 23 48 50.0	67.3	1	12.30
3541	56 Præsepe	9.9	8 31 15.38	65.1	1	+ 3.468	+ 20 32	. .	.	− 12.30
3542	56 Præsepe, (Eq.) . . .	9.9	31 15.46	66.1	15	3.468	+ 20 32 33.3	66.1	15	12.30
3543	57 Præsepe, (Eq.) . . .	10.0	31 23.03	67.0	7	3.455	+ 19 56 56.8	67.0	7	12.31
3544	58 Præsepe, (Eq.) . . .	10.5	31 26.66	65.9	9	3.468	+ 20 33 32.6	65.9	9	12.31
3545	59 Præsepe, (Eq.) . . .	9.7	31 29.30	70.5	3	3.470	+ 20 39 31.3	66.0	17	12.31
3546	60 Præsepe, (Eq.) . . .	10.5	8 31 30.98	65.9	9	+ 3.452	+ 19 47 6.6	65.9	9	− 12.31
3547	B. A. C. 2912 . . .	7.0*	31 36.93	59.1	3	3.742	+ 32 26 0.5	53.2	4	12.32
3548	61 Præsepe.	8.5	31 39.00	67.9	4	3.468	+ 20 34 35.8	66.7	2	12.32
3549	38 Cancri	7.1	31 39.86	69.3	1	3.462	+ 20 16 7.4	66.7	4	12.32
3550	63 Præsepe.	7.0	31 43.30	70.2	2	3.451	+ 19 45 56.9	66.9	3	12.33

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			h. m. s.			"	° ′ "			"
3551	64 Præsepe, (Eq.)	10.0	8 31 44.12	67.5	6	+ 3.453	+ 19 51 29.0	67.5	6	− 12.33
3552	B. A. C. 2914	7.0*	31 48.47	68.0	5	3.456	+ 20 1 52.2	65.5	4	12.33
3553	66 Præsepe, (Eq.)	10.5	31 50.84	65.6	9	3.452	+ 19 48 12.1	65.6	9	12.34
3554	67 Præsepe, (Eq.)	10.2	31 51.42	66.5	12	3.467	+ 20 33 21.5	66.5	12	12.34
3555	*g* Mâli	4.8	31 53.44	63.1	2	2.563	− 25 46 2.1	69.2	2	12.34
3556	Weisse (2) VIII, 790	8.4	8 31 54.29	68.0	5	+ 3.456	+ 20 2 36.7	67.5	3	− 12.34
3557	69 Præsepe.	9.5	31 54.47	71.2	5	3.469	+ 20 38 54.7	68.1	2	12.34
3558	70 Præsepe, (Eq.)	10.0	31 55.58	69.2	2	3.466	+ 20 31 21.7	66.5	12	12.34
3559	Weisse (2) VIII, 793	8.5	31 55.58	67.7	4	3.456	+ 20 1 56.2	67.1	3	12.34
3560	72 Præsepe, (Eq.)	9.8	31 56.35	66.3	9	3.459	+ 20 9 33.5	66.3	9	12.34
3561	Lacaille 3434	6.7	8 31 56.46	63.2	2	+ 2.381	− 33 15 26.7	69.8	2	− 12.34
3562	73 Præsepe, (Eq.)	9.8	31 56.93	65.5	6	3.449	+ 19 41 34.2	65.5	6	12.34
3563	74 Præsepe, (Eq.)	10.0	31 57.41	67.5	12	3.469	+ 20 37 36.7	67.5	12	12.35
3564	74 Præsepe	9.0	31 57.47	71.2	1	3.469	+ 20 37	. .	.	12.35
3565	75 Præsepe, (Eq.)	10.1	31 57.78	67.8	9	3.462	+ 20 17 51.1	67.8	9	12.35
3566	76 Præsepe, (Eq.)	11.3	8 32 0.14	69.2	6	+ 3.470	+ 20 41 0.2	69.2	6	− 12.35
3567	77 Præsepe, (Eq.)	10.0	32 2.25	67.5	14	3.460	+ 20 13 12.8	67.5	14	12.35
3568	39 Cancri	6.0*	32 2.94	66.1	8	3.466	+ 20 29 57.7	65.2	2	12.35
3569	79 Præsepe, (Eq.)	10.1	32 4.39	67.0	6	3.454	+ 19 56 43.8	67.0	6	12.35
3570	80 Præsepe, (Eq.)	10.8	32 4.78	65.6	6	3.451	+ 19 47 56.4	65.6	6	12.35
3571	40 Cancri	7.0	8 32 8.07	65.0	5	+ 3.465	+ 20 27 45.6	62.8	3	− 12.36
3572	82 Præsepe, (Eq.)	11.3	32 8.35	67.6	6	3.455	+ 19 57 59.1	67.6	6	12.36
3573	83 Præsepe, (Eq.)	9.8	32 10.00	67.4	15	3.458	+ 20 7 51.2	67.4	15	12.36
3574	Weisse VIII, 828	7.5	32 11.27	59.1	3	3.296	+ 12 2 0.5	55.9	3	12.36
3575	84 Præsepe.	10.2	32 11.94	67.2	3	3.465	+ 20 29 9.9	65.7	2	12.36
3576	85 Præsepe, (Eq.)	10.1	8 32 14.88	67.7	8	+ 3.461	+ 20 16 45.7	67.7	8	− 12.36
3577	86 Præsepe.	8.8	32 15.99	68.5	3	3.456	+ 20 1 27.4	66.2	2	12.37
3578	Lalande 17053	7.5	32 16.67	65.1	1	3.188	+ 6 15 56.2	70.2	1	12.37
3579	Anonymous	. .	32 18.	. .	.	3.188	+ 6 16 19.2	70.2	1	12.37
3580	87 Præsepe, (Eq.)	7.5	32 18.20	66.1	4	3.459	+ 20 10 42.6	66.6	13	12.37
3581	88 Præsepe.	6.5	8 32 18.57	69.2	3	+ 3.452	+ 19 50 29.0	64.9	3	− 12.37
3582	89 Præsepe, (Eq.)	10.1	32 18.71	66.8	6	3.468	+ 20 35 54.8	66.8	6	12.37
3583	B. A. C. 2919	6.5	32 19.60	66.1	3	3.458	+ 20 9 41.4	65.9	4	12.37
3584	Anonymous	. .	32 20.	. .	.	3.459	+ 20 11 13.1	66.3	1	12.37
3585	91 Præsepe	. .	32 20.	. .	.	3.462	+ 20 19 39.0	66.2	1	12.37
3586	91 Præsepe, (Eq.)	8.8	8 32 20.55	66.4	21	+ 3.462	+ 20 19 38.1	66.4	21	− 12.37
3587	92 Præsepe, (Eq.)	10.6	32 20.80	67.1	6	3.454	+ 19 57 25.4	67.1	6	12.37
3588	O. Arg. S. 8806	7.7	32 20.80	64.1	1	2.560	− 25 56 39.5	71.2	1	12.37
3589	93 Præsepe	7.8	32 22.88	71.2	6	3.469	+ 20 40 26.8	66.3	1	12.37
3590	94 Præsepe, (Eq.)	10.0	32 23.62	66.1	9	3.454	+ 19 58 5.2	66.1	9	12.37

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3591	95 Præsepe, (Eq.)	10.0	8 32 23.70	65.1	1	+ 3.459	+ 20 10 42.1	66.3	9	− 12.37
3592	ε Cancri	7.0	32 24.90	67.7	4	3.456	+ 20 2 13.0	67.7	2	12.38
3593	97 Præsepe, (Eq.)	11.3	32 26.08	68.3	6	3.450	+ 19 46 15.1	68.3	6	12.38
3594	98 Præsepe	. .	32 31.83	69.3	1	3.448	+ 19 41	. .	.	12.38
3595	98 Præsepe, (Eq.)	9.5	32 31.88	65.6	6	3.448	+ 19 41 13.3	65.6	6	12.38
3596	Anonymous	. .	8 32 34.21	65.1	1	+ 3.184	+ 6 3 23.9	65.1	1	− 12.39
3597	99 Præsepe, (Eq.)	11.0	32 35.20	69.6	6	3.463	+ 20 23 45.9	69.6	6	12.39
3598	Weisse (2) VIII, 810	8.2	32 37.42	62.7	2	3.622	+ 27 35 50.9	69.1	1	12.39
3599	100 Præsepe, (Eq.)	9.9	32 38.05	65.0	13	3.449	+ 19 43 16.2	65.0	13	12.39
3600	100 Præsepe	. .	32 38.10	69.3	1	3.449	+ 19 43	. .	.	12.39
3601	101 Præsepe, (Eq.)	11.0	8 32 40.44	69.6	6	+ 3.456	+ 20 3 31.8	69.6	6	− 12.39
3602	42 Cancri	6.8	32 40.66	65.3	4	3.459	+ 20 12 43.3	66.2	3	12.39
3603	103 Præsepe	. .	32 44.74	69.1	1	3.450	+ 19 48	. .	.	12.40
3604	103 Præsepe, (Eq.)	9.7	32 44.76	65.6	12	3.450	+ 19 48 11.1	65.6	12	12.40
3605	104 Præsepe, (Eq.)	10.0	32 44.87	67.7	9	3.455	+ 20 2 11.8	67.7	9	12.40
3606	105 Præsepe, (Eq.)	8.7	8 32 48.32	66.0	15	+ 3.470	+ 20 45 35.8	66.0	15	− 12.40
3607	Weisse VIII, 851	9.0	32 51.71	62.2	3	3.162	+ 4 53 31.4	71.2	1	12.41
3608	106 Præsepe, (Eq.)	9.6	32 53.94	69.2	2	3.463	+ 20 25 42.9	65.4	27	12.41
3609	B. A. C. 2925	6.0	32 54.14	66.7	7	3.456	+ 20 4 24.6	65.9	5	12.41
3610	B. A. C. 2925, (Eq.)	. .	32 54.19	65.5	30	3.456	+ 20 4 26.2	65.5	30	12.41
3611	Anonymous	. .	8 32 57.	. .	.	+ 2.375	− 33 32 55.1	67.2	1	− 12.41
3612	108 Præsepe, (Eq.)	10.6	33 2.54	67.7	9	3.454	+ 20 0 59.1	67.7	9	12.42
3613	109 Præsepe, (Eq.)	10.0	33 6.72	66.3	8	3.461	+ 20 20 56.6	66.3	8	12.42
3614	110 Præsepe, (Eq.)	9.7	33 7.91	66.5	15	3.461	+ 20 19 25.8	66.5	15	12.43
3615	111 Præsepe, (Eq.)	10.0	33 8.15	67.7	8	3.454	+ 20 0 11.4	67.7	8	12.43
3616	Weisse (2) VIII, 829	9.1	8 33 10.79	67.0	6	+ 3.462	+ 20 24 56.1	66.3	2	− 12.43
3617	Anonymous	6.5	33 14.30	63.9	1	2.376	− 33 32 40.8	67.2	1	12.43
3618	113 Præsepe, (Eq.)	7.7	33 17.29	69.8	3	3.449	+ 19 45 19.5	66.9	3	12.44
3619	114 Præsepe, (Eq.)	11.3	33 18.64	69.2	6	3.464	+ 20 28 30.9	69.2	6	12.44
3620	114 Præsepe	. .	33 18.83	68.2	1	3.464	+ 20 28	. .	.	12.44
3621	115 Præsepe, (Eq.)	10.8	8 33 22.69	69.2	4	+ 3.463	+ 20 26 18.0	69.2	4	− 12.44
3622	116 Præsepe, (Eq.)	10.0	33 25.11	68.3	2	3.454	+ 20 2 14.0	66.9	11	12.45
3623	117 Præsepe, (Eq.)	11.0	33 26.11	68.2	5	3.451	+ 19 51 59.4	68.2	5	12.45
3624	118 Præsepe, (Eq.)	10.5	33 26.28	69.6	6	3.458	+ 20 14 29.9	69.6	6	12.45
3625	119 Præsepe, (Eq.)	11.0	33 30.77	69.3	6	3.463	+ 20 27 52.4	69.3	6	12.45
3626	Weisse (2) VIII, 841	9.2	8 33 32.67	66.7	5	+ 3.456	+ 20 9 26.2	66.2	3	− 12.45
3627	121 Præsepe, (Eq.)	9.3	33 35.42	65.2	4	3.446	+ 19 38 17.8	65.2	4	12.46
3628	122 Præsepe, (Eq.)	10.7	33 39.92	69.2	5	3.468	+ 20 43 21.6	69.2	5	12.46
3629	123 Præsepe, (Eq.)	9.0	33 40.19	68.1	4	3.456	+ 20 9 20.9	66.1	9	12.46
3630	124 Præsepe, (Eq.)	10.2	33 44.47	65.2	13	3.448	+ 19 45 47.4	65.2	13	12.47

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3631	125 Præsepe, (Eq.)	10.8	8 33 46.23	68.3	5	+ 3.451	+ 19 54 31.3	68.3	5	− 12.47
3632	B. A. C. 2931	6.5	33 47.32	66.9	6	3.461	+ 20 22 11.4	65.5	3	12.47
3633	127 Præsepe	8.8	33 49.62	70.2	6	3.467	+ 20 39 20.0	67.2	2	12.47
3634	Lacaille 3449	7.0*	33 50.37	69.3	1	2.502	− 28 35 20.5	63.2	1	12.47
3635	Weisse VIII, 885	8.0*	33 51.	. .	.	2.807	− 14 12 14.1	63.7	2	12.47
3636	128 Præsepe, (Eq.)	10.5	8 33 52.71	69.6	6	+ 3.456	+ 20 7 50.0	69.6	6	− 12.48
3637	129 Præsepe, (Eq.)	10.5	33 53.71	69.6	6	3.457	+ 20 11 7.8	69.6	6	12.48
3638	*f* Mali	4.0	33 53.96	63.3	2	2.490	− 29 3 53.5	69.2	2	12.48
3639	Weisse VIII, 889	9.0*	33 57.	. .	.	2.847	− 12 9 32.4	70.2	1	12.48
3640	130 Præsepe, (Eq.)	10.2	34 3.36	67.0	6	3.455	+ 20 5 48.0	67.0	6	12.49
3641	131 Præsepe	7.7	8 34 4.99	69.7	2	+ 3.451	+ 19 54 29.5	65.2	1	− 12.49
3642	131 Præsepe, (Eq.)	8.9	34 5.03	65.0	29	3.451	+ 19 54 29.4	65.0	29	12.49
3643	132 Præsepe, (Eq.)	10.2	34 13.38	69.1	6	3.456	+ 20 11 4.4	69.1	6	12.50
3644	133 Præsepe, (Eq.)	10.9	34 15.24	67.0	6	3.457	+ 20 13 10.8	67.0	6	12.50
3645	Weisse (2) VIII, 856	7.0*	34 16.	. .	.	4.053	+ 43 10 53.8	71.2	2	12.50
3646	Lacaille 3459	7.3	8 34 16.79	67.2	4	+ 2.380	− 33 30 56.8	68.2	4	− 12.50
3647	134 Præsepe, (Eq.)	9.6	34 16.99	66.4	17	3.464	+ 20 32 2.6	66.4	17	12.50
3648	Weisse(2)VIII,866,(Eq.)	9.5	34 18.02	66.7	7	3.466	+ 20 40 43.4	66.7	7	12.51
3649	Weisse (2) VIII, 866	9.0	34 18.08	67.0	5	3.466	+ 20 40 43.1	68.2	1	12.51
3650	Anonymous	7.3	34 29.65	68.5	3	2.380	− 33 31 35.1	68.2	4	12.52
3651	O. Arg. S. 8852	6.0	8 34 30.37	65.1	1	+ 2.545	− 26 45 46.5	69.6	2	− 12.52
3652	Anonymous	8.5	34 30.40	69.7	2	2.805	− 14 21 42.0	62.8	2	12.52
3653	136 Præsepe, (Eq.)	10.5	34 31.07	68.2	5	3.450	+ 19 53 40.2	68.2	5	12.52
3654	*b* Mali	4.0	34 37.46	64.3	1	2.346	− 34 48 48.2	68.8	2	12.53
3655	Anonymous	7.7	34 37.62	64.2	1	2.428	− 31 40 16.3	70.2	1	12.53
3656	137 Præsepe	9.7	8 34 39.18	65.1	2	+ 3.453	+ 20 2 28.8	65.1	2	− 12.53
3657	O. Arg. S. 8856	8.5	34 40.52	64.7	2	2.543	− 26 52 55.7	69.7	2	12.53
3658	B. A. C. 2930	6.0*	34 42.29	61.2	4	9.340	+ 80 32 41.7	68.3	1	12.53
3659	138 Præsepe, (Eq.)	9.6	34 42.63	65.1	2	3.454	+ 20 4 41.4	66.7	20	12.53
3660	139 Præsepe, (Eq.)	10.5	34 46.46	67.6	6	3.451	+ 19 57 55.6	67.6	6	12.54
3661	140 Præsepe, (Eq.)	11.5	8 34 48.75	68.3	4	+ 3.448	+ 19 50 16.9	68.3	4	− 12.54
3662	141 Præsepe, (Eq.)	11.7	35 3.18	68.3	6	3.447	+ 19 47 32.0	68.3	6	12.56
3663	142 Præsepe, (Eq.)	9.7	35 4.58	66.9	12	3.450	+ 19 56 14.1	66.9	12	12.56
3664	143 Præsepe, (Eq.)	11.0	35 8.66	69.2	4	3.466	+ 20 44 4.6	69.2	4	12.56
3665	44 Cancri	7.0	35 10.50	71.2	2	3.423	+ 18 38 57.9	67.8	2	12.57
3666	Anonymous	9.5	8 35 10.68	71.2	1	+ 3.515	+ 23 1 36.9	56.3	2	− 12.57
3667	γ Cancri	4.6*	35 10.76	60.3	18	3.492	+ 21 58 7.8	63.7	2	12.57
3668	Weisse (2) VIII, 894	7.7	35 30.48	62.8	3	3.619	+ 27 43 30.9	69.6	2	12.59
3669	144 Præsepe, (Eq.)	. .	35 32.15	65.9	9	3.465	+ 20 41 24.5	65.9	9	12.59
3670	144 Præsepe	9.2	35 32.16	65.1	1	3.465	+ 20 41	. .	.	12.59

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3671	Weisse (2) VIII, 898 .	9.0*	8 35 34.86	69.2	1	+ 3.518	+ 23 12 51.0	56.3	2	− 12.59
3672	145 Præsepe, (Eq.) . .	10.3	35 39.69	66.7	6	3.465	+ 20 40 35.9	66.7	6	12.60
3673	146 Præsepe, (Eq.) . .	11.3	35 45.75	68.3	5	3.449	+ 19 54 28.1	68.3	5	12.61
3674	Weisse (2) VIII, 936 .	9.0	36 7.40	62.2	2	3.333	+ 14 7 30.8	68.7	2	12.63
3675	147 Præsepe, (Eq.) . .	10.7	36 24.54	66.2	6	3.464	+ 20 42 22.8	66.2	6	12.65
3676	148 Præsepe, (Eq.) . .	9.7	8 36 24.74	68.7	6	+ 3.459	+ 20 28 1.2	68.7	6	− 12.65
3677	O. Arg. S. 8887 . .	8.0	36 26.92	67.7	2	2.616	− 23 42 44.5	70.2	1	12.65
3678	149 Præsepe, (Eq.) . .	10.5	36 31.34	68.3	4	3.447	+ 19 53 50.9	68.3	4	12.66
3679	Lacaille 3469 . . .	7.7	36 32.22	63.5	3	2.431	− 31 43 54.3	62.2	2	12.66
3680	Anonymous . . .	9.0	36 34.41	71.1	1	3.334	+ 14 9 58.7	69.2	3	12.66
3681	Lalande 17182 . .	7.5*	8 36 38.65	69.1	1	+ 3.876	+ 37 47 54.1	47.2	2	− 12.67
3682	δ Cancri	4.5	36 43.48	62.1	16	3.422	+ 18 39 57.5	61.6	3	12.67
3683	150 Præsepe, (Eq.) . .	9.5	36 43.60	66.7	4	3.457	+ 20 23 51.9	66.7	4	12.67
3684	σ^1 Cancri	6.0	36 45.55	62.2	3	3.700	+ 31 12 6.2	53.2	8	12.67
3685	151 Præsepe, (Eq.) . .	9.5	36 46.06	67.8	6	3.448	+ 19 56 4.2	67.8	6	12.67
3686	Lacaille 3474 . . .	8.0	8 37 14.10	63.4	4	+ 2.498	− 29 1 23.7	69.2	2	− 12.70
3687	Lacaille 3485 . . .	6.8	37 29.62	66.7	2	2.336	− 35 26 32.7	69.7	2	12.72
3688	Anonymous . . .	7.8	37 57.28	67.4	4	2.412	− 32 39 12.5	68.8	2	12.75
3689	α Mali	5.0	37 58.09	67.4	4	2.410	− 32 41 3.4	68.8	2	12.75
3690	Dorpat 1270, (1st *) .	7.5	38 16.02	68.2	4	3.034	− 2 5 40.3	64.2	1	12.77
3691	Dorpat 1270, (2d *) .	7.5	8 38 16.40	68.2	4	+ 3.034	− 2 5 40.3	64.2	1	− 12.77
3692	Weisse (2) VIII, 969 .	8.2	38 53.18	62.3	2	3.938	+ 40 6 29.0	58.9	4	12.82
3693	Weisse VIII, 999 . .	9.0	39 6.14	59.1	2	3.280	+ 11 27 37.9	55.2	2	12.83
3694	Lacaille 3500 . . .	7.0	39 15.20	67.7	2	2.468	− 30 28 21.7	68.3	2	12.84
3695	Lacaille 3502 . . .	7.0*	39 25.	. .	.	2.437	− 31 44 19.9	62.2	2	12.85
3696	ε Hydræ	3.4*	8 39 21.64	57.7	138	+ 3.197	+ 6 55 47.9	50.4	66	− 12.85
3697	O. Arg. S. 8946 . .	9.0	39 24.43	64.2	1	2.548	− 27 3 46.6	68.6	2	12.85
3698	Weisse VIII, 1012, (1st*)	8.5	39 32.31	67.4	4	3.284	+ 11 40 24.1	55.2	1	12.86
3699	Weisse VIII, 1012, (2d *)	8.5	39 32.44	66.1	5	3.284	+ 11 40 10.3	55.2	2	12.86
3700	Lacaille 3509 . . .	7.2	40 10.20	63.3	4	2.570	− 26 6 12.9	67.2	3	12.90
3701	Lacaille 3511 . . .	9.0	8 40 26.77	68.7	2	+ 2.571	− 26 7	. .	.	− 12.92
3702	O. Arg. S. 8978 . .	7.2	40 44.74	63.2	2	2.500	− 29 14 52.4	68.2	2	12.94
3703	Weisse (2) VIII, 1016.	8.4	40 45.76	68.3	2	3.500	+ 22 42 58.7	56.8	2	12.94
3704	O. Arg. S. 8979 . .	7.0	40 46.12	63.2	2	2.501	− 29 13 3.2	68.2	2	12.94
3705	Weisse VIII, 1050 .	8.5	40 49.30	66.7	2	3.178	+ 5 57 22.6	68.2	2	12.95
3706	Weisse (2) VIII, 1018.	8.4	8 40 50.11	68.3	2	+ 3.500	+ 22 45 33.8	56.3	2	− 12.95
3707	Weisse (2) VIII, 1013.	8.8	40 51.86	66.7	4	3.932	+ 40 6 19.5	58.9	4	12.95
3708	Anonymous . . .	7.5	40 59.05	70.1	1	2.416	− 32 44 11.3	68.8	2	12.96
3709	O. Arg. S. 8993 . .	8.0	41 23.22	66.7	2	2.547	− 27 15 14.7	68.2	3	12.98
3710	O. Arg. N. 9342, (1st *)	. .	42 5.15	71.2	2	6.073	+ 71 19 55.7	71.2	2	13.03

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			h. m. s.			″	° ′ ″			″
3711	O. Arg. N. 9342, (2d *).	. .	8 42 6.22	71.2	2	+ 6.074	+ 71 20 23.0	71.2	1	− 13.03
3712	Weisse VIII, 1077. .	8.8	42 11.55	66.7	2	3.178	+ 5 58 8.3	68.3	2	13.04
3713	Lacaille 3531 . . .	6.5	42 12.86	64.1	2	2.415	− 32 53 4.8	66.2	2	13.04
3714	O. Arg. N. 9350 . .	8.5*	42 20.34	71.2	1	5.074	+ 63 6 29.9	61.8	2	13.05
3715	Lacaille 3529 . . .	6.0	42 20.63	63.3	2	2.529	− 28 7 24.5	66.7	2	13.05
3716	Anonymous . . .	7.5	8 42 25.08	69.1	1	+ 3.605	+ 27 41 27.1	62.2	1	− 13.03
3717	35 Lyncis	5.5*	42 32.14	62.1	2	4.060	+ 44 14 39.1	65.8	2	13.06
3718	Lacaille 3546 . . .	7.0	42 40.94	63.8	4	2.477	− 30 24 51.7	65.9	3	13.07
3719	B. A. C. 2991 . . .	7.0*	42 46.70	60.0	2	3.428	+ 19 21 4.5	54.2	3	13.08
3720	54 Cancri	6.5*	43 13.36	59.1	2	3.360	+ 15 52 2.0	56.5	3	13.11
3721	52 Cancri	8.5	8 43 20.35	64.2	5	+ 3.372	+ 16 31 7.5	66.7	2	− 13.11
3722	Anonymous . . .	7.1	43 21.67	64.9	3	2.296	− 37 29 12.5	68.7	2	13.12
3723	Anonymous . . .	7.6	43 46.70	64.5	3	2.541	− 27 44 15.1	68.7	2	13.14
3724	O. Arg. S. 9040 . .	8.5	43 51.63	65.1	1	2.621	− 24 3 40.3	69.3	3	13.15
3725	Anonymous . . .	8.5	44 4.57	63.2	2	2.433	− 32 21 0.7	69.7	2	13.16
3726	B. A. C. 3005 . . .	6.8	8 44 10.17	64.1	1	+ 2.514	− 28 56 36.4	65.1	2	− 13.17
3727	B. A. C. 3006 . . .	4.7	44 10.24	62.2	2	2.435	− 32 15 35.3	67.7	2	13.17
3728	Weisse (2) VIII, 1095 .	9.3	44 12.30	62.2	2	3.598	+ 27 32 18.5	67.8	2	13.17
3729	B. A. C. 3007 . . .	6.2	44 26.93	65.6	3	2.534	− 28 5 49.2	66.5	3	13.19
3730	Weisse (2) VIII, 1098 .	8.5	44 27.66	68.7	2	3.497	+ 22 54 45.4	56.3	2	13.19
3731	Anonymous . . .	8.5	8 44 33.52	70.1	1	+ 2.190	− 41 14 2.2	70.2	1	− 13.20
3732	6 Ursæ Majoris . . .	5.5*	44 34.58	59.2	2	5.245	+ 65 8 7.3	58.2	2	13.20
3733	*c* Mali	4.5	44 35.39	69.2	2	2.555	− 27 11 33.1	66.9	3	13.20
3734	Lacaille 3552 . . .	7.7	44 36.04	71.1	1	2.493	− 29 53 49.5	67.3	2	13.20
3735	Anonymous . . .	7.5	44 38.	. .	.	2.156	− 42 18 19.9	69.2	2	13.20
3736	Anonymous . . .	8.0	8 44 40.46	69.7	2	+ 2.190	− 41 13 24.5	67.3	2	− 13.20
3737	Anonymous . . .	9.0	44 40.53	62.2	2	3.319	+ 13 47 28.2	69.2	1	13.20
3738	Weisse VIII, 1146 . .	8.5*	44 41.63	62.2	3	3.318	+ 13 45 36.4	66.2	4	13.20
3739	Anonymous . . .	7.8	44 53.21	67.2	2	2.357	− 35 24 36.1	70.2	1	13.22
3740	Anonymous . . .	. .	45 11.	. .	.	2.193	− 41 11 50.5	70.2	1	13.24
3741	B. A. C. 3015 . . .	6.0	8 45 18.18	69.2	1	+ 3.396	+ 17 53 41.5	69.8	2	− 13.24
3742	Lacaille 3564 . . .	7.3	45 28.98	64.1	2	2.398	− 33 53 51.0	68.6	2	13.26
3743	Anonymous . . .	9.3	45 32.89	71.2	1	2.497	− 29 50 3.1	69.3	2	13.28
3744	Lacaille 3567 . . .	7.3	46 0.24	64.2	1	2.559	− 27 7 1.8	62.7	2	13.29
3745	Anonymous . . .	7.7	46 3.21	64.3	1	2.195	− 41 14	. .	.	13.29
3746	Weisse (2) VIII, 1145 .	7.2	8 46 25.92	68.3	2	+ 3.483	+ 22 20 58.9	56.3	2	− 13.32
3747	Lacaille 3574 . . .	7.2	46 42.	. .	.	2.449	− 31 58 28.8	69.3	1	13.34
3748	Anonymous . . .	7.2	47 6.37	63.2	1	2.448	− 32 2 28.0	69.6	2	13.36
3749	Anonymous. . . .	7.0	47 6.49	69.2	1	2.446	− 32 6 35.1	70.1	1	13.36
3750	ρ^3 Cancri	6.0*	47 16.07	59.0	3	3.612	+ 28 27 33.6	71.3	1	13.37

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3751	Anonymous	8.5	8 47 22.70	68.2	3	+ 2.481	− 30 41 53.5	67.2	1	− 13.38
3752	Weisse VIII, 1222.	7.7	47 37.33	68.7	2	3.153	+ 4 40 40.4	65.3	1	13.40
3753	B. A. C. 3031	6.5	47 53.58	66.5	3	3.333	+ 14 42 48.9	68.8	2	13.41
3754	Weisse (2) VIII. 1181	8.2	47 53.92	68.3	2	3.478	+ 22 13 28.6	56.3	1	13.41
3755	60 Cancri	5.5	48 16.72	63.3	2	3.286	+ 12 9 29.7	69.7	2	13.44
3756	59 Cancri	5.5*	8 48 17.76	69.2	2	+ 3.728	+ 33 26 45.7	53.2	9	− 13.44
3757	O. Arg. S. 9127.	7.7	48 18.50	64.2	2	2.482	− 30 42 53.1	67.2	1	13.44
3758	Anonymous	9.2	48 20.67	64.2	2	2.833	− 13 31 44.3	69.3	1	13.44
3759	Lacaille 3582	7.0	48 25.54	64.0	5	2.461	− 31 37 36.8	65.7	2	13.45
3760	17 Hydræ, (1st *)	7.5	48 37.88	64.8	6	2.943	− 7 26 18.3	64.9	3	13.46
3761	17 Hydræ, (2d *)	7.5	8 48 37.91	64.8	6	+ 2.943	− 7 26 11.9	64.9	3	− 13.46
3762	Lalande 17605	6.4	48 49.20	68.3	2	3.868	+ 38 47 50.3	54.5	3	13.47
3763	Anonymous	8.5	48 50.01	63.2	1	2.382	− 34 52 54.4	70.1	1	13.47
3764	B. A. C. 3041	7.0	48 51.81	61.8	5	3.394	+ 18 0 58.4	57.7	4	13.47
3765	Σ Cat. Gen. 1063	8.7	49 5.34	62.2	2	4.460	+ 54 30 36.5	67.2	1	13.49
3766	Lalande 1764;	8.0	8 49 6.56	59.1	2	+ 2.834	− 13 30 27.5	54.8	5	− 13.49
3767	Anonymous	7.8	49 12.56	66.2	2	2.380	− 34 58 25.9	70.2	1	13.50
3768	Anonymous	7.6	49 23.74	63.9	1	2.433	− 32 53 48.2	71.2	1	13.51
3769	*d* Mali	4.5	49 31.36	63.3	2	2.566	− 27 8 43.0	64.9	2	13.52
3770	Anonymous	9.0	49 32.92	65.1	1	2.466	− 31 32 23.6	71.1	1	13.52
3771	Lalande 17662	8.5	8 49 35.16	65.1	6	+ 2.837	− 13 22 15.6	60.0	6	− 13.52
3772	Weisse VIII, 1274	8.9	49 35.93	64.1	1	2.944	− 7 25 6.4	71.3	1	13.52
3773	ι Ursæ Majoris	3.5*	49 36.29	60.1	15	4.192	+ 48 35 20.3	50.8	52	13.52
3774	O. Arg. N. 9460	8.5	49 41.27	64.5	4	4.446	+ 54 19 7.1	58.2	4	13.52
3775	Lacaille 3595	7.0	49 44.25	65.3	4	2.434	− 32 52 9.9	66.2	1	13.52
3776	o^2 Cancri	5.5	8 49 45.85	66.5	2	+ 3.357	+ 16 6 57.8	63.6	3	− 13.53
3777	Anonymous	8.2	49 47.14	64.3	2	2.503	− 29 59 25.5	66.2	3	13.54
3778	O. Arg. S. 9154	7.9	49 47.22	64.2	2	2.487	− 30 39 22.4	67.2	1	13.54
3779	O. Arg. S. 9155.	7.9	49 47.67	64.2	2	2.485	− 30 45 22.4	67.2	1	13.54
3780	Weisse VIII, 1282.	9.0*	49 52.	. .	.	2.837	− 13 23 48.3	56.6	3	13.54
3781	ρ Ursæ Majoris	5.0	8 49 52.30	69.3	1	+ 5.534	+ 68 10 15.9	70.6	3	− 13.54
3782	Anonymous	6.8	49 55.24	64.7	2	2.307	− 37 47 45.0	70.7	2	13.54
3783	Anonymous	8.8	50 14.77	69.1	2	2.842	− 13 9 42.0	62.8	2	13.56
3784	Lacaille 3601	7.6	50 34.16	63.3	2	2.531	− 28 48 35.7	66.2	2	13.59
3785	Weisse (2) VIII, 1245	8.0*	50 34.32	69.2	2	3.521	+ 24 30 17.1	46.2	4	13.59
3786	α Cancri	4.0*	8 50 49.64	63.0	20	+ 3.288	+ 12 23 49.6	65.1	2	− 13.60
3787	Anonymous	9.0	50 50.87	62.2	1	3.495	+ 23 17 3.9	67.3	1	13.60
3788	Weisse (2) VIII, 1252	6.8	50 53.18	68.7	2	3.463	+ 21 42 24.8	56.3	1	13.60
3789	Weisse (2) VIII, 1255	8.7	50 55.13	68.1	6	3.495	+ 23 16 40.7	68.3	3	13.61
3790	O. Arg. N. 9484	9.0	50 57.51	69.3	1	4.386	+ 53 13 19.2	71.3	1	13.61

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3791	O. Arg. S. 9178. . .	8.0	8 50 58.68	64.7	2	+ 2.501	− 30 10 6.2	67.3	2	− 13.61
3792	Weisse (2) VIII, 1258 .	8.0	51 0.83	69.6	7	3.496	+ 23 20 16.7	68.8	2	13.61
3793	Lacaille 3607 . . .	7.8	51 32.91	63.5	3	2.569	− 27 10 38.7	64.8	2	13.65
3794	Weisse (2) VIII, 1291 .	8.0	52 41.18	68.3	2	3.466	+ 22 0 36.6	62.8	2	13.72
3795	O. Arg. S. 9210 . .	8.0	52 56.64	70.2	1	2.494	− 30 42 13.4	67.2	1	13.74
3796	Lacaille 3617 . . .	7.1	8 52 59.96	64.2	8	+ 2.477	− 31 25 28.4	66.2	2	− 13.74
3797	Weisse VIII, 1367. .	9.0	53 14.70	59.2	3	3.227	+ 9 5 37.5	56.2	3	13.76
3798	B. A. C. 3070 . . .	5.6	53 19.20	63.3	2	2.549	− 28 15 52.0	67.2	2	13.76
3799	Anonymous . . .	9.0	53 39.97	63.2	1	2.398	− 34 46 0.8	68.7	2	13.78
3800	Lacaille 3621 . . .	6.5	53 43.03	64.2	7	2.572	− 27 16 15.2	66.2	1	13.79
3801	68 Cancri	6.8	8 53 51.91	64.0	4	+ 3.380	+ 17 37 39.0	61.7	4	− 13.80
3802	κ Ursæ Majoris . . .	4.0*	54 3.12	59.2	2	4.138	+ 47 42 24.9	58.3	2	13.81
3803	B. A. C. 3076 . . .	6.5	54 7.66	65.8	3	3.177	+ 6 11 15.2	67.9	3	13.81
3804	Weisse (2) VIII, 1322 .	8.0	54 14.73	68.7	2	3.454	+ 21 32 18.1	56.3	2	13.82
3805	B. A. C. 3078 . . .	6.5	54 25.57	66.6	3	3.177	+ 6 11 59.2	67.9	3	13.83
3806	Weisse (2) VIII, 1324 .	7.0	8 54 33.44	68.2	1	+ 3.839	+ 38 23 47.8	62.2	3	− 13.84
3807	O. Arg. S. 9243. . .	7.0	54 42.41	64.1	2	2.649	− 23 36 30.0	68.7	2	13.85
3808	Anonymous . . .	6.7	55 4.84	64.2	2	2.581	− 26 58 9.3	69.2	2	13.87
3809	B. A. C. 3082 . . .	6.0*	55 7.13	62.2	10	2.599	− 26 6 54.5	66.2	2	13.88
3810	Weisse (2) VIII, 1352 .	7.0	55 17.91	62.2	2	3.485	+ 23 9 40.5	70.2	2	13.89
3811	Weisse (2) VIII, 1347 .	8.4	8 55 31.60	62.4	4	+ 3.990	+ 43 36 23.4	66.3	2	− 13.90
3812	Anonymous . . .	8.6	55 32.60	67.2	2	2.512	− 30 9 36.4	70.2	3	13.90
3813	O. Arg. S. 9258. . .	7.8	55 35.80	66.7	2	2.625	− 24 53 9.0	59.6	2	13.91
3814	Lacaille 3643 . . .	7.1	55 47.18	62.8	3	2.602	− 26 1 32.5	69.2	2	13.92
3815	Anonymous . . .	8.0	56 4.35	66.7	2	2.576	− 27 15 48.9	68.3	2	13.94
3816	Anonymous . . .	8.5	8 56 24.	. .	.	+ 4.384	+ 53 48 6.8	71.3	2	− 13.96
3817	Anonymous . . .	7.0	56 26.28	67.2	2	2.396	− 35 8 22.9	69.3	2	13.96
3818	Weisse VIII, 1439 . .	6.8	56 31.06	68.3	2	2.842	− 13 27 9.3	56.3	3	13.96
3819	B. A. C. 3091 . . .	7.0*	56 36.34	60.0	5	4.222	+ 50 9 57.7	54.3	3	13.97
3820	O. Arg. S. 9276. . .	7.1	56 43.36	64.3	3	2.508	− 30 28 1.9	65.8	2	13.98
3821	B. A. C. 3096 . . .	6.9	8 57 1.01	64.1	3	+ 2.626	− 24 57 8.4	65.2	2	− 14.00
3822	Lacaille 3656 . . .	6.5	57 4.93	63.4	3	2.476	− 31 53 22.2	66.2	2	14.00
3823	Weisse VIII, 1476 . .	8.3	58 0.59	59.5	3	2.857	− 12 42 3.2	69.2	2	14.06
3824	σ² Ursæ Majoris . . .	4.3	58 1.16	62.9	9	5.397	+ 67 41 54.8	64.5	4	14.06
3825	O. Arg. S. 9310. . .	7.8	58 30.81	65.0	4	2.597	− 26 32 2.5	67.2	2	14.09
3826	B. A. C. 3104 . . .	7.5*	8 58 35.21	64.3	2	+ 3.342	+ 15 49 55.1	69.7	2	− 14.09
3827	Anonymous . . .	7.5	58 42.05	68.3	1	2.480	− 31 53 38.1	66.2	2	14.10
3828	Weisse (2) VIII, 1438 .	7.0	58 43.77	68.2	2	3.438	+ 21 4 30.4	56.3	2	14.10
3829	O. Arg. S. 9321. . .	8.3	58 52.78	65.0	4	2.656	− 23 37 59.9	67.7	2	14.11
3830	B. A. C. 3107 . . .	7.0*	58 59.35	59.3	1	3.340	+ 15 44	. .	.	14.12

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3831	Weisse (2) VIII, 1446 .	8.3	8 59 5.33	68.3	2	+ 3.440	+ 21 9 27.4	56.3	2	— 14.12
3832	Lacaille 3671 . . .	5.9	59 8.63	62.7	2	2.558	— 28 27 41.2	65.7	2	14.13
3833	τ Cancri	6.0*	59 35.17	60.1	2	3.623	+ 30 12 52.0	53.2	11	14.16
3834	Carrington 1325 . .	9.7	59 52.32	71.2	4	9.767	+ 81 57 40.7	69.1	1	14.18
3835	Weisse (2) VIII, 1475 .	8.2	59 55.05	68.3	2	3.444	+ 21 27 29.8	56.3	2	14.18
3836	κ Cancri	5.2	9 0 9.67	63.1	62	+ 3.260	+ 11 13 44.5	67.0	4	— 14.19
3837	O. Arg. S. 9344. . .	7.2	0 18.55	65.0	4	2.660	— 23 35 56.4	67.6	3	14.20
3838	75 Cancri	5.5	0 32.73	62.2	5	3.557	+ 27 12 20.4	62.2	3	14.21
3839	Weisse VIII, 1529. .	7.0	0 34.60	60.2	2	2.858	— 12 44 50.1	53.9	6	14.22
3840	78 Cancri	7.0*	1 11.06	57.8	2	3.378	+ 18 2 4.1	57.2	2	14.25
3841	ξ Cancri	4.5	9 1 18.25	59.4	4	+ 3.464	+ 22 36 34.0	68.2	2	— 14.26
3842	Anonymous . . .	8.8	1 22.80	67.2	2	2.664	— 23 27 56.4	68.7	2	14.27
3843	Anonymous . . .	8.2	1 27.40	66.7	2	2.500	— 31 21 11.8	69.6	3	14.27
3844	Lacaille 3684 . . .	7.0	1 33.18	63.2	2	2.540	— 29 31 20.9	66.2	2	14.28
3845	Anonymous . . .	7.6	1 46.99	67.3	2	2.581	— 27 38 7.7	69.7	2	14.29
3846	B. A. C. 3121 . . .	4.8	9 1 54.33	62.0	4	+ 2.629	— 25 17 46.5	65.8	2	— 14.30
3847	Anonymous . . .	7.5	2 0.48	64.2	2	2.498	— 31 28 30.1	68.7	2	14.31
3848	Weisse (2) IX, 10 . .	8.1	2 10.08	63.2	3	3.549	+ 26 58 31.5	67.3	2	14.31
3849	79 Cancri	6.0*	2 17.93	59.9	3	3.461	+ 22 33 43.7	58.2	3	14.32
3850	Lacaille 3690 . . .	7.5	2 31.60	62.3	3	2.630	— 25 16 28.7	67.8	2	14.34
3851	20 Hydræ	5.5	9 2 44.79	69.2	2	+ 2.937	— 8 13 17.2	68.7	2	— 14.35
3852	Anonymous . . .	7.5	3 3.03	68.8	2	2.568	— 28 23 37.0	67.3	2	14.37
3853	c Ursæ Majoris . . .	5.5	3 14.27	69.3	2	4.825	+ 61 59 47.8	58.3	2	14.38
3854	B. A. C. 3127 . . .	7.0	3 37.08	64.2	2	2.634	— 25 14 10.5	66.3	3	14.40
3855	O. Arg. S. 9418 . .	6.6	3 37.10	64.4	5	2.551	— 29 15 3.3	67.2	2	14.40
3856	e Mali	5.2	9 4 0.50	63.6	4	+ 2.540	— 29 47 45.6	68.9	3	— 14.43
3857	Carrington 1338 . .	8.0	4 13.55	65.2	3	9.561	+ 81 51 46.6	68.7	2	14.44
3858	Lacaille 3704 . . .	7.0	4 20.83	69.5	3	2.625	— 25 43 5.8	66.2	2	14.45
3859	36 Lyncis	5.5	4 37.92	59.4	3	3.960	+ 43 47 31.6	69.7	2	14.46
3860	Lalande 18122, (1st *) .	7.8	4 46.84	71.3	1	4.313	+ 53 16 51.8	71.2	3	14.47
3861	Lalande 18122, (2d *) .	8.0	9 4 48.54	71.3	1	+ 4.313	+ 53 17 3.8	71.2	3	— 14.47
3862	Weisse (2) IX, 79 . .	8.6	4 54.09	68.7	2	3.420	+ 20 35 42.8	63.3	2	14.48
3863	Weisse (2) IX, 81 . .	9.0	4 55.01	68.2	1	3.420	+ 20 37 10.5	70.2	1	14.48
3864	B. A. C. 3138 . . .	6.0*	5 37.15	59.6	6	3.442	+ 21 51 26.5	54.2	3	14.52
3865	Anonymous . . .	7.8	5 49.02	65.2	1	2.671	— 23 31 41.2	69.3	2	14.54
3866	Anonymous . . .	7.1	9 5 49.16	64.2	3	+ 2.583	— 27 44 35.7	67.2	2	— 14.54
3867	e Ursæ Majoris . . .	5.5	6 5.37	68.7	2	4.366	+ 54 35 48.2	52.0	6	14.55
3868	B. A. C. 3143 . . .	5.8	6 13.80	64.3	2	2.336	— 38 41 16.4	66.7	2	14.56
3869	Lacaille 3716 . . .	6.6	6 15.47	64.2	2	2.643	— 25 1 39.8	67.2	2	14.56
3870	Madras 651	6.8	6 18.08	62.2	3	3.512	+ 25 35 22.8	62.2	2	14.57

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3871	Lacaille 3718	6.7	9 6 21.14	64.0	4	+ 2.576	− 28 22 29.8	66.8	2	− 14.57
3872	Lacaille 3725	7.0	7 1.46	63.7	4	2.533	− 30 29 29.4	67.2	2	14.61
3873	θ Hydræ	4.5	7 4.72	65.7	2	3.118	+ 2 54 9.4	67.3	2	14.61
3874	O. Arg. S. 9481	5.6	7 22.14	63.4	4	2.563	− 29 5 24.9	66.2	2	14.63
3875	π^2 Cancri	6.0*	7 29.90	62.8	3	3.326	+ 15 31 11.3	68.7	2	14.64
3876	O. Arg. S. 9488	7.2	9 7 39.34	64.7	5	+ 2.592	− 27 43 42.5	67.3	2	− 14.65
3877	O. Arg. S. 9489	7.1	7 43.90	64.2	3	2.596	− 27 30 51.5	67.8	2	14.65
3878	Weisse (2) IX, 142	7.9	7 56.16	62.6	2	3.538	+ 27 2 46.1	67.3	2	14.66
3879	O. Arg. S. 9496	7.2	8 4.40	64.2	3	2.597	− 27 32 24.5	67.8	2	14.67
3880	Weisse IX, 153	9.0	8 17.96	71.3	1	3.164	+ 5 42 26.4	69.2	2	14.68
3881	Lacaille 3733	6.5	9 8 30.40	63.2	2	+ 2.504	− 31 58 39.5	67.8	2	− 14.70
3882	Weisse (2) IX, 160	8.5	8 37.27	59.7	3	3.500	+ 25 13 8.9	55.2	3	14.70
3883	Anonymous	9.5	8 41.62	69.3	1	3.407	+ 20 13 36.9	62.8	2	14.71
3884	Anonymous	9.0	9 4.	. .	.	2.428	− 35 20 50.4	70.2	1	14.73
3885	Lacaille 3739	7.3	9 6.14	63.7	4	2.553	− 29 47 28.3	65.2	2	14.73
3886	Lacaille 3741	7.0	9 9 6.38	67.2	2	+ 2.428	− 35 22 59.5	69.7	2	− 14.73
3887	B. A. C. 3156	5.2	9 11.11	69.2	2	2.237	− 42 38 57.4	66.3	2	14.74
3888	Weisse (2) IX, 172	8.5	9 14.26	60.2	3	3.480	+ 24 14 14.7	55.3	3	14.74
3889	Weisse (2) IX, 176	7.2	9 34.18	62.2	4	3.577	+ 29 9 48.8	62.2	2	14.76
3890	Lacaille 3750	6.6	9 45.50	63.9	4	2.491	− 32 44 32.9	65.5	4	14.77
3891	Lalande 18288	5.8	9 9 47.30	68.8	2	+ 3.728	+ 35 56 58.3	47.2	2	− 14.77
3892	Anonymous	8.5	9 49.42	69.8	5	2.610	− 27 37 22.9	67.8	4	14.78
3893	O. Arg. S. 9522	7.4	9 51.62	64.3	3	2.619	− 26 36 52.6	68.7	2	14.78
3894	Anonymous	7.5	9 51.82	65.2	1	2.598	− 27 41	. .	.	14.78
3895	Lacaille 3751	7.0	10 5.45	66.9	3	2.586	− 28 18 20.5	68.3	2	14.79
3896	38 Lyncis	5.0	9 10 7.14	68.7	2	+ 3.762	+ 37 23 33.7	46.7	6	− 14.79
3897	Weisse (2) IX, 198	8.6	10 20.67	67.2	2	3.370	+ 18 18 55.5	68.7	2	14.81
3898	O. Arg. S. 9539	8.2	10 44.76	69.3	2	2.566	− 29 22 3.8	67.8	2	14.83
3899	Weisse (2) IX, 207	8.3	10 48.92	68.8	2	3.400	+ 20 0 26.8	56.3	2	14.83
3900	83 Cancri	6.0	11 9.75	61.3	47	3.369	+ 18 17 47.1	61.5	7	14.85
3901	B. A. C. 3174	5.1	9 11 27.89	64.5	3	+ 2.350	− 38 48 59.4	67.7	2	− 14.87
3902	Anonymous	8.4	11 43.58	64.5	3	2.585	− 28 33 1.1	69.9	3	14.89
3903	Anonymous	7.0	12 4.40	64.3	2	2.443	− 35 6 17.5	68.7	2	14.91
3904	Lalande 18362	6.0	12 12.23	69.2	2	3.790	+ 38 46 43.2	59.7	2	14.92
3905	α Lyncis	5.0	12 30.84	68.8	2	3.696	+ 34 58 55.9	71.2	1	14.93
3906	Dorpat 1343, (1st *)	9.0	9 12 36.88	65.2	4	+ 3.161	+ 5 42 55.4	47.2	1	− 14.94
3907	Dorpat 1343, (2d *)	9.0	12 37.51	65.2	4	3.161	+ 5 43 23.4	72.3	2	14.94
3908	Anonymous	7.0	12 55.65	63.7	2	2.482	− 33 30 29.3	69.6	3	14.96
3909	B. A. C. 3182	6.5	12 58.06	69.3	1	4.138	+ 50 8 14.3	48.1	3	14.96
3910	Lacaille 3780	6.3	13 0.68	66.8	2	2.365	− 38 27 25.1	70.3	2	14.96

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3911	26 Hydræ	5.5	9 13 1.95	58.3	2	+ 2.893	− 11 23 9.7	70.3	2	− 14.96
3912	Anonymous	8.0	13 22.77	69.8	3	2.356	− 38 50 43.2	67.7	2	14.98
3913	Anonymous	. .	13 28.95	68.8	2	3.396	+ 20 1 57.5	56.3	2	14.99
3914	27 Hydræ	5.5	13 38.92	61.6	3	2.932	− 8 57 49.7	70.2	2	15.00
3915	O. Arg. S. 9600	8.3	13 53.54	64.4	4	2.620	− 27 0 11.5	69.3	2	15.01
3916	B. A. C. 3190	6.0	9 13 59.63	63.5	3	+ 2.485	− 33 30 45.1	69.6	3	− 15.02
3917	Anonymous	7.0	14 22.89	68.8	2	2.591	− 28 32 2.5	66.8	2	15.04
3918	Anonymous	6.8	14 23.10	64.0	5	2.589	− 28 39	. .	.	15.04
3919	O. Arg. S. 9615	7.2	14 39.13	63.5	3	2.590	− 28 37 38.7	66.7	2	15.06
3920	Lacaille 3788	7.5	14 43.63	63.1	2	2.599	− 28 12 43.5	66.2	2	15.06
3921	O. Arg. N. 9842	7.2	9 15 9.73	59.6	3	+ 4.155	+ 50 52 33.1	56.2	2	− 15.09
3922	O. Arg. N. 9844	8.8	15 12.24	60.2	2	4.151	+ 50 46 16.8	56.2	2	15.09
3923	*h* Mali	5.1	15 17.70	67.2	2	2.655	− 25 22 18.6	68.3	2	15.10
3924	B. A. C. 3194	7.5*	15 25.42	60.8	2	3.497	+ 25 46 43.8	60.6	5	15.10
3925	Anonymous	6.8	15 25.82	64.3	1	2.463	− 34 40 50.6	64.2	1	15.10
3926	Anonymous	6.8	9 15 25.82	64.3	1	+ 2.463	− 34 45 52.3	69.3	1	− 15.10
3927	Lacaille 3796	7.6	15 27.42	66.7	2	2.560	− 30 12 46.6	65.8	2	15.10
3928	B. A. C. 3201	6.5*	15 58.44	59.1	2	3.510	+ 26 31 1.9	53.2	7	15.13
3929	B. A. C. 3202	7.5	16 2.37	69.3	1	3.200	+ 8 18 42.9	70.8	4	15.14
3930	Weisse IX, 337	8.5	16 18.44	69.7	2	2.839	− 14 53 50.9	69.3	1	15.16
3931	Lacaille 3802	7.0	9 16 47.40	66.6	3	+ 2.569	− 29 55 40.6	65.8	2	− 15.18
3932	1 Draconis	5.0	16 48.18	63.5	11	9.241	+ 81 56 21.6	63.7	18	15.18
3933	Anonymous	7.0	16 48.48	60.3	1	2.370	− 38 47 3.9	70.2	2	15.18
3934	B. A. C. 3206	6.8	16 52.27	60.6	7	3.397	+ 20 23 25.6	62.2	2	15.19
3935	Anonymous	8.4	16 55.54	70.8	3	2.600	− 28 23 40.8	70.9	1	15.19
3936	Anonymous	7.7	9 16 57.03	64.8	2	+ 2.372	− 38 43 11.6	69.2	2	− 15.19
3937	Anonymous	7.0	17 3.	. .	.	4.463	− 34 55 20.8	70.2	1	15.20
3938	Anonymous	6.7	17 5.25	64.8	4	2.465	− 34 49 24.4	68.2	1	15.20
3939	B. A. C. 3207	4.5	17 8.74	63.5	3	2.604	− 28 14 15.6	66.2	2	15.20
3940	O. Arg. S. 9661	8.3	17 13.28	64.5	3	2.571	− 29 53 24.5	67.2	2	15.21
3941	Anonymous	8.1	9 17 15.40	66.8	3	+ 2.599	− 28 30 38.6	68.3	2	− 15.21
3942	Anonymous	8.2	17 26.04	66.8	3	2.600	− 28 28 39.2	67.9	3	15.22
3943	Lacaille 3807	6.7	17 46.98	63.2	2	2.516	− 32 36 8.1	66.3	2	15.24
3944	Lacaille 3810	6.5	18 3.12	66.8	2	2.472	− 34 38 54.6	67.8	2	15.25
3945	Weisse (2) IX, 377	9.0	18 7.46	59.2	2	3.447	+ 23 14 48.6	55.6	3	15.26
3946	Weisse (2) IX, 383	9.5	9 18 19.32	59.2	2	+ 3.446	+ 23 14 47.2	55.8	2	− 15.27
3947	Anonymous	8.1	18 28.02	64.2	2	2.602	− 28 27 57.5	67.3	2	15.28
3948	Lacaille 3815	7.0*	18 42.92	71.2	1	2.376	− 38 49 28.9	69.2	2	15.29
3949	O. Arg. S. 9692	8.5	19 13.65	66.8	2	2.607	− 28 22 35.8	67.3	3	15.32
3950	41 Lyncis	5.5*	19 28.42	60.2	2	3.971	+ 46 12 45.9	53.2	3	15.33

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3951	Schjellerup 3476	8.9	9 19 31.98	67.2	2	+ 2.951	− 7 59 42.5	68.7	2	− 15.34
3952	Lalande 18604	7.4	20 16.36	65.1	2	3.292	+ 14 21 23.3	69.3	2	15.38
3953	*h* Ursæ Majoris	5.0	20 27.11	68.3	2	4.805	+ 63 40 14.1	58.2	3	15.39
3954	Anonymous	7.6	20 32.30	64.4	5	2.621	− 27 46 10.4	68.8	2	15.39
3955	α Hydræ	2.0*	20 42.47	56.6	148	2.951	− 8 3 13.8	47.4	44	15.40
3956	Lacaille 3834	6.5	9 20 43.67	66.2	2	+ 2.510	− 33 17 29.5	68.8	2	− 15.40
3957	ω Leonis	6.0*	20 57.44	63.8	4	3.218	+ 9 39 53.1	66.3	2	15.42
3958	Anonymous.	7.5	21 20.37	66.8	2	2.622	− 27 47 19.9	68.8	2	15.44
3959	Lacaille 3838	6.5	21 21.98	66.2	2	2.514	− 33 11 1.6	69.2	3	15.44
3960	B. A. C. 3235	6.2	21 49.62	67.6	3	2.489	− 34 23 58.7	70.7	2	15.46
3961	*d* Ursæ Majoris	4.0	9 22 2.01	62.5	7	+ 5.466	+ 70 26 31.7	61.1	4	− 15.48
3962	Lacaille 3843	7.2	22 23.57	63.3	2	2.679	− 24 49 26.2	66.2	2	15.50
3963	Lacaille 3848	6.8	22 25.17	67.6	3	2.493	− 34 17 43.9	69.2	2	15.50
3964	Weisse (2) IX, 478.	9.0	23 3.89	59.9	3	3.412	− 21 54 13.2	55.9	3	15.53
3965	Weisse IX, 488	9.0*	23 4.37	65.3	2	2.890	− 12 7 23.8	60.9	5	15.53
3966	Anonymous	7.0	9 23 12.	. .	.	+ 2.529	− 32 41 58.6	69.8	2	− 15.54
3967	Weisse (2) IX, 471.	7.0	23 13.58	60.2	2	3.898	+ 44 21 24.1	68.3	2	15.54
3968	Weisse (2) IX, 486.	9.5*	23 26.73	61.3	2	3.466	+ 25 1 41.4	60.3	5	15.56
3969	ε Antliæ	4.1	23 28.16	64.5	4	2.474	− 35 20 26.6	70.3	2	15.56
3970	B. A. C. 3243	6.3	23 28.47	63.3	2	2.661	− 25 58 54.7	68.7	2	15.56
3971	θ Ursæ Majoris	3.0*	9 23 28.83	54.4	17	+ 4.164	+ 52 18 50.4	52.3	15	− 15.56
3972	Lacaille 3857	7.4	23 30.49	63.3	2	2.680	− 24 54 59.7	68.2	2	15.56
3973	Weisse IX, 498	9.5	23 32.55	65.3	2	2.891	− 12 7 4.8	66.2	2	15.56
3974	B. A. C. 3248	6.0	23 41.83	63.3	2	2.661	− 25 58 41.8	68.8	2	15.57
3975	λ Leonis	5.0	23 43.53	64.1	2	3.440	+ 23 34 59.9	69.7	2	15.57
3976	Lacaille 3874	7.6	9 23 48.63	67.2	2	+ 2.529	− 32 47 28.3	68.8	2	− 15.58
3977	Lacaille 3864	7.1	23 49.54	64.4	4	2.631	− 27 37 49.5	67.8	2	15.58
3978	Anonymous.	8.2	24 5.70	64.7	2	2.634	− 27 34 30.9	67.8	2	15.59
3979	O, Arg. S. 9789.	6.0	24 6.17	69.2	1	2.596	− 29 31 54.9	66.3	2	15.59
3980	O. Arg. N, 9989	6.5	24 21.07	66.0	2	5.412	+ 70 15 28.6	70.2	2	15.61
3981	ξ Leonis	5.0*	9 24 23.80	58.8	13	+ 3.249	+ 11 55 3.8	55.2	3	− 15.61
3982	*h* Leonis	6.0*	24 27.09	62.6	7	3.225	+ 10 19 52.3	48.2	5	15.61
3983	ζ^1 Antliæ, (1st *)	7.0	24 46.25	70.2	3	2.563	− 31 16 36.7	71.3	2	15.63
3984	ζ^1 Antliæ, (2d *)	6.5	24 46.55	69.7	2	2.563	− 31 16 28.7	71.3	2	15.63
3985	9 Leonis Minoris.	6.0*	24 53.99	59.6	2	3.705	+ 37 6 18.6	52.8	11	15.64
3986	Anonymous	8.5	9 24 56.82	67.3	2	+ 2.462	− 36 3 50.4	69.2	1	− 15.64
3987	B. A. C. 3255	6.5*	25 6.	. .	.	3.535	+ 28 59 10.3	71.3	2	15.65
3988	ψ Argus	3.5	25 11.09	69.3	1	2.374	− 39 51 20.1	66.2	2	15.65
3989	26 Ursæ Majoris	6.0	25 12.56	68.8	2	4.168	+ 52 40 16.2	63.7	2	15.65
3990	Anonymous	7.3	25 22.47	64.3	1	2.480	− 35 18 41.5	70.2	3	15.66

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3991	10 Leonis Minoris	5.8	9 25 38.05	69.3	2	+ 3.701	+ 37 1 0.1	50.6	7	− 15.67
3992	Lacaille 3889	6.0	25 42.67	64.4	5	2.486	− 35 5 33.8	66.3	2	15.68
3993	Anonymous	6.8	25 45.32	64.9	3	2.463	− 36 8	. .	.	15.68
3994	O. Arg. S. 9824	8.5*	25 50.34	70.9	3	2.636	− 27 36 10.4	67.8	2	15.69
3995	Anonymous.	7.3	25 58.46	68.8	2	2.621	− 28 25 51.7	67.2	2	15.70
3996	Weisse IX, 563	9.0	9 26 6.05	59.6	3	+ 3.260	+ 12 42 23.1	56.2	2	− 15.70
3997	Lacaille 3892	6.8	26 10.74	63.1	2	2.630	− 28 0 43.9	66.3	2	15.71
3998	Weisse IX, 579	9.0	26 48.49	59.6	3	3.250	+ 12 9 3.4	56.2	3	15.74
3999	Lacaille 3903	6.2	27 29.37	64.8	5	2.415	− 38 30 40.4	66.2	2	15.78
4000	33 Hydræ	6.0*	27 33.48	59.7	4	2.996	− 5 17 29.2	66.2	2	15.78
4001	Lacaille 3905	6.5	9 27 38.47	64.5	4	+ 2.427	− 38 1 13.6	69.2	1	− 15.80
4002	O. Arg. S. 9855	8.5*	27 58.52	63.5	3	2.571	− 31 19 29.4	68.2	2	15.80
4003	O. Arg. S. 9856	6.8	28 0.63	63.2	1	2.569	− 31 24 12.7	68.2	2	15.81
4004	O. Arg. S. 9888	8.5	29 11.44	67.2	2	2.768	− 20 22 48.5	68.8	2	15.87
4005	Anonymous	9.0	29 22.	. .	.	2.496	− 35 11 34.4	70.1	1	15.88
4006	Lacaille 3918	6.5	9 29 22.64	61.2	3	+ 2.496	− 35 12 3.9	68.9	3	− 15.88
4007	10 Leonis	5.1	29 49.03	64.1	12	3.179	+ 7 27 43.7	67.3	2	15.90
4008	Lacaille 3920	7.9	29 50.82	62.3	2	2.659	− 26 53 53.2	70.8	2	15.90
4009	O. Arg. S. 9903	7.5	29 51.86	64.4	5	2.771	− 20 15 42.5	68.3	2	15.90
4010	Weisse (2) IX, 639	8.5	30 14.34	67.2	2	3.328	+ 17 27 42.3	68.3	2	15.91
4011	Lacaille 3923	6.5	9 30 15.36	63.4	3	+ 2.709	− 24 4 45.7	67.2	3	− 15.92
4012	Anonymous	8.0	30 22.85	67.2	2	2.495	− 35 24 34.9	69.6	3	15.93
4013	O. Arg, S. 9914.	9.2	30 31.04	67.2	2	2.713	− 23 52 32.1	70.6	3	15.94
4014	Lacaille 3928	5.7	30 42.60	63.3	2	2.700	− 24 40 17.5	68.8	2	15.95
4015	Weisse (2) IX, 650	9.0*	30 45.40	59.2	2	3.396	+ 21 46 53.8	63.6	4	15.95
4016	Anonymous	8.0	9 30 53.51	65.2	1	+ 3.642	+ 35 4	. .	.	− 15.96
4017	Anonymous	8.3	31 6.14	68.3	1	3.218	+ 10 15 19.2	55.2	2	15.97
4018	B. A. C. 3296	5.5	31 8.46	63.2	2	2.575	− 31 33 5.1	66.3	2	15.97
4019	2 Sextantis	5.5*	31 9.01	59.2	3	3.147	+ 5 16 45.9	58.3	3	15.97
4020	12 Leonis	6.5*	31 9.43	60.2	3	3.466	+ 25 59 44.5	61.3	2	15.97
4021	O. Arg. S. 9931.	7.0	9 31 12.60	64.3	2	+ 2.599	− 30 20 33.5	64.2	2	− 15.98
4022	Anonymous	8.0	31 16.08	68.3	2	3.254	+ 12 40 52.7	56.2	2	15.98
4023	Weisse (2) IX, 660.	9.0	31 17.70	59.2	3	3.384	+ 21 5 29.5	56.2	2	15.98
4024	Weisse (2) IX, 662.	8.3	31 19.59	62.6	3	3.396	+ 21 49 40.2	55.7	2	15.98
4025	O. Arg. S. 9938.	9.0	31 30.22	69.3	1	2.716	− 23 48 26.8	70.3	1	15.99
4026	Lacaille 3946	5.8	9 31 36.41	65.2	2	+ 2.497	− 35 28 5.1	70.3	2	− 16.00
4027	Anonymous	8.3	31 39.64	64.3	1	3.449	+ 25 4	. .	.	16.00
4028	Lacaille 3945	7.2	31 41.41	64.0	4	2.606	− 30 3 4.3	65.9	3	16.00
4029	Anonymous	8.4	32 3.10	64.2	2	2.774	− 20 17 53.5	70.2	2	16.02
4030	Anonymous	7.0	32 8.88	67.5	3	2.480	− 36 17 57.6	71.5	3	16.02

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4031	O. Arg. S. 9956. . .	9.0	9 32 22.09	67.3	2	+ 2.718	− 23 47 15.1	69.3	1	− 16.04
4032	Weisse (2) IX, 686 . .	7.3	32 41.48	61.6	5	3.735	+ 39 35 17.8	61.1	5	16.05
4033	B. A. C. 3306 . . .	6.5	33 1.07	69.2	2	2.425	− 38 58 53.0	65.8	2	16.07
4034	Anonymous. . . .	6.0	33 25.77	60.3	1	2.447	− 38 5	. .	.	16.09
4035	Anonymous . . .	7.2	33 25.83	67.2	2	2.428	− 38 53 53.9	69.3	1	16.09
4036	ο Leonis	4.0	9 33 40.54	59.9	32	+ 3.220	+ 10 31 37.7	61.9	4	− 16.10
4037	Anonymous . . .	9.0	33 56.16	65.1	1	2.505	− 35 27 34.2	70.2	1	16.12
4038	Lacaille 3967 . . .	7.3	34 11.46	62.8	5	2.608	− 30 17 20.5	65.8	2	16.13
4039	B. A. C. 3314 . . .	7.5	34 31.22	60.2	2	3.544	+ 30 44 49.9	54.2	3	16.15
4040	Lalande 19022 . . .	8.8	34 34.31	71.2	2	3.820	+ 43 21 28.7	71.3	2	16.15
4041	Anonymous . . .	8.0	9 34 46.98	64.2	2	+ 2.511	− 35 17 29.1	70.3	3	− 16.16
4042	Anonymous . . .	6.0	35 19.21	64.3	3	2.511	− 35 23 47.1	69.1	5	16.19
4043	Lacaille 3975 . . .	6.2	35 25.23	64.9	3	2.563	− 32 45 38.7	66.8	2	16.20
4044	B. A. C. 3318 . . .	7.0	35 31.81	59.2	2	3.372	+ 20 49 51.9	56.7	4	16.20
4045	Lacaille 3976 . . .	6.8	35 44.81	63.3	3	2.624	− 29 40 3.3	66.8	2	16.21
4046	Anonymous . . .	7.5	9 35 51.62	64.8	2	+ 2.460	− 37 51 49.5	70.3	2	− 16.22
4047	Anonymous . . .	9.0	35 52.56	67.2	2	2.723	− 23 37 35.6	69.3	2	16.22
4048	ψ Leonis	6.2	36 6.19	68.3	2	3.278	+ 14 39 35.5	58.3	2	16.23
4049	Anonymous. . . .	7.5	36 35.30	66.2	2	2.525	− 34 56 26.7	69.3	2	16.26
4050	Lacaille 3983 . . .	6.7	36 47.11	66.2	2	2.527	− 34 51 52.2	67.3	2	16.27
4051	Lacaille 3984 . . .	6.8	9 36 51.58	63.9	5	+ 2.569	− 32 45 44.7	67.8	2	− 16.27
4052	Anonymous. . . .	8.0	37 11.61	64.3	2	2.637	− 29 9 57.1	70.7	2	16.28
4053	Weisse (2) IX, 794. .	7.6	37 49.17	61.7	6	3.480	+ 27 41 22.3	67.8	2	16.32
4054	Lalande 19134 . . .	8.0	37 50.04	68.7	2	3.202	+ 9 31 30.1	65.3	2	16.32
4055	ε Leonis	3.0*	37 53.92	55.6	147	3.425	+ 24 25 1.0	49.9	58	16.32
4056	B. A. C. 3333 . . .	6.2	9 38 23.03	60.2	2	+ 3.371	+ 21 7 53.6	54.3	3	− 16.35
4057	Lacaille 3996 . . .	6.3	38 32.87	66.8	2	2.447	− 38 55 48.1	64.6	4	16.36
4058	Weisse (2) IX, 815. .	8.6	38 40.13	62.2	3	3.476	+ 27 34 7.9	67.8	2	16.36
4059	B. A. C. 3336 . . .	5.0	38 46.75	63.7	4	3.172	+ 7 21 12.1	68.2	3	16.37
4060	Weisse (2) IX, 817. .	8.0	38 49.03	65.5	4	3.479	+ 27 48 9.9	68.3	1	16.37
4061	18 Leonis	6.0*	9 38 50.62	63.7	3	+ 3.243	+ 12 27 10.0	66.3	2	− 16.37
4062	Weisse (2) IX, 819. .	8.8	38 51.48	67.2	2	3.296	+ 16 12 23.4	70.2	2	16.37
4063	Anonymous . . .	9.0	39 6.87	65.8	2	3.222	+ 11 1 57.4	63.8	2	16.38
4064	B. A. C. 3339 . . .	6.0	39 10.01	68.8	2	3.105	+ 2 25 52.1	67.3	2	16.39
4065	Radcliffe 2396 . . .	6.0	39 21.87	62.1	2	4.821	+ 66 14 31.3	61.8	2	16.40
4066	Weisse (2) IX, 832. .	8.7	9 39 28.66	64.8	6	+ 3.295	+ 16 10 24.4	67.8	2	− 16.40
4067	15 Leonis Minoris. . .	6.0*	39 32.51	59.6	2	3.887	+ 46 40 14.3	54.3	2	16.41
4068	Anonymous . . .	7.5	39 40.22	69.3	2	2.491	− 37 5 29.8	70.1	1	16.41
4069	Anonymous . . .	8.8	39 43.95	69.8	2	3.236	+ 12 4 27.1	64.7	2	16.42
4070	Weisse (2) IX, 831. .	8.0*	39 45.23	59.2	2	3.818	+ 44 10 59.9	57.3	2	16.82

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4071	Anonymous	7.5	9 39 48.61	69.3	2	+ 2.490	− 37 10 6.0	67.2	2	− 16.42
4072	Weisse (2) IX, 837.	8.8	39 53.13	68.8	2	3.476	+ 27 45 33.2	69.3	2	16.42
4073	Weisse IX, 867	9.0	39 57.34	61.7	2	2.919	− 11 15 33.7	66.7	2	16.43
4074	Weisse IX, 868.	8.5	39 58.70	61.6	3	2.919	− 11 17 33.3	56.3	4	16.43
4075	B. A. C. 3345	6.0	40 1.47	63.8	5	3.236	+ 12 4 33.9	58.2	2	16.43
4076	Lacaille 4006	6.2	9 40 4.89	60.3	2	+ 2.531	− 35 12 58.3	69.3	2	− 16.43
4077	Lacaille 4002	7.5	40 5.52	63.3	2	2.688	− 26 37 43.6	66.3	2	16.43
4078	Anonymous	9.0	40 9.73	61.1	1	2.924	− 10 54 0.4	62.2	2	16.44
4079	Weisse IX, 871	7.7	40 11.62	65.7	2	3.221	+ 11 1 52.4	58.3	4	16.44
4080	Lacaille 4007	6.5	40 14.79	63.2	2	2.577	− 32 51 47.3	68.3	2	16.44
4081	Brisbane 2651	7.1	9 40 31.10	64.2	2	+ 2.431	− 39 59 43.1	70.8	2	− 16.45
4082	Anonymous	9.5	40 45.64	66.8	2	2.723	− 24 34	. .	.	16.47
4083	Anonymous	. .	40 50.	. .	.	2.421	− 40 28 56.9	70.3	1	16.47
4084	Brisbane 2657	7.5	40 54.34	66.0	3	2.431	− 40 2 3.8	70.0	4	16.47
4085	Weisse (2) IX, 856.	6.5	40 59.30	69.2	2	3.655	+ 37 23 48.3	46.3	3	16.48
4086	*υ* Ursæ Majoris	4.0*	9 40 59.87	62.7	4	+ 4.376	+ 59 41 39.6	67.2	2	− 16.48
4087	Anonymous	8.7	41 0.91	64.8	2	2.639	− 29 37 34.5	69.6	3	16.48
4088	Anonymous	9.0	41 2.22	61.1	1	2.924	− 10 53 2.8	62.2	2	16.48
4089	Lacaille 4016	7.0	41 3.52	69.3	2	2.462	− 38 40 35.3	67.7	2	16.48
4090	Weisse IX, 887.	9.0	41 20.27	60.9	3	3.223	+ 11 12 24.0	55.0	4	16.50
4091	Weisse (2) IX, 867.	8.0	9 41 21.08	64.8	2	+ 3.330	+ 18 42 23.9	63.7	2	− 16.50
4092	Lacaille 4021	6.0	41 33.14	66.8	2	2.587	− 32 35 39.9	69.2	2	16.51
4093	Anonymous	. .	41 45.	. .	.	2.496	− 37 12 31.7	67.3	1	16.52
4094	Anonymous	6.0	41 45.80	64.3	2	2.489	− 37 32 34.2	70.3	1	16.52
4095	O. Arg. S. 10122	7.8	41 55.54	66.8	2	2.726	− 24 33 34.4	69.8	2	16.52
4096	20 Leonis	7.0*	9 41 59.65	59.6	3	+ 3.375	+ 21 49 47.5	53.2	6	− 16.53
4097	Anonymous	. .	42 12.94	48.3	1	3.428	+ 25 12 39.4	70.7	2	16.54
4098	O. Arg. S. 10130	7.8	42 22.69	64.5	3	2.642	− 29 40 21.8	67.8	2	16.55
4099	Lacaille 4026	7.4	42 24.99	62.3	2	2.707	− 25 45 59.7	65.3	2	16.55
4100	*φ* Ursæ Majoris	5.0*	42 33.32	60.2	2	4.139	+ 54 42 57.5	55.9	5	16.56
4101	Lacaille 4030	6.8	9 42 36.75	68.3	2	+ 2.504	− 36 59 11.4	68.3	2	− 16.56
4102	Lacaille 4031, (1st *)	8.0	42 47.04	67.2	4	2.557	− 34 22 13.5	70.2	1	16.57
4103	Lacaille 4031, (2d *)	7.0	42 47.04	67.2	4	2.557	− 34 22 15.3	69.4	4	16.57
4104	Anonymous	8.8	43 7.	. .	.	2.465	− 38 55 31.4	65.2	2	16.58
4105	4 Sextantis	5.0	43 12.77	66.7	2	3.139	+ 4 59 50.8	69.6	2	16.59
4106	Weisse IX, 929.	8.3	9 43 14.15	64.2	8	+ 3.270	+ 14 46 18.7	67.3	2	− 16.59
4107	21 Leonis	7.0	43 17.14	65.7	2	3.238	+ 12 29 38.8	69.2	2	16.59
4108	23 Leonis	7.5*	43 27.20	60.3	4	3.255	+ 13 43 7.4	70.2	2	16.60
4109	Lacaille 4036	5.0	43 36.08	62.8	3	2.517	− 36 32 11.8	67.8	2	16.61
4110	17 Leonis Minoris.	7.0*	43 51.66	69.2	2	3.669	+ 38 34 9.8	46.8	4	16.62

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4111	B. A. C. 3367	6.0	9 43 55.76	68.8	2	+ 2.536	− 35 37 1.3	57.7	2	− 16.62
4112	Lacaille 4045	7.6	44 17.30	61.3	2	2.456	− 39 31 2.6	69.7	2	16.64
4113	Anonymous.	7.2	44 35.71	68.8	2	2.539	− 35 36 36.6	57.7	2	16.62
4114	Anonymous.	. .	44 38.	. .	.	3.316	+ 18 8 57.2	69.3	1	16.66
4115	μ Leonis	4.0	44 47.59	65.3	26	3.446	+ 26 39 51.6	64.9	7	16.67
4116	Lacaille 4046	7.5	9 44 55.15	68.8	2	+ 2.628	− 30 51 24.2	64.8	2	− 16.67
4117	Weisse (2) IX, 960.	9.0	45 40.37	60.7	5	3.313	+ 18 3	. .	.	16.71
4118	Weisse (2) IX, 961.	9.0	45 43.84	59.7	2	3.317	+ 18 18 49.7	66.3	2	16.71
4119	Anonymous	8.2	45 46.60	64.3	3	2.504	− 37 32 0.2	69.3	2	16.71
4120	Lacaille 4052	6.6	45 50.32	63.6	3	2.604	− 32 20 27.4	71.9	3	16.72
4121	Anonymous	8.8	9 45 53.64	64.3	2	+ 3.275	+ 15 22 26.0	71.8	2	− 16.72
4122	Weisse (2) IX, 966.	7.5	45 55.82	64.2	2	3.470	+ 28 21 11.3	68.3	1	16.72
4123	(* 114) Washington	9.5	46 1.03	62.8	5	3.269	+ 14 58 23.2	65.2	1	16.72
4124	Rumker 2988	7.8	46 11.12	64.2	5	3.275	+ 15 23	. .	.	16.73
4125	Weisse (2) IX, 980.	7.2	46 15.	. .	.	3.275	+ 15 23 40.1	70.2	1	16.73
4126	Weisse (2) IX, 978.	8.0	9 46 23.64	68.7	2	+ 3.648	+ 38 4 25.7	46.3	2	− 16.74
4127	Weisse IX, 998.	8.0	46 29.70	59.7	2	3.214	+ 10 54 57.7	65.3	2	16.75
4128	B. A. C. 3385	6.0*	46 42.04	62.8	2	2.703	− 26 40 43.9	66.3	2	16.76
4129	O. Arg. N. 10356	6.2	46 57.00	69.3	2	4.116	+ 54 54 17.5	48.2	7	16.77
4130	Anonymous	8.0	47 0.38	64.8	2	2.471	− 39 20 36.8	69.3	2	16.77
4131	Anonymous.	8.5	9 47 2.81	61.8	2	+ 3.332	+ 19 29 46.4	62.2	1	− 16.77
4132	Weisse IX, 1011	8.6	47 15.59	69.3	2	3.172	+ 7 44 41.9	55.3	2	16.78
4133	Anonymous.	7.1	47 31.45	65.8	4	2.506	− 37 45 5.3	70.2	3	16.80
4134	Weisse (2) IX, 1003	7.8	47 46.86	67.5	4	3.792	+ 44 38 33.1	69.3	4	16.81
4135	Lacaille 4058	7.8	47 47.42	63.7	2	2.695	− 27 20 22.1	65.7	2	16.81
4136	Rumker 3002	8.5	9 47 49.48	62.0	2	+ 3.330	+ 19 29 2.7	59.3	4	− 16.81
4137	B. A. C. 3391	6.0	47 51.85	62.3	2	2.728	− 25 16 33.7	66.3	2	16.81
4138	Weisse IX, 1024	7.8	47 55.26	61.8	2	3.211	+ 10 46 22.2	59.3	4	16.82
4139	Anonymous.	8.4	48 5.05	65.7	4	2.688	− 27 50 19.2	69.7	2	16.82
4140	Weisse IX, 1035	6.8	48 30.94	68.3	2	3.178	+ 8 20 23.6	55.3	2	16.84
4141	Lacaille 4065	7.0	9 48 31.06	63.2	2	+ 2.578	− 34 14 52.1	66.2	1	− 16.84
4142	O. Arg. N. 10374	9.0	48 36.43	62.1	2	4.701	+ 66 0 13.0	61.8	2	16.85
4143	Weisse (2) IX, 1030	7.5	48 51.90	66.3	2	3.469	+ 28 45 37.4	68.3	2	16.86
4144	O. Arg. S. 10219	7.0	48 55.27	67.2	2	2.689	− 27 52 32.3	67.3	2	16.86
4145	19 Leonis Minoris	5.5*	49 5.68	59.6	2	3.716	+ 41 43 12.8	53.3	4	16.87
4146	Anonymous.	7.3	9 49 6.53	66.7	2	+ 2.608	− 32 42 6.0	69.7	2	− 16.87
4147	Weisse (2) IX, 1038	8.0	49 10.45	62.2	2	3.476	+ 29 13 27.8	68.3	1	16.88
4148	Weisse (2) IX, 1047	9.0	49 19.36	59.2	2	3.303	+ 17 43 15.6	56.3	2	16.88
4149	Anonymous.	8.5	49 19.99	64.8	2	2.465	− 40 5 7.1	70.6	2	16.88
4150	O. Arg. S. 10227	8.8	49 47.28	66.8	2	2.692	− 27 50 22.3	69.3	1	16.90

Number.	Name of Star.	Magnitude.	Mean Right Ascension, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.	Mean Declination, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.
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4151	Anonymous	7.0	9 50 9.27	68.8	2	+ 2.493	− 38 53 18.9	64.7	5	− 16.92
4152	Weisse (2) IX, 1065	9.0	50 17.06	62.2	2	3.474	+ 29 14 55.0	67.8	2	16.93
4153	Anonymous	6.3	50 19.21	64.9	3	2.467	− 40 9 39.2	71.0	3	16.93
4154	O. Arg. S. 10236	8.0	50 22.08	69.2	2	2.667	− 29 27 31.9	66.7	2	16.93
4155	Lacaille 4074	6.4	50 25.70	63.3	2	2.724	− 25 53 11.1	66.8	2	16.93
4156	B. A. C. 3405	5.9	9 50 28.80	63.8	3	+ 2.611	− 32 45 22.9	67.3	2	− 16.94
4157	Lacaille 4076	6.9	50 34.86	64.0	2	2.710	− 26 48 41.8	66.8	2	16.94
4158	O. Arg. S. 10241	9.8	50 37.43	70.7	2	2.694	− 27 52 33.4	67.3	3	16.94
4159	ν Leonis	5.5*	50 41.33	61.2	9	3.238	+ 13 6 38.3	56.2	6	16.95
4160	Lacaille 4082	6.7	50 56.10	63.2	2	2.588	− 34 9 42.0	68.3	2	16.96
4161	Weisse (2) IX, 1086	7.8	9 51 24.42	60.2	3	+ 3.735	+ 42 59 10.0	58.0	4	− 16.98
4162	B. A. C. 3409	5.5	51 31.22	64.7	2	3.488	+ 30 18 51.3	53.2	5	16.99
4163	Weisse (2) IX, 1096	9.0	51 41.34	65.3	2	3.313	+ 18 46 30.2	59.9	3	16.99
4164	Anonymous	8.8	52 8.62	69.8	2	2.500	− 38 54 30.4	65.2	2	17.01
4165	Lacaille 4089	7.3	52 27.03	63.7	4	2.686	− 28 38 13.4	65.2	2	17.03
4166	π Leonis	4.5*	9 52 48.77	63.3	53	+ 3.180	+ 8 42 52.0	68.0	3	− 17.05
4167	Lacaille 4095	5.9	52 51.84	65.2	2	2.575	− 35 13 19.5	69.3	2	17.05
4168	Anonymous	7.6	53 3.09	64.2	2	2.666	− 30 1 16.7	68.8	2	17.06
4169	B. A. C. 3420	6.8	53 56.31	68.3	2	3.512	+ 32 12 16.7	54.3	2	17.10
4170	Anonymous	8.0	54 10.46	68.3	1	2.590	− 34 38 38.2	67.3	2	17.11
4171	Anonymous	7.5	9 55 15.44	68.2	2	+ 2.517	− 38 44	. .	.	− 17.16
4172	Lacaille 4107	7.8	55 21.78	66.6	5	2.516	− 38 46 44.0	69.5	5	17.16
4173	Weisse (2) IX, 1172	6.8	55 30.06	68.3	2	3.626	+ 38 42 1.7	46.2	2	17.17
4174	Lacaille 4106, (1st *)	8.5	55 32.93	63.2	3	2.704	− 28 0 15.7	65.2	2	17.17
4175	Lacaille 4106, (2d *)	9.0	55 33.95	63.2	3	2.705	− 27 59 56.2	65.2	2	17.17
4176	Weisse (2) IX, 1177	9.5	9 55 43.52	62.2	2	+ 3.453	+ 28 54 26.5	66.8	2	− 17.18
4177	Anonymous	8.8	55 47.	. .	.	3.238	+ 13 32 15.4	62.7	2	17.19
4178	B. A. C. 3427	7.0*	55 48.51	60.2	3	3.525	+ 33 19 16.6	63.2	6	17.18
4179	Anonymous	9.0	55 52.	. .	.	3.238	+ 13 30 52.1	70.2	1	17.18
4180	Lacaille 4111	6.5	55 53.99	63.3	3	2.616	− 33 30 4.6	66.2	2	17.19
4181	Anonymous	8.1	9 56 6.32	69.1	4	+ 3.238	+ 13 33 15.5	66.0	3	− 17.20
4182	Weisse IX, 1204	7.2	56 15.81	59.3	3	3.228	+ 12 47 50.5	57.8	2	17.20
4183	Anonymous	7.2	56 24.	. .	.	2.522	− 38 42 35.4	70.3	2	17.21
4184	Weisse (2) IX, 1192	8.7	56 33.50	62.3	3	3.445	+ 28 31 24.5	62.2	2	17.22
4185	Lacaille 4115	6.8	56 33.89	66.7	2	2.678	− 29 54 15.1	65.8	2	17.22
4186	Anonymous	8.7	9 56 45.86	64.2	2	+ 2.683	− 29 35 46.6	68.9	3	− 17.22
4187	Anonymous	7.0	57 11.60	68.0	4	2.524	− 38 44 57.5	68.3	2	17.24
4188	Anonymous	8.0	57 13.86	64.3	2	2.685	− 29 34 26.6	68.3	2	17.25
4189	Lacaille 4120	6.5	57 14.02	63.2	1	2.636	− 32 33 46.6	68.3	2	17.25
4190	O. Arg. S. 10324	6.8	57 14.98	65.2	4	2.759	− 24 38 26.7	70.2	2	17.25

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4191	Lacaille 4119	7.7	9 57 16.60	62.3	2	+ 2.736	− 26 14 4.7	66.3	2	− 17.25
4192	Rumker 3061	8.3	57 22.66	62.2	3	3.236	+ 13 31 29.2	56.3	2	17.25
4193	Weisse (2) IX, 1214	9.0*	57 27.54	59.2	2	3.297	+ 18 14 47.7	56.3	3	17.26
4194	Lalande 19627	8.7	57 33.19	71.3	3	4.855	+ 69 6 24.3	71.3	3	17.26
4195	B. A. C. 3439	7.0*	57 33.27	59.7	2	3.561	+ 35 40 52.9	54.3	3	17.26
4196	Weisse (2) IX, 1230	9.4	9 57 39.66	62.2	3	+ 3.282	+ 17 8 39.7	59.8	2	− 17.27
4197	Anonymous	7.0	57 50.23	69.2	2	2.530	− 38 36 11.7	64.8	3	17.27
4198	O. Arg. S. 10337	5.0	57 53.18	64.7	2	2.776	− 23 36 33.6	67.6	3	17.28
4199	Anonymous	9.0	57 57.69	62.7	2	3.231	+ 13 13 3.5	65.3	2	17.28
4200	Weisse IX, 1243	8.0	58 7.05	66.8	2	3.233	+ 13 38 24.5	67.8	2	17.28
4201	Anonymous	9.0	9 58 16.39	65.3	2	+ 3.335	+ 21 15 8.7	67.5	3	− 17.29
4202	O. Arg. S. 10346	6.8	58 27.90	64.5	5	2.720	− 27 30 39.3	67.8	2	17.30
4203	Lacaille 4135	6.5	58 30.09	67.2	2	2.519	− 39 17 55.8	69.3	2	17.30
4204	O. Arg. S. 10351	6.5	58 50.73	63.8	7	2.721	− 27 31 6.0	67.8	2	17.32
4205	Weisse IX, 1259	7.5	59 5.64	60.2	2	3.237	+ 13 27 45.8	58.6	3	17.33
4206	Weisse (2) IX, 1255	7.8	9 59 6.17	64.5	4	+ 3.464	+ 30 11 38.9	68.8	2	− 17.33
4207	Weisse (2) IX, 1257	9.2	59 8.90	63.2	1	3.463	+ 30 8 30.9	68.8	2	17.33
4208	21 Leonis Minoris	5.5	59 9.59	68.3	2	3.560	+ 35 55 31.4	46.8	4	17.33
4209	Weisse (2) IX, 1259	9.0	59 16.46	69.3	1	3.623	+ 39 19 49.7	67.2	2	17.34
4210	B. A. C. 3448	6.0	59 19.77	64.8	2	2.615	− 34 12 12.9	70.3	2	17.34
4211	Lacaille 4142	6.8	9 59 23.40	63.7	2	+ 2.641	− 32 42 45.2	68.3	2	− 17.34
4212	14 Sextantis	6.0	59 28.08	66.7	2	3.146	+ 6 17 32.9	69.2	2	17.35
4213	η Leonis	5.0	59 41.79	64.2	2	3.283	+ 17 26 39.4	49.3	1	17.35
4214	Weisse (2) IX, 1273	9.5	59 54.08	62.2	2	3.622	+ 39 26 48.2	61.9	3	17.36
4215	Weisse IX, 1279	8.1	10 0 4.89	66.8	2	3.235	+ 13 42 20.3	67.8	2	17.37
4216	Weisse (2) IX, 1282	7.9	10 0 5.19	68.3	2	+ 3.276	+ 16 57 33.0	59.7	2	− 17.37
4217	B. A. C. 3456	6.5	0 9.95	71.2	2	3.494	+ 32 17 23.1	71.3	2	17.38
4218	A Leonis	5.0	0 28.34	66.2	2	3.198	+ 10 40 55.5	70.7	2	17.39
4219	Rumker 3069	8.5	0 45.01	64.2	3	3.222	+ 12 40 45.5	55.8	2	17.40
4220	α Leonis	1.2*	0 54.85	55.4	203	3.221	+ 12 39 0.0	62.8	21	17.41
4221	Anonymous.	7.7	10 0 56.04	65.2	3	+ 2.773	− 24 15 10.0	69.7	2	− 17.41
4222	O. Arg. S. 10387	8.0	1 23.44	64.3	2	2.786	− 23 22 27.2	68.3	2	17.43
4223	Anonymous.	8.0	1 33.40	65.3	2	2.774	− 24 16 50.5	69.7	2	17.44
4224	Weisse (2) IX, 1316	7.5	1 35.90	62.3	2	3.326	+ 21 1 1.8	63.5	4	17.44
4225	Anonymous	9.2	1 52.67	65.0	3	3.223	+ 12 55 54.0	70.2	2	17.45
4226	16 Sextantis	6.5	10 1 54.54	66.1	2	+ 3.151	+ 6 51 19.5	65.8	2	− 17.45
4227	Lacaille 4162	7.0	2 15.40	63.3	2	2.623	− 34 19 47.8	70.8	2	17.47
4228	B. A. C. 3466	6.2	2 31.70	62.8	4	3.649	+ 41 20 52.6	55.6	4	17.48
4229	Anonymous.	8.8	2 39.41	66.2	2	2.660	− 32 11 14.6	68.3	2	17.48
4230	Anonymous	8.9	2 40.74	65.0	3	3.223	+ 12 57 44.2	70.2	2	17.48

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4231	Groombridge 1618	6.5	10 2 45.22	71.2	2	+ 3.857	+ 50 9 31.5	71.2	2	− 17.49
4232	B. A. C. 3468	6.0	2 54.32	60.6	4	3.584	+ 38 5 23.5	54.3	8	17.49
4233	Anonymous	9.5	3 7.49	66.8	2	3.225	+ 13 10 51.5	69.3	1	17.50
4234	Rumker 3076	8.5	3 11.86	62.2	2	3.217	+ 12 30 45.4	59.8	2	17.51
4235	Lacaille 4165	7.0	3 20.35	63.0	4	2.662	− 32 9 43.8	67.1	4	17.51
4236	Weisse (2) X, 53	8.3	10 3 43.46	64.9	3	+ 3.460	+ 30 50 13.9	65.8	2	− 17.53
4237	Weisse (2) X, 49	7.2	3 44.63	68.7	2	3.560	+ 36 56 20.9	46.3	2	17.53
4238	Anonymous	8.2	3 48.27	65.2	2	2.599	− 36 4 53.5	69.7	2	17.53
4239	Weisse X, 38	7.5	3 50.92	68.3	2	3.150	+ 6 51 19.9	66.9	2	17.53
4240	Weisse X, 45	8.0	4 5.79	59.6	3	3.218	+ 12 43 29.5	56.3	2	17.54
4241	Lalande 19854	8.3	10 5 20.48	66.2	2	+ 3.476	+ 32 12 12.9	68.3	2	− 17.60
4242	Weisse (2) X, 106	8.0	5 23.06	59.2	2	3.271	+ 17 13 30.3	56.2	4	17.60
4243	Weisse X, 70	8.0	5 25.05	60.1	2	2.954	− 10 26 49.8	63.6	3	17.60
4244	Lacaille 4185	7.0	5 36.76	62.6	3	2.646	− 33 38 36.1	66.8	2	17.61
4245	Lacaille 4183	7.4	5 39.94	63.2	3	2.733	− 27 54 58.1	65.3	1	17.61
4246	Weisse X, 74	8.4	10 5 50.40	68.3	2	+ 3.141	+ 6 11 12.2	62.8	2	− 17.62
4247	Weisse X, 75	8.7	5 54.57	66.8	2	3.217	+ 12 50 13.2	69.3	2	17.62
4248	Lacaille 4186	6.2	5 56.08	63.9	3	2.533	− 40 11 9.6	69.2	2	17.62
4249	Weisse X, 76	8.6	5 57.90	64.1	5	3.208	+ 12 1 48.7	65.1	5	17.62
4250	Lalande 19869	7.2	6 7.46	65.8	2	3.472	+ 32 7 4.5	66.8	2	17.63
4251	Anonymous	7.8	10 6 7.62	67.2	2	+ 2.584	− 37 28 34.9	71.3	1	− 17.63
4252	Anonymous	9.1	6 9.09	69.3	3	3.208	+ 12 2 40.3	64.2	2	17.63
4253	Lacaille 4190	7.3	6 26.46	63.2	2	2.722	− 28 48 33.1	69.3	2	17.64
4254	Weisse X, 94	8.2	6 30.25	66.6	3	3.212	+ 12 22 52.3	68.2	3	17.65
4255	Lacaille 4192	7.0	6 34.83	66.2	2	2.678	− 31 49 30.3	70.2	2	17.65
4256	Weisse X, 96	9.0	10 6 42.02	67.3	2	+ 3.211	+ 12 23 19.7	70.9	1	− 17.65
4257	B. A. C. 3489	6.0*	6 53.31	60.2	2	2.758	− 26 20 18.8	65.2	2	17.66
4258	Anonymous	7.0	6 56.99	64.2	2	2.542	− 39 56 58.2	70.3	2	17.66
4259	22 Leonis Minoris	6.2	7 3.49	63.3	4	3.470	+ 32 9 39.8	64.6	4	17.67
4260	Anonymous	8.5	7 7.08	67.2	2	2.711	− 29 44 18.1	68.3	1	17.67
4261	21 Sextantis	6.0	10 7 9.78	57.8	2	+ 2.991	− 7 18 0.2	69.8	2	− 17.67
4262	Lacaille 4196	6.0	7 13.54	67.3	2	2.672	− 32 20 29.6	72.3	2	17.68
4263	O. Arg. S. 10471	5.5	7 36.21	65.0	5	2.804	− 23 7 18.6	70.3	2	17.69
4264	Weisse X, 115	9.0	7 41.27	66.7	2	3.212	+ 12 34 32.6	67.8	2	17.70
4265	Weisse X, 116	7.4	7 41.60	64.8	2	3.210	+ 12 22 4.5	59.7	5	17.70
4266	B. A. C. 3497	6.1	10 7 48.67	62.6	3	+ 2.551	− 39 39 12.8	65.8	2	− 17.70
4267	32 Ursæ Majoris	5.5	7 49.07	62.9	10	4.471	+ 65 48 16.7	61.8	5	17.70
4268	B. A. C. 3498	6.7	7 58.55	62.6	3	2.523	− 39 37 2.7	65.8	2	17.71
4269	Anonymous	7.0	8 12.22	64.6	3	2.571	− 38 39 2.1	71.3	2	17.72
4270	Weisse (2) X, 157	7.7	8 12.53	62.5	4	3.636	+ 41 58 19.9	61.8	4	17.72

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4271	Weisse (2) X, 158	8.5	10 8 13.56	62.6	3	+ 3.636	+ 42 0 9.1	67.3	2	− 17.72
4272	23 Leonis Minoris	5.5*	8 16.69	59.8	5	3.434	+ 30 0 22.8	53.9	5	17.72
4273	Anonymous	7.2	8 22.87	68.7	2	2.709	− 30 7 24.4	67.8	2	17.72
4274	λ Ursæ Majoris	3.5*	8 38.53	46.3	3	3.667	+ 43 36 41.5	63.3	2	17.73
4275	B. A.C. 3495	5.5*	8 39.16	61.9	7	10.149	+ 84 57 32.6	63.6	5	17.73
4276	Rumker 3113	. .	10 8 42 14	60.8	2	+ 3.209	+ 12 21 49.7	58.3	1	− 17.74
4277	Weisse (2) X, 165	9.3	8 46.00	61.2	3	3.660	+ 43 20 4.3	58.3	3	17.74
4278	Weisse (2) X, 179	8.2	9 9.41	68.3	2	3.435	+ 30 15 2.8	65.2	2	17.76
4279	O. Arg. S. 10488	7.0	9 24.38	70.4	5	2.705	+ 30 30 20.8	68.3	2	17.73
4280	Anonymous.	8.8	9 37.36	64.8	2	2.578	− 38 35 43.6	68.7	2	17.77
4281	Lacaille 4218	7.0	10 9 41.47	64.5	10	+ 2.744	− 27 55 11.9	65.3	2	− 17.78
4282	Radcliffe 2472	6.5	10 3.84	62.2	2	3.865	+ 52 6 15.9	62.2	2	17.79
4283	Weisse (2) X, 194	6.7	10 5.54	62.2	2	3.662	+ 43 44 58.7	65.3	2	17.79
4284	Weisse (2) X, 197	8.0	10 7.00	69.3	2	3.557	+ 38 12 24.8	55.0	4	17.80
4285	Lalande 19981	8.5	10 20.74	69.2	2	3.203	+ 11 58 56.5	68.2	3	17.80
4286	Weisse (2) X, 204	9.0	10 10 34.13	66.3	2	+ 3.446	+ 31 19 4.0	67.8	2	− 17.81
4287	Lacaille 4227	7.0	10 37.66	64.8	2	2.667	− 33 25 48.7	68.8	2	17.81
4288	Weisse X, 173	9.0	10 56.19	59.8	2	3.197	+ 11 32 9.5	57.3	4	17.83
4289	B. A. C. 3521	6.0	11 42.89	63.3	2	2.744	− 28 17 35.7	66.8	2	17.86
4290	γ^1 Leonis	2.0*	12 15.04	63.7	81	3.299	+ 20 32 53.0	62.8	9	17.88
4291	γ^2 Leonis	3.5*	10 12 15.28	64.7	11	+ 3.299	+ 20 32 50.5	71.3	2	− 17.88
4292	Weisse X, 204	9.0	12 23.37	67.3	2	3.035	− 3 32	. .	.	17.89
4293	Lacaille 4242	6.2	12 28.87	64.8	2	2.631	− 36 6 18.1	68.8	2	17.89
4294	O. Arg. S. 10533	7.5	12 41.86	71.1	2	2.748	− 28 15 33.7	68.6	3	17.90
4295	Lacaille 4245	6.5	12 56.95	63.3	2	2.667	− 33 55 2.4	63.3	2	17.91
4296	Weisse X, 209	7.3	10 12 59.40	64.3	2	+ 3.200	+ 12 3 18.1	65.8	2	− 17.91
4297	Anonymous	8.0	13 2.70	63.7	5	3.034	− 3 38 31.2	69.3	2	17.91
4298	O. Arg. S. 10540	7.5	13 21.72	71.1	2	2.750	− 28 15 39.4	69.3	2	17.93
4299	Σ Cat. Gen. 1198, (1st *).	8.5	13 31.74	62.3	2	3.663	+ 44 36 24.1	69.0	3	17.93
4300	Σ Cat. Gen. 1198, (2d *).	8.0	13 32.22	62.3	2	3.663	+ 44 36 33.6	59.2	3	17.93
4301	B. A. C. 3528	5.5*	10 13 38.20	66.8	4	+ 8.142	+ 83 16 3.0	66.7	8	− 17.93
4302	Weisse X, 224	8.0	13 41.62	59.2	2	3.023	− 4 40 45.6	55.6	3	17.94
4303	Lacaille 4250	7.0	13 55.92	66.9	3	2.693	− 32 25 35.9	69.3	2	17.95
4304	Anonymous	8.2	13 58.45	65.3	2	2.820	− 22 56 12.4	68.3	1	17.95
4305	B. A. C. 3531	5.0	13 59.43	62.3	2	4.430	+ 66 16 20.1	65.3	2	17.95
4306	Lacaille 4253	7.0	10 14 1.68	66.7	2	+ 2.589	− 39 0 2.3	67.8	2	− 17.95
4307	Weisse X, 229	7.5	14 4.28	59.2	2	3.023	− 4 42 46.9	55.6	3	17.95
4308	Weisse X, 234	7.5	14 27.79	62.0	3	3.192	+ 11 24 16.6	60.3	2	17.97
4309	Weisse X, 240	7.2	14 42.49	64.3	2	3.198	+ 12 1 36.7	67.8	2	17.98
4310	Lacaille 4257	6.6	14 49.07	63.2	3	2.800	− 24 40 8.8	68.3	1	17.98

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4311	Lalande 20114 . . .	7.0	10 14 53.68	65.3	4	+ 2.821	− 23 0 27.0	70.2	1	− 17.98
4312	26 Leonis Minoris . .	6.5*	14 58.34	59.6	2	3.500	+ 35 55 23.0	53.3	2	17.99
4313	Weisse (2) X, 290 . .	7.6	15 3.29	63.2	4	3.435	+ 31 32 33.3	62.3	2	17.99
4314	Weisse X, 255 . . .	7.5	15 34.50	60.2	1	3.041	− 3 2 10.7	61.6	4	18.01
4315	43 Leonis	6.0	15 40.78	64.5	3	3.147	+ 7 15 5.3	70.3	2	18.02
4316	Anonymous. . . .	7.5	10 15 47.98	64.3	2	+ 2.653	− 35 31 7.4	69.8	2	− 18.02
4317	Lacaille 4266 . . .	7.0*	15 56.56	63.3	2	2.749	− 28 51 10.6	69.3	2	18.02
4318	24 Sextantis	6.5*	16 18.35	47.3	1	3.070	− 0 11 41.6	70.3	2	18.04
4319	Anonymous. . . .	8.9	16 23.57	65.3	2	2.770	− 27 18 32.0	69.8	2	18.04
4320	Lacaille 4267 . . .	6.0	16 24.04	68.3	2	2.816	− 23 37 35.1	66.7	2	18.04
4321	B. A. C. 3553 . . .	6.0	10 16 27.26	60.2	2	+ 3.042	− 2 56 11.7	69.3	2	− 18.04
4322	B. A. C. 3554 . . .	6.6	16 48.08	64.8	4	2.743	− 29 27 21.9	68.6	2	18.06
4323	Weisse X, 276 . . .	7.0	16 54.40	61.9	5	3.188	+ 11 17 42.7	59.3	4	18.06
4324	Anonymous . . .	. .	17 11.76	67.3	2	3.094	+ 2 10	. .	.	18.07
4325	Rumker 3171 . . .	8.9	17 17.21	64.2	2	3.196	+ 12 3 54.1	69.0	3	18.08
4326	B. A. C. 3557 . . .	5.2	10 17 21.71	63.3	3	+ 2.631	− 37 18 2.5	67.8	2	− 18.08
4327	Lalande 20169 . . .	6.7	17 22.71	68.3	2	3.507	+ 36 54 50.7	47.3	2	18.08
4328	O. Arg. S. 10594 . .	8.0	17 24.03	65.2	2	2.744	− 29 34 33.0	70.3	2	18.08
4329	γ Antliæ	7.3	17 29.60	62.9	3	2.752	− 28 56 29.8	67.8	2	18.08
4330	Rumker 3172 . . .	8.8	17 32.35	60.6	3	3.190	+ 11 34 45.5	58.6	3	18.08
4331	Weisse X, 288 . . .	8.3	10 17 37.80	62.2	2	+ 3.181	+ 10 41 29.3	59.9	3	− 18.09
4332	29 Leonis Minoris . .	5.5*	17 39.85	56.6	3	3.494	+ 36 8 12.2	61.3	4	18.09
4333	44 Leonis	5.6	17 52.43	66.3	2	3.168	− 9 29 41.6	70.0	3	18.10
4334	30 Leonis Minoris . .	4.5*	17 52.67	60.5	3	3.468	+ 34 30 26.6	59.6	3	18.10
4335	B. A. C. 3562 . . .	6.0	18 12.63	71.1	2	3.168	+ 9 29 9.3	69.9	3	18.11
4336	B. A. C. 3563 . . .	5.5	10 18 46.44	47.3	1	+ 3.007	− 6 21 18.1	69.3	2	− 18.13
4337	Lacaille 4287 . . .	6.7	18 47.55	66.8	2	2.632	− 37 35 37.9	68.3	2	18.13
4338	Weisse (2) X, 360 . .	8.8	18 49.52	61.5	4	3.257	+ 17 56 6.1	60.3	3	18.13
4339	Weisse X, 315 . . .	6.7	18 53.19	69.2	2	3.118	+ 4 38 34.6	62.8	2	18.14
4340	Lacaille 4286 . . .	6.2	18 56.77	66.3	2	2.762	− 28 29 3.5	66.2	2	18.14
4341	Weisse X, 316 . . .	7.3	10 19 1.08	60.9	3	+ 3.185	+ 11 12 54.5	57.0	3	− 18.14
4342	B. A. C. 3566 . . .	7.0	19 16.42	64.3	2	3.015	− 5 43 0.4	69.3	2	18.15
4343	Weisse (2) X, 374 . .	7.5	19 18.93	66.6	6	3.256	+ 17 55 58.0	59.0	4	18.15
4344	μ Hydræ	4.5	19 19.30	59.3	3	2.908	− 16 7 22.0	66.7	2	18.15
4345	26 Sextantis	6.0	19 27.88	64.3	2	3.069	− 0 16 38.0	67.3	2	18.16
4346	β Leonis Minoris. . .	5.5	10 19 46.49	68.3	2	+ 3.505	+ 37 25 25.1	46.6	5	− 18.17
4347	35 Ursæ Majoris . . .	6.5	19 54.83	63.3	4	4.363	+ 66 20 26.3	64.3	2	18.17
4348	Radcliffe 2496 . . .	6.0	20 9.28	62.3	2	3.655	+ 45 55 32.5	56.2	3	18.18
4349	45 Leonis	7.0	20 15.15	61.6	7	3.176	+ 10 28 29.5	61.0	4	18.19
4350	Lacaille 4295 . . .	6.5	20 17.81	63.3	3	2.621	− 38 39 4.3	68.3	2	18.19

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4351	B. A. C. 3576	7.0*	10 20 26.06	60.2	2	+ 3.070	− 0 15 2.0	65.3	2	− 18.19
4352	O. Arg. N. 10861	6.5	20 39.55	65.8	2	4.275	+ 64 58 25.8	70.3	2	18.20
4353	α Antliæ	4.4	20 44.92	64.4	11	2.744	− 30 21 21.5	67.2	2	18.20
4354	Rumker 3203	7.3	20 55.61	66.9	3	3.238	+ 16 28 9.4	70.8	2	18.21
4355	Weisse (2) X, 412	7.5	21 9.83	63.6	9	3.292	+ 17 50 47.3	57.6	3	18.22
4356	Anonymous	. .	10 21 22.	. .	.	+ 4.269	+ 65 0 52.6	69.3	1	− 18.23
4357	Anonymous	8.5	21 27.58	69.3	2	2.998	− 7 34 27.7	57.6	3	18.23
4358	Anonymous	6.2	21 30.04	60.3	2	2.701	− 33 41 8.1	69.3	2	18.23
4359	36 Ursæ Majoris	5.9	21 38.41	68.3	2	3.919	+ 56 41 48.0	58.2	2	18.24
4360	Weisse X, 375	7.0	21 47.28	66.8	2	3.179	+ 10 52 14.9	68.3	2	18.24
4361	32 Leonis Minoris.	6.0*	10 21 55.31	59.8	3	+ 3.532	+ 39 38 24.1	53.2	8	− 18.25
4362	Weisse X, 377	8.9	21 55.67	62.6	3	3.182	+ 11 14 26.9	57.9	3	18.25
4363	Anonymous	6.8	21 58.80	64.3	2	2.677	− 35 30 20.5	70.3	1	18.25
4364	Weisse X, 378	7.5	21 59.38	60.2	2	3.199	+ 12 54 6.2	68.3	2	18.25
4365	Rumker 3209	8.3	22 10.92	64.5	4	3.248	+ 17 41 42.5	59.6	3	18.26
4366	Anonymous	. .	10 22 14.	. .	.	+ 2.678	− 35 28 13.9	70.3	1	− 18.26
4367	Anonymous	8.5	22 28.37	69.6	3	3.499	+ 37 45 4.0	46.8	2	18.27
4368	O. Arg. S. 10666	8.7	22 52.75	68.8	2	2.757	− 29 49 29.1	65.3	2	18.28
4369	Lacaille 4307	6.5	22 54.32	63.6	3	2.653	− 37 20 39.3	67.8	2	18.28
4370	Rumker 3211	8.2	22 59.91	60.3	1	3.192	+ 12 20 47.9	71.3	2	18.29
4371	B. A. C. 3596	5.4	10 23 1.24	63.3	2	+ 2.768	− 28 56 56.5	67.3	2	− 18.29
4372	9 (H) Draconis	5.2	23 4.88	62.6	7	5.346	+ 76 25 55.6	64.2	6	18.29
4373	30 Sextantis	6.0	23 8.00	64.2	2	3.073	+ 0 4 44.7	69.3	2	18.29
4374	δ Antliæ	5.0	23 8.97	68.8	2	2.757	− 29 53 28.9	68.3	2	18.29
4375	33 Leonis Minoris.	6.3	23 54.01	62.2	2	3.427	+ 33 5 48.1	67.8	2	18.32
4376	Weisse X, 412	8.0	10 23 58.26	66.8	2	+ 3.176	+ 10 46 5.1	68.3	2	− 18.32
4377	B. A. C. 3603	6.0	23 58.50	58.3	2	3.006	− 6 55 12.8	71.2	2	18.32
4378	O. Arg. N. 10911	7.0*	24 7.63	69.3	2	3.613	+ 44 54 1.1	56.3	2	18.36
4379	O. Arg. S. 10684	8.1	24 11.84	64.3	2	2.825	− 24 30 22.7	69.7	2	18.33
4380	Lacaille 4317	6.6	24 17.80	66.3	2	2.810	− 25 46 2.1	70.3	2	18.33
4381	Weisse X, 425	8.1	10 24 46.03	67.3	2	+ 3.169	+ 10 8 28.6	70.6	3	− 18.35
4382	Anonymous	9.8	25 2.34	65.3	2	3.243	+ 17 36	. .	.	18.36
4383	B. A. C. 3607	5.0*	25 3.02	60.3	2	3.542	+ 41 8 39.8	54.3	2	18.36
4384	Lacaille 4326	6.8	25 10.89	63.3	2	2.704	− 34 24 25.5	69.3	2	18.36
4385	Lalande 20419	8.0	25 14.32	65.3	2	3.002	− 7 28 36.3	57.3	2	18.37
4386	Lacaille 4324	6.0	10 25 17.70	64.2	3	+ 2.792	− 27 31 7.9	68.8	2	− 18.37
4387	Weisse X, 439	9.0	25 26.16	64.2	2	3.176	+ 11 0 41.3	68.8	2	18.37
4388	ρ Leonis	4.0	25 26.24	63.1	56	3.167	+ 10 1 32.7	60.2	6	18.37
4389	34 Leonis Minoris.	5.0*	25 29.94	59.7	2	3.457	+ 35 42 28.0	54.3	3	18.37
4390	Anonymous	8.3	25 40.38	64.8	2	2.716	− 33 40 32.0	68.8	2	18.38

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4391	Anonymous.	9.7	10 25 51.04	63.7	2	+ 3.240	+ 17 30 16.0	67.3	1	— 18.39
4392	Weisse (2) X, 513	8.5	26 0.50	66.3	2	3.221	+ 15 36 58.6	69.8	2	18.39
4393	Rumker 3238	8.7	26 3.06	63.8	2	3.224	+ 15 56 4.4	68.8	2	18.39
4394	37 Ursæ Majoris	6.0	26 7.08	68.3	2	3.918	+ 57 48 6.0	58.3	2	18.40
4395	Anonymous.	8.3	26 16.	. .	.	3.118	+ 4 58 53.2	70.4	1	18.40
4396	Weisse X, 456	8.0	10 26 31.21	68.8	2	+ 3.039	— 3 33 18.5	59.8	2	— 18.41
4397	Anonymous.	8.8	26 51.63	69.3	2	3.034	— 4 9 15.5	59.3	2	18.42
4398	Weisse X, 468	9.0	26 56.70	60.2	2	3.193	+ 12 54	. .	.	18.43
4399	Anonymous.	7.5	27 10.66	64.3	2	2.698	— 35 20 47.4	69.3	2	18.43
4400	Lacaille 4340	7.0	27 17.66	63.5	3	2.808	— 26 37 39.9	64.6	2	18.44
4401	Lamont's Z. X, 33	8.0	10 27 20.22	59.2	2	+ 2.987	— 9 10 39.5	56.2	6	— 18.44
4402	Lacaille 4345	6.7	27 20.27	63.3	3	2.638	— 39 30 59.7	66.3	2	18.44
4403	Lalande 20482	8.0	27 23.95	48.3	1	2.976	— 10 23 53.5	70.8	2	18.44
4404	48 Leonis	5.5*	27 29.65	69.3	2	3.143	+ 7 40 23.6	63.3	2	18.44
4405	Weisse (2) X, 537	8.2	27 34.26	62.2	2	3.406	+ 32 30 1.1	62.3	2	18.45
4406	Anonymous	7.9	10 28 17.15	70.3	2	+ 2.674	— 37 24 24.4	67.3	2	— 18.47
4407	B. A. C. 3627	6.0	28 18.04	59.2	2	2.857	— 22 27 18.1	66.3	2	18.47
4408	35 Leonis Minoris	6.0	28 18.65	69.3	2	3.465	+ 37 3 6.0	47.3	2	18.47
4409	Lacaille 4349	6.9	28 20.32	63.8	2	2.764	— 30 37 15.7	65.8	2	18.47
4410	Anonymous	9.0	28 27.87	69.3	1	3.037	— 3 53	. .	.	18.48
4411	Anonymous	8.6	10 28 37.88	68.3	1	+ 3.037	— 3 52 55.0	49.3	2	— 18.48
4412	Anonymous	8.5	28 40.69	69.7	2	3.037	— 3 53	. .	.	18.48
4413	Anonymous	8.5	28 40.85	69.3	2	2.777	— 29 36 54.9	65.2	2	18.48
4414	B. A. C. 3630	5.5	29 0.04	63.3	2	2.656	— 38 50 23.7	68.4	1	18.50
4415	Anonymous	9.0	29 12.89	65.8	4	2.702	— 35 39 46.9	70.9	1	18.50
4416	Anonymous	9.2	10 29 20.53	65.3	1	+ 2.703	— 35 35 57.9	7.09	1	— 18.51
4417	Weisse X, 517	8.8	29 25.06	69.0	4	3.035	— 4 6 18.6	49.3	1	18.51
4418	B. A. C. 3629	6.0*	29 26.72	62.2	1	6.379	+ 81 9 17.6	67.3	2	18.51
4419	Lacaille 4360	6.8	29 28.74	63.7	2	2.822	— 25 56 55.2	68.3	2	18.51
4420	Weisse X, 520	7.0	29 34.35	70.8	4	2.968	— 11 28 50.1	66.0	3	18.52
4421	Weisse X, 526	9.0	10 29 44.22	69.3	1	+ 2.990	— 9 6 25.7	56.9	3	— 18.52
4422	Anonymous	8.1	29 52.94	64.7	5	2.705	— 35 38 35.7	70.6	2	18.52
4423	Anonymous	9.3	29 56.	. .	.	3.038	— 3 48 2.6	70.3	1	18.53
4424	Lacaille 4363	6.5	30 2.85	64.2	6	2.800	— 28 2 51.9	68.8	2	18.53
4425	Lacaille 4364	6.4	30 8.31	63.2	2	2.812	— 26 55 55.7	70.0	3	18.53
4426	Lacaille 4365	6.7	10 30 10.64	64.2	2	+ 2.746	— 32 32 50.8	70.3	2	— 18.54
4427	Anonymous	. .	30 13.43	49.3	1	3.041	— 3 31 18.1	49.3	1	18.54
4428	Anonymous	. .	30 13.62	49.3	1	3.037	— 3 53	. .	.	18.54
4429	Weisse X, 538	8.8	30 27.79	60.2	2	2.979	— 10 19 6.1	55.3	3	18.54
4430	B. A. C. 3637	6.0*	30 38.54	60.1	2	2.958	— 12 39 28.8	54.3	2	18.55

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4431	B. A. C. 3638	5.8	10 30 39.70	62.3	2	+ 2.817	− 26 41 18.1	64.8	2	− 18.55
4432	Weisse X, 548	9.0	30 47.93	59.7	2	2.980	− 10 19 24.6	55.3	3	18.56
4433	37 Leonis Minoris	4.5*	30 49.86	60.2	2	3.398	+ 32 42 7.1	65.8	2	18.56
4434	38 Leonis Minoris	5.5*	31 6.36	69.3	2	3.476	+ 38 38 19.1	48.3	1	18.56
4435	O. Arg. S. 10775	8.0	31 13.04	67.3	2	2.799	− 28 22 20.8	68.8	2	18.57
4436	Lacaille 4374	6.8	10 31 20.37	63.3	3	+ 2.719	− 34 59 38.9	66.8	2	− 18.57
4437	50 Leonis	6.8	31 23.80	67.3	2	3.226	+ 16 51 17.0	69.3	2	18.57
4438	O. Arg. N. 11017	6.5	31 45.41	69.3	2	3.622	+ 47 34 11.2	56.2	3	18.59
4439	ϕ^3 Hydræ	5.5	31 45.64	61.6	3	2.927	− 16 9 3.3	68.3	2	18.59
4440	Weisse (2) X, 642	9.0	32 6.32	61.2	2	3.438	+ 36 13 17.0	61.4	5	18.60
4441	38 Ursæ Majoris	5.2	10 32 20.76	63.0	3	+ 4.217	+ 66 26 52.9	58.3	2	− 18.61
4442	B. A. C. 3649	8.5	32 22.00	70.3	4	3.156	+ 9 34 14.1	70.3	2	18.61
4443	Lacaille 4384	7.1	32 34.84	63.3	3	2.655	− 39 56 37.5	68.3	2	18.61
4444	Weisse (2) X, 660	7.0	32 35.59	60.1	5	3.339	+ 28 15 12.8	55.3	3	18.62
4445	Lacaille 4387	6.0	32 55.86	64.3	10	2.712	− 35 56 59.5	65.3	2	18.63
4446	O. Arg. N. 11041	8.3	10 33 4.38	64.8	2	+ 4.077	+ 63 46 11.1	62.3	2	− 18.63
4447	Lacaille 4389	6.9	33 26.19	63.7	4	2.752	− 32 53 4.8	67.3	3	18.64
4448	Anonymous	8.5	34 1.64	59.8	2	2.974	− 11 28 7.4	56.3	3	18.66
4449	Lacaille 4393	7.8	34 9.74	63.0	3	2.833	− 26 3 21.5	70.7	2	18.67
4450	Weisse X, 600	7.5	34 10.19	65.8	2	3.200	+ 14 42 29.5	69.3	2	18.67
4451	33 Sextantis	6.0	10 34 16.64	67.3	2	+ 3.063	− 1 0 25.5	70.3	2	− 18.67
4452	B. A. C. 3661	6.5*	34 20.11	59.8	2	3.382	+ 32 25 42.3	68.3	2	18.67
4453	Weisse X, 608	9.0*	34 24.	. .	.	3.199	+ 14 40 11.5	70.2	1	18.67
4454	Weisse (2) X, 693	8.0	34 26.15	65.8	2	3.443	+ 37 15 0.2	55.6	3	18.67
4455	Anonymous	8.5	34 27.89	67.9	3	2.720	− 35 51 36.2	69.3	2	18.62
4456	Lacaille 4399	6.5	10 34 28.32	63.0	3	+ 2.730	− 35 0 45.3	67.6	3	− 18.67
4457	Weisse (2) X, 696	9.0	34 35.50	62.0	4	3.427	+ 36 6 33.7	62.7	4	18.68
4458	Weisse X, 618	8.0	34 54.55	61.2	4	3.167	+ 11 5 13.3	59.5	5	18.69
4459	Lacaille 4407	6.5	35 6.75	62.8	4	2.733	− 35 0 1.6	68.3	2	18.70
4460	Lacaille 4406	7.3	35 13.76	63.4	4	2.843	− 25 18 56.0	66.4	2	18.70
4461	Weisse (2) X, 711	8.0	10 35 18.01	68.3	2	+ 3.400	+ 34 5 43.3	65.3	2	− 18.70
4462	34 Sextantis	6.7	35 23.66	62.3	13	3.108	+ 4 18 48.5	61.6	4	18.70
4463	Anonymous	7.5	35 34.96	64.8	2	2.726	− 35 41 3.4	70.9	3	18.71
4464	Lacaille 4412	7.0	35 42.01	65.3	2	2.669	− 39 57 40.5	71.8	2	18.71
4465	B. A. C. 3671	5.5*	35 47.93	55.6	3	3.285	+ 23 55 11.5	53.2	12	18.72
4466	Weisse X, 637	8.3	10 35 57.57	62.6	3	+ 3.041	− 3 40 30.8	49.3	2	− 18.72
4467	Anonymous	7.7	36 9.10	65.3	1	3.114	+ 5 2 5.9	71.3	2	18.73
4468	B. A. C. 3674	7.5*	36 9.58	59.3	3	2.871	− 22 49 3.8	54.3	2	18.73
4469	B. A. C. 3677	5.5	36 14.20	63.3	3	2.774	− 31 59 2.5	68.8	2	18.73
4470	Anonymous	8.0	36 14.80	60.3	1	2.722	− 36 13	. .	.	18.73

Number.	Name of Star.	Magnitude.	Mean Right Ascension, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.	Mean Declination, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.
			h. m. s.			″	° ′ ″			″
4471	Anonymous	8.2	10 36 20.50	67.3	2	+ 3.114	+ 4 58 59.6	71.3	2	− 18.73
4472	Anonymous	8.5	36 34.92	65.0	3	2.729	− 35 46 7.0	70.3	1	18.74
4473	Lacaille 4419	6.4	36 46.46	66.8	2	2.786	− 31 1 3.5	68.9	3	18.75
4474	Anonymous	9.5	36 47.96	66.3	2	3.421	+ 36 21 15.6	67.3	1	18.75
4475	Anonymous	8.0	36 55.20	64.8	2	2.816	− 28 19 47.6	69.3	2	18.75
4476	Weisse X, 656	8.0	10 37 3.40	60.8	2	+ 3.165	+ 11 6 33.9	60.3	4	− 18.76
4477	O. Arg. S. 10840	6.8	37 5.33	69.3	2	2.797	− 30 8 2.3	66.8	2	18.76
4478	Weisse (2) X, 754	9.4	37 20.90	62.1	4	3.463	+ 39 40 31.1	56.2	3	18.77
4479	41 Ursæ Majoris	5.8	37 34.21	68.8	2	3.830	+ 58 9 19.4	48.2	5	18.77
4480	Weisse X, 664	8.9	37 44.65	65.3	3	3.114	+ 5 4 23.8	65.3	2	18.78
4481	O. Arg. S. 10849	6.3	10 37 45.72	64.5	4	+ 2.870	− 23 15 8.8	66.3	2	− 18.78
4482	Anonymous	7.5	37 53.05	67.3	2	2.730	− 36 8	. .	.	18.78
4483	36 Sextantis	6.1	37 56.60	64.2	3	3.098	+ 3 13 22.7	68.2	2	18.78
4484	42 Leonis Minoris	4.5*	38 4.31	46.2	1	3.358	+ 31 25 6.5	69.3	2	18.79
4485	Weisse (2) X, 774	8.6	38 7.85	66.3	2	3.417	+ 36 25 43.3	70.3	1	18.79
4486	Lacaille 4437	6.1	10 38 14.77	65.0	3	+ 2.730	− 36 11 45.7	68.8	4	− 18.79
4487	Lacaille 4438	7.3	38 17.94	63.3	3	2.715	− 37 24 28.1	71.8	2	18.79
4488	Weisse (2) X, 776	8.1	38 19.89	64.3	4	3.416	+ 36 22 23.4	61.5	5	18.80
4489	Weisse X, 673	8.9	38 21.48	62.3	2	3.161	+ 10 45 28.2	57.3	3	18.80
4490	37 Sextantis	6.0	38 48.24	61.3	9	3.130	+ 7 6 37.7	64.8	2	18.81
4491	*k* Leonis	5.5	10 39 0.10	66.3	2	+ 3.195	+ 14 55 56.2	58.3	2	− 18.82
4492	Anonymous	7.1	39 25.69	65.0	3	2.735	− 36 12 30.1	68.3	3	18.83
4493	Lacaille 4450	6.5	39 33.59	63.7	4	2.683	− 40 14 16.2	70.8	2	18.83
4494	O. Arg. S. 10872	8.4	39 51.27	64.4	4	2.834	− 27 25 45.8	68.8	2	18.84
4495	O. Arg. S. 10874	7.8	39 51.73	64.4	4	2.834	− 27 24 17.9	68.8	2	18.84
4496	Weisse X, 702	8.0	10 39 59.62	59.7	2	+ 3.187	+ 14 6 56.7	70.8	2	− 18.85
4497	Weisse X, 703	7.5	40 2.15	69.0	3	3.128	+ 7 5 2.9	67.8	2	18.85
4498	Weisse (2) X, 818	6.0	40 25.88	69.3	2	3.431	+ 38 18 28.1	46.7	5	18.86
4499	Anonymous	7.7	40 33.60	67.3	2	2.750	− 35 21 35.0	69.8	2	18.86
4500	Weisse X, 716	9.1	40 48.67	61.9	3	3.173	+ 12 37 42.3	66.3	1	18.87
4501	Anonymous	8.8	10 40 52.33	68.3	2	+ 2.812	− 29 53 58.8	66.8	2	− 18.87
4502	O. Arg. S. 10887	6.6	41 0.28	63.3	2	2.802	− 30 51 57.0	68.3	3	18.88
4503	Anonymous	7.0	41 9.07	67.3	2	2.752	− 35 23 17.5	71.2	1	18.88
4504	43 Leonis Minoris	6.0*	41 13.52	50.3	1	3.334	+ 30 9 20.5	69.4	2	18.88
4505	Weisse (2) X, 830	9.0	41 22.52	64.8	2	3.407	+ 36 38 48.7	55.3	2	18.89
4506	Lacaille 4463	5.6	10 41 40.85	63.3	3	+ 2.803	− 30 56 59.0	66.8	2	− 18.90
4507	Anonymous	8.5	41 43.39	69.3	2	3.155	+ 10 30 33.3	57.3	1	18.90
4508	*l* Leonis	5.8	41 53.76	63.6	69	3.161	+ 11 17 5.9	60.0	11	18.90
4509	39 Sextantis	7.5*	41 57.00	60.1	2	3.006	− 8 22 38.5	54.3	3	18.90
4510	44 Leonis Minoris	6.0*	42 11.58	59.2	2	3.316	+ 28 42 42.8	53.2	10	18.91

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			h. m. s.			"	° ' "			"
4511	Anonymous . . .	9.0	10 42 27.37	69.3	2	+ 2.818	− 29 44 13.4	67.3	2	− 18.92
4512	42 Ursæ Majoris . . .	5.5	42 33.67	69.4	2	3.842	+ 60 3 42.3	58.3	2	18.92
4513	O. Arg, S. 10906 . .	6.3	42 34.59	64.3	2	2.855	− 26 4 35.3	66.8	2	18.92
4514	Weisse X, 757. . .	9.0	42 37.06	60.8	2	3.155	+ 10 33 50.7	65.3	3	18.92
4515	O. Arg. S. 10907 . .	7.5	42 37.13	68.8	2	2.817	− 29 54 5.1	66.3	2	18.92
4516	Anonymous . . .	8.0	10 42 45.89	64.3	1	+ 2.732	− 37 34 19.0	69.3	2	− 18.93
4517	O. Arg. S. 10912 . .	8.0	42 48.03	68.8	2	2.819	− 29 48 44.3	65.0	4	18.93
4518	Lacaille 4480 . . .	7.0	42 58.83	63.8	2	2.722	− 38 25 53.9	68.8	2	18.93
4519	Anonymous . . .	8.3	42 59.70	70.0	3	2.825	− 29 15 15.5	67.8	2	18.93
4520	Lacaille 4481 . . .	7.2	43 9.64	63.3	2	2.681	− 41 37 45.5	70.3	2	18.94
4521	B. A. C. 3719 . . .	6.0	10 43 26.40	66.8	2	+ 2.784	− 33 19 6.4	65.8	2	− 18.95
4522	Σ Cat. Gen. 1248 . .	9.0	43 27.38	64.6	6	3.278	+ 25 11 32.1	68.2	2	18.95
4523	Weisse X, 801 . . .	7.0*	43 33.60	49.3	2	3.066	− 0 47 44.7	56.3	3	18.95
4524	B. A. C. 3720 . . .	9.0*	43 42.85	60.3	2	3.105	+ 4 19 52.0	54.3	3	18.95
4525	O. Arg. N. 11176 . .	9.0	43 43.	. .	.	3.925	+ 62 53 3.9	66.8	2	18.95
4526	Weisse X, 781 . . .	7.0	10 43 46.64	66.3	2	+ 3.167	+ 12 19 15.0	69.3	2	− 18.96
4527	Lalande 20849 . . .	7.0*	43 51.19	71.3	2	4.310	+ 70 35 55.1	71.3	2	18.96
4528	Carrington 1611 . .	10.0	43 55.	. .	.	6.095	+ 81 47 49.0	65.8	2	18.96
4529	Lacaille 4488 . . .	7.1	43 55.58	63.7	4	2.788	− 33 5 56.7	65.8	2	18.96
4530	Weisse X, 803 . . .	8.0	44 37.26	67.2	2	3.165	+ 12 5 59.7	69.3	2	18.98
4531	Dorpat 1482, (1st *) .	9.0	10 44 51.97	64.9	6	+ 3.134	+ 8 12	. .	.	− 18.99
4532	Dorpat 1482, (2d *) .	8.2	44 52.55	64.9	6	3.134	+ 8 12 15.7	67.0	3	18.99
4533	B. A. C. 3726 . . .	6.5	45 2.10	67.3	2	3.085	+ 1 46 1.5	68.3	1	18.99
4534	44 Ursæ Minoris . . .	5.5*	45 4.28	67.3	2	3.693	+ 55 19 41.4	67.3	2	18.99
4535	Anonymous . . .	8.8	45 12.58	64.8	2	3.134	+ 8 14 3.9	67.8	2	19.00
4536	O. Arg. S. 10933 . .	7.2	10 45 15.44	64.3	3	+ 2.885	− 23 37 44.2	67.8	2	− 19.00
4537	46 Leonis Minoris . .	4.5	45 28.38	58.3	3	3.371	+ 34 58 6.6	62.3	2	19.00
4538	Weisse X, 822 . . .	8.5	45 29.02	63.0	3	3.163	+ 12 1 50.5	57.8	2	19.00
4539	O. Arg. S. 10936 . .	8.8	45 34.09	69.3	2	2.832	− 29 20 11.1	64.3	1	19.01
4540	O, Arg. S. 10941 . .	7.5	45 52.46	69.0	3	2.832	− 29 26 24.0	67.3	2	19.02
4541	O. Arg. S. 10944 . .	7.9	10 46 0.42	66.8	2	+ 2.867	− 25 50 13.5	70.7	2	− 19.02
4542	Weisse X, 837 . . .	8.7	46 19.48	59.3	3	3.162	+ 12 3 17.9	57.8	2	19.03
4543	Anonymous . . .	8.6	46 30.68	69.3	2	3.067	− 0 36 37.7	49.3	1	19.03
4544	Lacaille 4498 . . .	6.4	46 30.94	62.6	4	2.780	− 34 44 48.3	66.3	2	19.03
4545	B. A. C. 3732 . . .	6.0*	46 36.03	60.2	3	3.062	− 1 23 11.0	54.3	4	19.04
4546	O. Arg. S. 10952 . .	7.0	10 46 37.42	69.8	2	+ 2.835	− 29 21 6.1	64.3	1	− 19.04
4547	b^3 Hydræ	5.5*	46 38.68	59.8	4	2.924	− 19 23 10.0	65.3	2	19.04
4548	Lacaille 4503 . . .	7.5	46 42.59	64.3	3	2.723	− 39 40 25.7	70.2	2	19.04
4549	Weisse (2) X, 944 . .	6.5	46 52.87	69.4	1	3.394	+ 37 30 17.5	46.3	1	19.04
4550	Anonymous . . .	7.0	47 1.	. .	.	3.066	− 0 46 26.1	70.2	1	19.05

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			h. m. s.			"	° ' "			"
4551	Anonymous . . .	8.3	10 47 1.25	64.3	1	+ 2.889	− 23 35 19.2	67.8	2	− 19.05
4552	47 Leonis Minoris . .	7.0	47 10.64	60.8	4	3.362	+ 34 46 53.3	55.6	7	19.05
4553	Lacaille 4506 . . .	7.0	47 12.46	64.7	2	2.815	− 31 34 56.9	69.8	2	19.05
4554	Lacaille 4505 . . .	7.5	47 16.29	64.1	3	2.868	− 26 0 7.8	65.8	2	19.05
4555	Anonymous . . .	6.5	47 24 23	67.6	3	2.794	− 33 46 13.2	71.3	1	19.06
4556	Weisse X, 859 . . .	8.0	10 47 25.38	59.2	2	+ 3.066	− 0 46 25.9	55.9	6	− 19.06
4557	B. A. C. 3737 . . .	6.2	47 29.43	64.3	4	3.120	+ 6 35 31.5	55.3	2	19.06
4558	Lacaille 4508 . . .	7.0	47 30.00	63.2	2	2.693	− 42 22 22.9	70.3	2	19.06
4559	Anonymous . . .	7.7	47 36.23	64.2	2	2.828	− 30 24 9.7	69.8	2	19.06
4560	Radcliffe 2582 . . .	6.5	47 50.31	62.2	2	3.741	+ 58 14 58.9	69.3	2	19.07
4561	Weisse (2) X, 963 . .	7.8	10 47 55.96	68.3	2	+ 3.255	+ 23 54 36.3	68.3	2	− 19.07
4562	Weisse (2) X, 961 . .	9.0	47 57.79	60.7	2	3.370	+ 35 49 1.2	56.2	2	19.07
4563	B. A. C. 3741 . . .	6.0*	47 58.51	59.2	2	3.353	+ 34 15 11.7	50.3	4	19.07
4564	54 Leonis, (1st *) . . .	6.8	48 1.61	65.2	11	3.269	+ 25 29 44.6	65.8	2	19.07
4565	54 Leonis, (2d *) . . .	8.1	48 2.11	65.3	10	3.269	+ 25 29 40.5	68.8	2	19.08
4566	Anonymous . . .	8.5	10 48 7.88	69.3	2	+ 3.067	− 0 40 46.7	49.3	1	− 19.08
4567	O. Arg. S. 10974 . .	7.7	48 12.51	64.3	1	2.838	− 29 35 29.3	67.3	2	19.08
4568	55 Leonis	6.0	48 30.23	64.1	2	3.083	+ 1 28 55.0	70.3	2	19.09
4569	Weisse X, 879 . . .	9.0	48 32.74	60.8	2	2.966	− 14 31 30.5	55.3	3	19.09
4570	Anonymous . . .	. .	48 33.96	63.3	1	2.825	− 31 3 21.5	67.3	1	19.09
4571	Lacaille 4516 . . .	7.4	10 48 45.34	62.3	3	+ 2.870	− 26 13 57.5	64.8	2	− 19.09
4572	Lalande 21014 . . .	7.6	48 47.26	64.4	4	3.254	+ 23 59 53.2	69.4	1	19.10
4573	O. Arg. N. 11258 . .	9.0	48 53.62	69.3	2	3.524	+ 47 56 52.4	56.3	2	19.10
4574	Lalande 21026 . . .	8.0	48 57.27	55.8	5	3.066	− 0 52 21.9	54.9	7	19.10
4575	Lacaille 4519 . . .	6.8	49 14.42	64.7	5	2.828	− 31 2 26.6	66.8	2	19.11
4576	Lalande 21025 . . .	8.3	10 49 15.82	61.7	4	+ 3.366	+ 35 56 42.7	56.2	3	− 19.11
4577	O. Arg. N. 11279 . .	8.0	49 40.44	63.2	2	3.772	+ 60 1 49.6	62.3	1	19.12
4578	Weisse (2) X, 994 . .	7.3	49 41.23	64.8	4	3.259	+ 24 53 18.0	65.3	2	19.12
4579	Lalande 21042 . . .	9.0	50 11.20	62.1	3	3.362	+ 35 54 28.0	56.3	2	19.13
4580	B. A. C. 3755	4.8	50 11.95	64.5	4	2.776	− 36 23 12.9	70.3	2	19.13
4581	O. Arg. S. 11003 . .	7.5	10 50 14.38	63.3	4	2.836	− 30 27 22.5	66.3	2	− 19.13
4582	Anonymous . . .	7.5	50 18.28	63.3	2	2.720	− 41 17 38.9	68.8	2	19.14
4583	Anonymous . . .	8.3	50 22.30	64.8	2	2.862	− 27 43 43.1	68.3	2	19.14
4584	Weisse X, 914 . . .	7.8	50 52.84	61.4	5	3.145	+ 10 26 56.1	59.3	4	19.15
4585	Weisse (2) X, 1017. .	8.5	51 5.17	67.3	2	3.237	+ 22 37 2.0	68.3	2	19.16
4586	Weisse (2) X, 1022. .	9.0	10 51 13.46	62.8	2	+ 3.358	+ 35 52 58.7	56.3	2	− 19.16
4587	O. Arg. S. 11015 . .	8.4	51 17.39	64.6	3	2.866	− 27 34 3.1	69.8	2	19.16
4588	Lacaille 4535 . . .	6.8	51 35.32	66.3	2	2.727	− 41 17 28.8	69.3	2	19.17
4589	Weisse (2) X, 1029. .	8.4	51 39.01	68.3	2	3.387	+ 38 45 1.2	48.3	1	19.17
4590	Lalande 21081 . . .	6.3	51 43.42	68.8	2	3.366	+ 36 50 39.1	47.3	1	19.17

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			h. m. s.			″	° ′ ″			″
4591	O. Arg. S. 11020	7.7	10 51 47.32	64.3	2	+ 2.902	− 23 27 6.7	69.3	2	− 19.17
4592	Anonymous	7.3	52 17.59	65.0	3	2.911	− 22 30 16.0	69.0	3	19.19
4593	Anonymous	7.6	52 29.77	66.3	2	2.809	− 34 7 40.4	70.8	2	19.19
4594	Anonymous	7.8	52 37.52	64.3	3	2.793	− 35 45 15.3	70.3	2	19.20
4595	Lacaille 4539	7.5	52 39.50	62.7	3	2.883	− 26 1 9.9	64.4	2	19.20
4596	Carrington 1637	8.0	10 52 55.92	69.3	2	+ 57.46	+ 81 47 34.4	67.6	2	− 19.20
4597	O. Arg. N. 11325	7.4	52 57.60	61.0	4	3.507	+ 48 25 58.2	62.3	2	19.20
4598	Anonymous	. .	53 6.	. . .	.	2.986	+ 12 34 42.0	71.2	1	19.21
4599	Lacaille 4543	7.0	53 12.93	65.8	2	2.809	− 34 23 37.9	68.3	2	19.21
4600	*d* Leonis	4.0	53 19.70	62.4	9	3.101	+ 4 22 6.4	57.7	8	19.21
4601	β Ursæ Majoris	4.0	10 53 22.29	65.5	5	+ 3.665	+ 57 7 52.5	64.1	4	− 19.21
4602	Weisse X, 957	7.8	53 23.97	65.4	1	3.102	+ 4 29	. .	.	19.21
4603	*c* Leonis	5.5*	53 29.32	61.2	4	3.118	+ 6 51 11.6	66.8	2	19.22
4604	Lacaille 4553	6.0	53 52.47	66.3	2	2.723	− 42 30 2.3	71.0	2	19.23
4605	B. A. C. 3773	7.0*	53 53.55	60.3	2	3.077	+ 0 47 55.1	67.3	2	19.23
4606	B. A. C. 3774	6.2	10 54 2.32	63.3	2	+ 2.843	− 31 5 31.0	66.8	2	− 19.23
4607	Lacaille 4558	6.3	54 25.96	64.6	3	2.758	− 39 44 49.8	68.8	2	19.24
4608	p^1 Leonis	5.5*	54 41.20	63.1	6	3.061	− 1 43 54.9	67.3	2	19.25
4609	Anonymous	8.7	55 3.09	70.0	4	3.134	+ 9 21 36.1	57.8	2	19.26
4610	α Ursæ Majoris	2.0*	55 3.49	53.3	120	3.790	+ 62 30 21.4	53.3	123	19.26
4611	Anonymous	8.2	10 55 7.79	65.0	4	+ 2.828	− 33 9 25.3	65.8	2	− 19.26
4612	Weisse X, 987	7.8	55 14.86	60.3	3	3.137	+ 9 55 30.5	59.3	5	19.26
4613	Lacaille 4566	6.5	55 28.52	65.8	2	2.791	− 37 4 55.3	65.3	2	19.27
4614	B. A. C. 3778	6.0	55 37.99	64.0	7	2.891	− 26 4 31.7	65.4	2	19.27
4615	Lalande 21947	7.4	55 39.99	69.1	5	3.350	+ 36 53 39.3	69.8	6	19.27
4616	Lacaille 4567	6.2	10 55 45.74	64.3	2	+ 2.758	− 40 21 39.3	68.8	2	− 19.27
4617	B. A. C. 3779	6.0	56 4.83	64.3	2	3.072	+ 0 0 14.5	68.2	2	19.28
4618	Weisse (2) X, 1123	9.0	56 18.88	63.3	2	3.329	+ 34 58 37.8	58.0	4	19.29
4619	Weisse X, 1006	8.3	56 26.26	64.0	4	3.133	+ 9 28 58.9	57.6	3	19.29
4620	p^2 Leonis	6.0*	56 26.49	65.3	1	3.077	+ 0 45 8.7	69.6	3	19.29
4621	B. A. C. 3781	7.0	10 56 29.02	60.3	2	+ 3.375	+ 39 37 16.9	53.2	8	− 19.29
4622	Lacaille 4570	7.0	56 31.79	66.3	2	2.888	− 26 45 54.2	70.2	2	19.29
4623	B. A. C. 3783	6.0	56 36.03	66.3	2	2.851	− 31 12 25.7	66.3	2	19.29
4624	Anonymous	8.2	56 51.08	71.3	2	3.077	+ 0 43 22.6	70.2	1	19.30
4625	Weisse X, 1025	6.5	57 12.04	67.3	2	3.158	+ 13 25 16.3	71.3	2	19.31
4626	O. Arg. N. 11397	7.0	10 57 12.22	62.3	2	+ 3.909	+ 66 37 46.9	62.3	2	− 19.31
4627	Lacaille 4576	7.0	57 37.58	64.0	3	2.775	− 39 33 17.2	67.8	2	19.32
4628	Anonymous	9.2	57 40.77	64.8	2	3.319	+ 34 33 7.0	65.8	2	19.32
4629	χ Leonis	5.0*	57 47.58	62.7	52	3.123	+ 8 5 31.3	60.7	5	19.32
4630	B. A. C. 3792	5.6	58 17.79	67.8	2	2.823	− 35 3 2.9	66.8	2	19.33

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			h. m. s.			″	° ′ ″			″
4631	Lalande 21258 . . .	8.0	10 58 27.22	68.3	2	+ 3.418	+ 44 14 51.0	70.6	3	− 19.34
4632	Weisse X, 1044 . .	7.8	58 29.32	65.3	1	3.156	+ 13 19 23.7	70.3	2	19.34
4633	O. Arg. S. 11114 . .	9.0	58 29.58	69.3	5	2.870	− 29 40 54.3	70.2	2	19.34
4634	Anonymous . . .	9.5	58 35.55	71.3	2	2.869	− 29 46 43.6	69.3	2	19.34
4635	Weisse X, 1049 . .	8.4	58 47.49	64.7	4	3.157	+ 13 33 34.4	67.8	2	19.34
4636	Schjellerup 4037 . .	8.5	10 58 55.29	67.3	2	+ 3.141	+ 11 3 47.6	69.3	2	− 19.35
4637	Weisse X, 1060 . .	7.3	59 11.24	66.8	2	3.156	+ 13 27 33.8	67.8	2	19.35
4638	p^3 Leonis	5.7	59 45.59	63.6	3	3.088	+ 2 42 51.4	66.3	2	19.37
4639	Weisse (2) X, 1196. .	6.8	59 52.28	68.3	2	3.338	+ 37 32 33.5	47.3	2	19.37
4640	Weisse X, 1075 . .	7.8	59 54.42	64.6	7	3.139	+ 10 58 7.8	60.6	3	19.37
4641	Weisse X, 1076 . .	9.0	11 0 4.73	63.2	1	+ 3.139	+ 10 57 6.5	68.3	2	− 19.37
4642	O. Arg. S. 11147 . .	7.3	0 8.89	64.3	5	2.874	− 29 47 48.4	65.3	3	19.38
4643	Anonymous . . .	. .	0 27.	. . .	.	2.851	− 32 47 53.2	70.8	2	19.38
4644	Lacaille 4599 . . .	6.3	0 27.65	63.3	3	2.859	− 31 49 45.3	69.3	2	19.38
4645	Anonymous . . .	8.6	0 29.58	69.3	2	2.882	− 28 55 57.1	66.8	2	19.38
4646	Weisse X, 1087 . .	9.5	11 0 30.09	64.2	2	+ 3.139	+ 10 58 33.9	68.9	3	− 19.38
4647	Anonymous . . .	6.8	0 32.22	60.3	2	2.851	− 32 49	. .	.	19.39
4648	Weisse X, 1090 . .	9.0	0 40.31	66.3	2	3.138	+ 10 57 12.7	69.8	2	19.39
4649	O. Arg. S. 11154 . .	6.6	0 41.77	64.3	3	2.892	− 27 44 5.7	65.6	3	19.39
4650	Weisse (2) X, 1221 .	8.6	0 52.64	63.3	2	3.315	+ 35 28 25.6	67.8	2	19.39
4651	Anonymous . . .	7.8	11 1 16.30	67.3	2	+ 2.786	− 40 11	. .	.	− 19.40
4652	Lacaille 4607 . . .	6.9	1 16.60	64.5	4	2.811	− 37 39 3.0	68.3	2	19.40
4653	Anonymous . . .	. .	1 24.	. . .	.	2.786	− 40 10 45.3	71.2	1	19.40
4654	Lacaille 4609 . . .	6.0	1 30.80	63.8	2	2.883	− 29 12 53.1	67.3	2	19.41
4655	B. A. C. 3811 . . .	6.5	1 36.31	68.3	2	3.327	+ 37 4 5.3	46.8	4	19.41
4656	ψ Ursæ Majoris . . .	3.5*	11 1 46.79	62.2	3	+ 3.411	+ 45 15 25.4	60.9	3	− 19.41
4657	Lacaille 4614 . . .	7.0	1 54.55	65.3	3	2.886	− 28 59 22.3	65.8	2	19.41
4658	Lacaille 4616 . . .	7.5	2 5.36	65.0	3	2.804	− 38 42 55.1	69.8	2	19.42
4659	O. Arg. N. 11496 . .	8.8	2 16.73	65.0	4	3.641	+ 59 39 9.2	68.3	2	19.42
4660	Weisse (2) XI, 6 . .	7.0*	2 18.14	59.2	2	3.291	+ 33 17 21.7	55.3	3	19.42
4661	Weisse (2) XI, 16 . .	7.9	11 2 31.51	62.6	3	+ 3.314	+ 36 5 39.3	67.3	2	− 19.43
4662	O. Arg. S. 11188 . .	8.6	2 38.39	64.2	3	2.916	− 25 13 49.3	69.3	2	19.43
4663	Lacaille 4624, (1st *) .	8.5	3 12.39	69.0	3	2.891	− 28 50 30.4	68.3	3	19.44
4664	Lacaille 4624, (2d *) .	7.6	3 13.27	68.8	4	2.891	− 28 50 30.4	68.3	3	19.44
4665	B. A. C. 3823 . . .	6.5	3 13.36	68.3	2	2.890	− 29 2 7.2	67.0	3	19.44
4666	Rumker 3457 . . .	7.4	11 3 14.34	60.3	3	+ 3.122	+ 8 39 1.7	69.0	3	− 19.44
4667	O. Arg. N. 11518 . .	7.2	3 23.07	65.1	6	3.631	+ 59 39 28.5	66.3	3	19.45
4668	O. Arg. S. 11208 . .	6.8	3 41.76	64.1	7	2.919	− 25 14 5.1	66.6	3	19.45
4669	Lacaille 4633 . . .	6.7	3 51.97	63.3	3	2.871	− 31 48 19.0	68.8	2	19.46
4670	Anonymous . . .	. .	4 10.28	63.9	1	3.760	+ 0 40	. .	.	19.46

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			h. m. s.			″	° ′ ″			″
4671	Weisse (2) XI, 53	8.7	11 4 23.39	62.6	2	+ 3.303	+ 35 45 59.7	68.4	2	− 19.47
4672	Anonymous	9.0	4 27.33	64.3	1	2.920	− 25 23	. .	.	19.47
4673	O. Arg. S. 11216	7.0	4 27.51	66.3	3	2.921	− 25 9 51.4	69.3	2	19.47
4674	Weisse (2) XI, 58	8.8	4 31.84	60.8	2	3.283	+ 33 22 32.4	70.8	2	19.47
4675	Weisse (2) XI, 74	7.8	4 54.47	69.3	2	3.308	+ 36 34 50.6	46.6	5	19.48
4676	Weisse (2) XI, 80	7.2	11 5 4.48	69.3	2	+ 3.308	+ 36 35 26.9	46.8	4	− 19.48
4677	(* 124) Washington	9.3	5 7.99	64.8	2	3.608	+ 59 24 23.9	65.3	1	19.48
4678	Lacaille 4638	7.0	5 8.29	64.4	6	2.922	+ 25 22 26.5	64.8	2	19.48
4679	Anonymous	9.0	5 11.82	65.3	1	3.607	+ 59 24	. .	.	19.49
4680	Weisse XI, 61	8.0	5 25.39	61.3	2	3.131	+ 10 37 32.3	61.0	3	19.49
4681	Lacaille 4642	6.4	11 5 30.32	63.8	4	+ 2.878	− 31 40 28.0	68.3	2	− 19.49
4682	O. Arg. S. 11226	7.0	5 32.	. .	.	2.897	− 29 1 20.3	68.3	2	19.49
4683	Anonymous	9.5	5 36.39	69.3	1	3.862	+ 68 17 48.8	70.3	2	19.49
4684	Weisse (2) XI, 90	7.0	5 43.64	60.2	2	3.285	+ 34 12 24.6	55.3	2	19.50
4685	Weisse (2) XI, 98	9.0	6 4.10	67.3	2	3.194	+ 21 20 58.6	70.3	2	19.50
4686	Anonymous	9.5	11 6 21.92	67.4	2	+ 3.850	+ 68 16 15.8	70.3	2	− 19.51
4687	Lacaille 4646	7.2	6 22.36	63.3	2	2.923	− 25 42 16.0	68.4	1	19.51
4688	p^5 Leonis	5.5*	6 35.55	62.5	9	3.076	+ 0 41 28.6	58.3	2	19.51
4689	δ Leonis	2.3*	6 39.46	56.7	183	3.192	+ 21 17 26.1	51.5	68	19.52
4690	B. A. C. 3837	6.6	6 45.29	62.0	4	3.120	+ 8 49 33.5	60.3	3	19.52
4691	F. Lalande 1831, (1st *)	7.7	11 6 55.90	71.3	3	+ 4.159	+ 74 13 58.4	71.3	2	− 19.52
4692	F. Lalande 1831, (2d *)	7.7	6 57.75	71.3	3	4.154	+ 74 13 58.4	71.3	2	19.52
4693	Anonymous	8 5	7 8.56	65.3	1	3.590	+ 59 26 53.4	71.3	1	19.53
4694	O. Arg. N. 11584	7.6	7 21.30	65.0	3	3.378	+ 58 58 39.5	69.8	2	19.53
4695	Weisse (2) XI, 118.	6.9	7 21.82	68.3	2	3.313	+ 38 20 26.8	46.3	2	19 53
4696	Anonymous	9.8	11 7 23.15	67.4	2	+ 3.837	+ 68 18 8.7	70.3	2	− 19.53
4697	O. Arg. N. 11590	7.5	7 40.02	65.3	4	3.903	+ 69 58 54.5	66.8	2	19.54
4698	Weisse (2) XI, 126.	9.2	7 40.14	61.5	4	3.268	+ 32 55 23.5	61.8	2	19.54
4699	72 Leonis	5.0*	7 45.06	60.1	2	3.206	+ 23 51 28.0	53.2	6	19.54
4700	O. Arg. S. 11250	7.5	7 46.02	63.6	3	2.929	− 25 18 44.5	64.7	2	19.54
4701	Anonymous	7.7	11 7 55.02	65.8	2	+ 2.922	− 26 32 47.9	69.3	2	− 19.54
4702	Lacaille 4665	6.4	8 19.14	63.3	3	2.881	− 32 33 27.5	69.3	2	19.55
4703	Lacaille 4667	6.6	8 30.03	67.6	3	2.833	− 38 42 51.6	65.3	2	19.55
4704	Lacaille 4668	7.6	8 35.68	66.8	2	2.842	− 37 40 42.6	68.0	3	19.55
4705	Anonymous	9.1	8 40.82	69.3	2	3.137	+ 12 22 14.5	55.3	2	19.56
4706	B. A. C. 3846	6.0*	11 8 47.42	60.3	2	+ 3.428	+ 50 14 21.2	53.3	3	− 19.56
4707	O. Arg. N. 11619	9.0	8 49.88	67.3	2	3.883	+ 69 57 8.7	68.3	1	19.56
4708	Lacaille 4669	7.0	8 53.94	69.3	3	2.845	− 37 29 44.0	68.6	3	19.56
4709	Weisse XI, 133	8.0*	9 3.	. .	.	3.058	− 2 42 34.2	67.8	2	19.56
4710	O. Arg, S. 11267	7.6	9 5.46	64.3	2	2.901	− 30 5 7.7	70.2	2	19.56

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4711	Rumker 3497	7.0	11 9 9.29	68.8	2	+ 3.604	+ 61 2 6.7	65.3	2	− 19.56
4712	Lacaille 4672	7.0*	9 11.89	69.4	2	2.838	− 38 34 4.7	67.3	2	19.57
4713	Weisse XI, 137	8.0	9 26.09	63.3	1	3.057	− 2 52 40.1	70.3	4	19.57
4714	φ Leonis	4.5	9 32.69	63.4	13	3.057	− 2 53 14.7	67.3	3	19.57
4715	Lacaille 4680	6.9	10 12.42	67.6	3	2.850	− 37 38 10.8	65.3	2	19.58
4716	Weisse (2) XI, 182	8.0	11 10 23.46	66.3	2	+ 32.82	+ 36 12 27.6	69.3	2	− 19.59
4717	ξ Ursæ Majoris, (1st *)	4.3*	10 42.32	59.3	3	3.252	+ 32 19 1.5	55.3	2	19.59
4718	ξ Ursæ Majoris, (2d *)	4.3*	10 42.66	59.3	2	3.252	+ 32 19 1.5	55.3	2	19.59
4719	Lacaille 4687	7.1	10 52.46	63.3	2	2.889	− 32 46 15.4	65.8	2	19.60
4720	Weisse (2) XI, 200	7.2	11 11.68	62.8	2	3.279	+ 36 15 13.5	69.3	2	19.60
4721	O. Arg. S. 11291	7.1	11 11 23.36	66.7	2	+ 2.924	− 27 40 15.3	67.8	2	− 19.61
4722	Lacaille 4693	5.7	11 42.73	64.2	2	2.950	− 23 34 42.1	67.3	2	19.61
4723	δ Crateris	3.4*	12 20.67	56.0	141	3.003	− 14 1 19.2	50.5	46	19.62
4724	Lamont 3284	7.5	12 22.03	67.2	2	3.075	+ 0 34 57.9	69.8	2	19.62
4725	Lacaille 4703	7.6	12 30.33	67.3	2	2.843	− 39 44 6.5	70.3	2	19.63
4726	O. Arg. S. 11304	7.5	11 12 35.39	66.8	2	+ 2.928	− 27 42 34.0	67.8	2	− 19.63
4727	O. Arg. N. 11674	8.5	12 35.73	65.0	6	3.943	+ 72 29 28.8	67.3	2	19.63
4728	O. Arg. S. 11311	7.9	13 7.17	69.3	3	2.917	− 29 40 52.1	67.6	2	19.64
4729	Weisse XI, 211	8.5	13 9.40	66.8	2	3.004	− 14 0 8.4	70.3	2	19.64
4730	Anonymous	9.0	13 27.28	67.3	2	3.119	+ 9 56	. .	.	19.64
4731	O. Arg. S. 11318	6.5	11 13 29.74	64.3	2	+ 2.931	− 27 34 0.3	67.9	2	− 19.64
4732	Weisse XI, 217	9.3	13 30.22	61.7	2	3.015	− 11 54 30.3	55.8	4	19.64
4733	O. Arg. S. 11320	7.9	13 33.81	65.0	3	2.944	− 25 23 17.6	70.4	2	19.65
4734	Lacaille 4709	7.5	13 42.82	63.3	2	2.908	− 31 20 10.1	68.3	2	19.65
4735	Weisse XI, 221	8.0	13 47.53	62.2	2	3.109	+ 7 49 56.9	61.0	3	19.65
4736	Anonymous	8.5	11 13 54.63	65.4	2	+ 3.269	+ 36 24	. .	.	− 19.65
4737	σ Leonis	4.0*	13 55.05	58.8	7	3.104	+ 6 47 45.4	61.0	3	19.65
4738	Lacaille 4710	8.0	13 56.49	69.3	1	2.885	− 34 57 6.8	67.4	2	19.65
4739	Anonymous	. .	14 3.31	70.8	2	3.282	+ 38 17 25.4	46.3	1	19.65
4740	Weisse XI, 233	8.0	14 21.77	61.3	2	3.095	+ 4 58 30.2	57.2	2	19.66
4741	Lacaille 4713	6.8	11 14 23.55	63.8	4	+ 2.889	− 34 45 31.2	67.3	2	− 19.66
4742	Weisse XI, 234	7.8	14 25.68	60.6	3	3.109	+ 7 59 24.6	57.3	3	19.66
4743	Lalande 21645	8.0*	14 30.12	70.3	1	3.016	− 11 56 1.5	59.0	6	19.66
4744	Weisse (2) XI, 257, (1st *)	8.5	14 30.46	69.3	1	3.277	+ 37 51 20.8	46.3	1	19.66
4745	Weisse (2) XI, 257, (2d *)	8.5	14 30.72	69.3	1	3.277	+ 37 51 20.8	46.3	1	19.66
4746	Lacaille 4714	8.0	11 14 33.49	65.3	2	+ 2.927	− 28 49 39.6	72.1	5	− 19.66
4747	Weisse XI, 235	7.0	14 35.03	67.3	2	3.118	+ 9 56 9.1	64.8	2	19.66
4748	71 Leonis	6.0*	15 9.12	60.3	2	3.158	+ 18 12 16.1	64.3	2	19.67
4749	Weisse XI, 253	7.6	15 29.67	62.8	2	3.018	− 11 53 5.5	61.3	2	19.68
4750	Anonymous	7.0	15 38.29	68.8	2	2.868	− 38 20 15.8	67.3	2	19.68

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4751	O. Arg. S. 11344	8.2	11 15 39.58	64.2	4	+ 2.963	− 22 57 47.3	67.8	2	− 19.68
4752	Weisse (2) XI, 258	8.3	15 50.89	61.3	1	3.094	+ 4 54 17.2	61.8	2	19.69
4753	Weisse XI, 261	9.2	16 1.28	64.0	4	3.090	+ 3 55 45.3	67.3	1	19.69
4754	Lacaille 4725	7.6	16 12.81	63.9	5	2.936	− 28 7 45.9	65.3	2	19.69
4755	Weisse (2) XI, 293	6.2	16 18.73	68.3	2	3.270	+ 38 0 10.5	46.3	2	19.69
4756	O. Arg. S. 11353	7.0	11 16 22.69	64.2	4	+ 2.965	− 22 56 22.2	65.8	2	− 19.69
4757	B. A. C. 3875	5.5	16 26.20	64.8	2	2.892	− 35 23 50.7	69.3	2	19.70
4758	ι Leonis	5.0	16 37.51	62.9	4	3.122	+ 11 17 58.5	67.3	2	19.70
4759	Lacaille 4732	7.0	16 59.46	65.3	3	2.949	− 26 11 27.7	71.3	3	19.70
4760	Weisse (2) XI, 312	8.7	17 13.59	69.0	3	3.226	+ 31 46 36.6	62.8	2	19.71
4761	Weisse XI, 284	7.6	11 17 33.59	64.2	7	+ 3.084	+ 2 51 53.1	65.2	2	− 19.71
4762	Lacaille 4735	7.3	17 42.39	63.3	3	2.910	− 33 31 3.2	70.0	4	19.72
4763	O. Arg. S. 11370	8.0	18 21.93	65.2	2	2.954	− 26 6 6.3	71.3	2	19.73
4764	80 Leonis	6.5	18 38.30	59.2	2	3.092	+ 4 37 49.9	55.3	2	19.73
4765	Weisse XI, 318	7.0	18 51.36	59.7	2	3.017	− 12 58 55.9	69.3	2	19.73
4766	Weisse (2) XI, 340	8.0	11 18 52.50	59.3	2	+ 3.164	+ 21 10 6.4	69.4	2	− 19.73
4767	O. Arg. S. 11374	8.2	18 53.50	66.8	2	2.959	− 25 15 36.4	70.3	2	19.74
4768	B. A. C. 3892	6.2	19 3.01	62.1	3	3.112	+ 9 25 46.1	62.6	4	19.74
4769	Weisse (2) XI, 344	8.0	19 6.52	60.0	5	3.164	+ 21 17 23.2	62.8	2	19.74
4770	Rumker 3575	9.5	19 11.18	64.3	2	3.152	+ 18 37 34.7	71.3	1	19.74
4771	83 Leonis, (1st *)	7.1	11 19 39.91	64.1	8	+ 3.088	+ 3 46 34.8	67.3	3	− 19.75
4772	83 Leonis, (2d *)	8.0	19 40.88	64.1	8	3.087	+ 3 46 10.0	68.8	2	19.75
4773	Lacaille 4746	7.2	19 55.40	64.3	1	2.894	− 37 23 18.9	70.8	2	19.75
4774	O. Arg. S. 11394	8.3	20 23.68	64.2	2	2.974	− 23 2 46.8	70.4	2	19.76
4775	Lacaille 4749	6.7	20 41.92	63.4	2	2.965	− 25 5 31.4	64.8	2	19.76
4776	τ Leonis	4.0*	11 20 44.25	65.9	28	+ 3.086	+ 3 37 37.0	57.1	3	− 19.76
4777	B. A. C. 3901	6.0	20 44.67	47.3	1	3.068	− 0 55 47.9	68.3	2	19.76
4778	Weisse XI, 349	7.3	20 45.15	65.5	9	3.086	+ 3 36 4.6	71.3	2	19.76
4779	B. A. C. 3902	7.0*	20 45.69	60.3	4	3.124	+ 12 44 37.9	54.3	3	19.76
4780	B. A. C. 3903	6.3	20 53.60	64.3	1	3.072	− 0 7 38.2	68.8	2	19.77
4781	Anonymous	7.1	11 21 6.54	64.2	2	+ 2.915	− 34 46 45.7	69.3	2	− 19.77
4782	Lacaille 4753	6.0	21 8.48	63.3	2	2.917	− 34 33 33.3	68.3	2	19.77
4783	Weisse XI, 365	6.4	21 14.39	66.8	2	3.086	+ 3 33 21.8	70.3	2	19.77
4784	O. Arg. S. 11410	7.0	21 25.66	64.2	3	2.977	− 23 3 19.7	70.0	3	19.77
4785	B. A. C. 3906	6.0	21 50.24	46.3	1	4.629	+ 81 53 51.7	69.3	2	19.78
4786	B. A. C. 3909	5.8	11 22 14.66	66.8	2	+ 3.072	− 0 4 42.0	69.8	2	− 19.78
4787	B. A. C. 3911	6.8	22 25.96	60.5	5	3.104	+ 8 22 17.2	69.7	3	19.79
4788	(* 123) Washington	9.0	22 38.99	65.1	5	3.749	+ 72 13 26.2	65.2	2	19.79
4789	Lacaille 4758	6.6	22 41.82	64.3	2	2.960	− 27 15 35.7	68.4	1	19.79
4790	Weisse (2) XI, 416	6.5	22 43.84	68.3	2	3.246	+ 38 43 32.8	46.3	2	19.79

Number.	Name of Star.	Magnitude.	Mean Right Ascension, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.	Mean Declination, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.
			h. m. s.			"	° ' "			"
4791	Weisse XI, 390. . .	8.1	11 22 47.36	64.2	2	+ 3.087	+ 3 58 40.8	68.3	3	− 19.79
4792	Lacaille 4760 . . .	6.0	22 53.39	66.8	2	2.906	− 37 41 9.1	68.3	2	19.79
4793	58 Ursæ Majoris . . .	7.0	22 55.81	62.3	2	3.280	+ 43 56 28.6	67.9	2	19.79
4794	λ Draconis	3.5*	23 2.99	52.2	11	3.665	+ 70 6 11.2	63.2	10	19.80
4795	e Leonis	4.5*	23 9.73	61.7	9	3.064	− 2 13 54.8	62.3	4	19.80
4796	86 Leonis	5.5*	11 23 10.48	59.8	2	+ 3.146	+ 19 10 49.2	56.3	3	− 19.80
4797	O. Arg. S. 11438 . .	6.5	23 23.57	63.9	3	2.973	− 25 1 37.6	64.0	3	19.80
4798	Weisse XI, 403 . .	7.7	23 43.35	65.0	3	3.050	− 5 56 50.3	69.3	2	19.81
4799	Lacaille 4766 . . .	6.6	23 55.10	64.0	3	2.905	− 38 27 51.8	65.0	3	19.81
4800	O. Arg. S. 11444 . .	7.6	24 3.55	64.2	3	2.974	− 25 7 40.6	67.3	2	19.81
4801	Anonymous. . . .	9.0	11 24 6.91	66.3	2	+ 2.954	− 29 30	. .	.	− 19.81
4802	O. Arg. S. 11446 . .	7.5	24 7.61	64.3	2	2.961	− 28 1 28.1	70.8	2	19.81
4803	B. A. C. 3917 . . .	7.3	24 11.38	63.7	7	3.086	+ 3 50 9.7	66.4	1	19.81
4804	Rumker 3615 . . .	6.0	24 13.05	60.0	4	3.142	+ 18 31 22.0	59.3	3	19.81
4805	Weisse XI, 412. . .	8.2	24 26.54	59.3	2	3.103	+ 8 38	. .	.	19.81
4806	Lalande 21902 . . .	6.5*	11 24 43.	. .	.	+ 3.227	+ 37 1 14.3	47.3	1	− 19.82
4807	Anonymous . . .	9.2	24 45.28	65.4	3	3.075	+ 0 46 46.5	65.3	1	19.82
4808	B. A. C. 3920 . . .	6.5	24 49.48	64.8	2	3.052	− 5 41 43.2	69.3	2	19.82
4809	Weisse XI, 421. . .	9.0	25 0.	. .	.	3.048	− 6 50 39.3	70.3	2	19.82
4810	Lalande 21911 . . .	8.0	25 7.97	67.3	2	3.073	+ 0 21 51.0	65.3	1	19.82
4811	B. A. C. 3921 . . .	6.5	11 25 20.01	62.6	4	+ 2.963	− 28 29 46.2	64.8	2	− 19.83
4812	B. A. C. 3922 . . .	6.2	25 20.45	62.7	3	2.963	− 28 29 38.0	64.8	2	19.83
4813	Weisse XI, 429. . .	8.6	25 26.17	64.2	7	3.079	+ 2 6 52.8	66.8	2	19.83
4814	Lacaille 4773 . . .	7.7	25 35.46	62.3	2	2.964	− 28 22 9.5	65.3	1	19.83
4815	B. A. C. 3925 . . .	6.0	25 40.60	59.4	2	3.047	− 7 3 15.9	70.3	2	19.83
4816	Weisse XI, 438. . .	8.5	11 25 51.32	63.0	4	+ 3.079	+ 2 3 34.1	66.8	2	− 19.83
4817	B. A. C. 3926 . . .	5.5	25 58.99	63.0	3	2.956	− 30 18 52.7	70.8	2	19.83
4818	B. A. C. 3927 . . .	4.8	25 59.52	64.3	1	2.908	− 39 39 57.0	68.8	2	19.83
4819	Lacaille 4777 . . .	6.7	26 1.23	63.1	6	2.932	− 35 26 7.2	72.3	2	19.84
4820	B. A. C. 3928 . . .	4.4	26 7.31	63.0	3	2.953	− 31 5 1.5	69.4	2	19.84
4821	Weisse XI, 446. . .	8.0	11 26 18.48	63.6	2	+ 3.102	+ 8 45 10.4	69.3	2	− 19.84
4822	Anonymous. . . .	9.0	26 20.61	67.3	2	3.079	+ 2 7	. .	.	19.84
4823	Lalande 21947 . . .	6.1	26 28.97	69.5	5	3.222	+ 37 35 26.8	47.6	3	19.84
4824	Weisse XI, 450. . .	7.2	26 30.56	66.8	2	3.052	− 5 45 49.9	68.3	2	19.84
4825	B. A. C. 3929 . . .	5.5	26 48.37	68.9	3	2.911	− 39 48 52.9	68.8	2	19.85
4826	Rumker 3636 . . .	8.0	11 26 51.06	59.8	2	+ 3.126	+ 15 39 59.8	56.0	3	− 19.85
4827	Weisse (2) XI, 490. .	9.0	26 51.96	60.3	2	3.153	+ 22 47 47.4	55.3	2	19.85
4828	O. Arg. N. 11873 . .	8.5	26 59.82	64.9	5	3.649	+ 71 34 35.1	67.4	1	19.85
4829	Weisse XI, 462 . .	7.0	27 14.13	61.7	2	3.056	− 4 45 16.0	56.3	2	19.85
4830	Anonymous. . . .	6.7	27 26.14	64.3	2	2.911	− 40 22 52.7	70.3	2	19.85

Number.	Name of Star.	Magnitude.	Mean Right Ascension, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.	Mean Declination, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.
			h. m. s.			″	° ′ ″			″
4831	Anonymous. . . .	6.9	11 27 28.34	64.5	3	+ 2.937	− 35 25 49.5	72.3	2	− 19.85
4832	Weisse XI, 466. . .	8.7	27 32.56	61.7	2	2.056	− 4 49 1.5	55.3	2	19.86
4833	Weisse XI, 468. . .	8.0	27 36.94	59.8	2	2.058	− 4 10 51.3	55.3	2	19.86
4834	Weisse (2) XI, 509 . .	6.5	27 45.29	60.3	2	3.145	+ 21 12 53.2	60.8	2	19.86
4835	Weisse (2) XI, 511 . .	9.0	27 45.48	59.3	2	3.129	+ 16 47 3.0	70.3	1	19.86
4836	2 Draconis	5.5	11 27 48.07	68.3	2	+ 3.589	+ 70 6 4.8	65.3	2	− 19.86
4837	O. Arg. S. 11491 . .	6.7	28 5.54	64.2	2	2.968	− 29 15 30.5	68.3	2	19.86
4838	Anonymous . . .	9.0	28 6.42	64.9	3	3.053	− 5 43 8.2	68.3	2	19.86
4839	Lacaille 4792 . . .	6.5	28 20.46	66.8	2	2.944	− 34 50 18.7	68.8	2	19.87
4840	Weisse (2) XI, 526. .	9.0	28 29.59	68.3	2	3.142	+ 20 52 43.1	63.2	2	19.87
4841	Weisse XI, 488 . .	9.0	11 28 33.58	65.8	2	+ 3.028	− 13 41 16.2	62.8	2	− 19.87
4842	Weisse XI, 495 . .	8.5	28 52.06	65.8	2	3.098	+ 8 7 20.0	68.4	1	19.87
4843	B. A. C. 3937 . . .	6.0	28 55.55	66.3	2	3.170	+ 28 33 16.6	60.3	4	19.87
4844	Weisse (2) XI, 534. .	8.0	28 56.88	65.8	2	3.167	+ 27 44 56.5	68.3	2	19.87
4845	Weisse (2) XI, 540. .	8.0	29 7.60	65.8	2	3.159	+ 25 48 14.3	68.8	2	19.87
4846	O. Arg. N. 11901 . .	9.0	11 29 10.22	67.8	5	+ 3.603	+ 71 19 45.0	65.3	1	− 19.88
4847	B. A. C. 3940 . . .	7.0	29 22.33	60.8	2	3.094	+ 6 53 6.1	60.9	5	19.88
4848	θ Crateris	5.0	29 34.88	65.8	2	3.044	− 9 1 42.0	66.8	2	19.88
4849	(* 115) Washington .	9.5	29 37.39	64.0	3	3.076	+ 1 28	. .	.	19.88
4850	Lacaille 4802 . . .	6.5	29 40.92	63.3	2	2.947	− 35 20 51.4	68.3	2	19.88
4851	Lacaille 4805 . . .	7.0	11 29 44.41	66.6	3	+ 2.954	− 33 52 36.5	68.8	2	− 19.88
4852	υ Leonis	4.8	29 46.89	63.0	69	3.072	− 0 3 3.7	61.3	7	19.88
4853	Weisse (2) XI, 556 . .	8.0	29 52.06	66.3	2	3.167	+ 28 32 55.6	67.3	2	19.88
4854	Anonymous . . .	9.0	30 5.98	67.4	4	3.584	+ 71 15	. .	.	19.89
4855	Anonymous . . .	8.0	30 10.43	69.3	1	2.951	− 34 48 39.3	71.3	1	19.89
4856	Anonymous . . .	7.5	11 30 21.72	64.2	2	+ 2.954	− 34 27 48.3	69.4	2	− 19.89
4857	Anonymous . . .	. .	30 28.93	65.2	1	3.580	+ 71 19	. .	.	19.89
4858	Lacaille 4814 . . .	7.0	30 39.23	64.8	2	2.936	− 38 38 3.5	70.6	3	19.89
4859	59 Ursæ Majoris . . .	5.5	30 52.19	65.8	2	3.238	+ 44 24 4.8	58.8	2	19.89
4860	Lalande 22059 . . .	5.8	31 8.39	68.3	2	3.187	+ 34 24 4.6	47.3	2	19.90
4861	Weisse (2) XI, 592 .	8.3	11 31 10.16	64.3	2	+ 3.136	+ 20 52 30.4	56.8	2	− 19.90
4862	Anonymous. . . .	7.2	31 10.54	64.3	1	2.955	− 34 49	. .	.	19.90
4863	B. A. C. 3955 . . .	5.5	31 14.73	47.3	2	3.067	− 1 39 42.7	69.2	2	19.91
4864	. . . .	. .	. . . .	. .	.	. .	. . . . .	. .	.	. .
4865	O. Arg. S. 11531 . .	8.5	31 17.02	64.3	2	2.995	− 24 48 53.5	70.3	1	19.90
4866	Anonymous . . .	9.1	11 31 18.54	64.3	2	+ 2.995	− 24 50 38.2	70.3	2	− 19.90
4867	Weisse (2) XI, 600. .	8.0	31 24.82	59.3	2	3.146	+ 24 6 16.2	64.8	2	19.90
4868	ι Crateris	5.5*	31 33.54	60.3	2	3.036	− 12 25 55.9	54.3	3	19.90
4869	Weisse (2) XI, 608 . .	7.8	31 36.46	68.3	2	3.125	+ 17 52 39.4	48.3	1	19.90
4870	Lacaille 4824 . . .	7.5	31 46.47	67.6	3	2.941	− 38 28 19.2	72.3	2	19.90

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			h. m. s.			″	° ′ ″			″
4871	Anonymous	7.6	11 31 46.52	65.2	1	+ 2.941	− 38 35 3.3	62.3	1	− 19.90
4872	Weisse XI, 548	7.2	31 51.65	60.8	2	3.092	+ 6 50 15.2	54.3	3	19.91
4873	Lacaille 4825	6.0	31 54.15	63.3	2	2.937	− 39 31 38.4	68.8	2	19.91
4874	Weisse XI, 553	9.4	32 6.02	64.2	5	3.077	+ 1 44 47.9	67.3	1	19.91
4875	Anonymous	7.8	32 18.17	64.6	3	2.993	− 26 4 10.7	70.3	2	19.91
4876	Weisse XI, 558	9.0*	11 32 22.18	71.3	3	+ 3.104	+ 11 6 12.6	71.4	2	− 19.91
4877	Lacaille 4830	7.2	32 27.78	66.1	4	2.944	− 38 36 32.3	70.3	1	19.91
4878	Weisse XI, 562	8.6	32 35.30	67.4	2	3.070	− 0 39 50.1	68.8	2	19.91
4879	Anonymous	9.5	32 37.79	61.3	1	3.057	− 5 19 59.5	57.3	1	19.91
4880	Lacaille 4833	7.6	32 48.58	63.3	2	2.964	− 34 12 24.8	68.8	2	19.92
4881	Weisse (2) XI, 633	8.0	11 32 52.22	61.6	3	+ 3.152	+ 26 55 49.2	56.3	2	− 19.92
4882	Anonymous	9.6	32 56.97	59.3	1	3.132	+ 20 53	. .	.	19.92
4883	O. Arg. S. 11557	7.5	33 2.50	64.2	2	2.982	− 29 42 13.5	71.3	1	19.92
4884	Lacaille 4837, (1st *)	6.5	33 3.51	69.3	2	2.952	− 37 19 54.4	67.3	2	19.92
4885	Lacaille 4837, (2d *)	8.5	33 4.92	69.3	1	2.952	− 37 19 54.0	70.3	1	19.92
4886	Carrington 1741	8.7	11 33 13.24	67.1	2	+ 4.097	+ 81 21	. .	.	− 19.92
4887	B. A. C. 3962	7.3	33 13.41	64.1	17	3.077	+ 1 43 42.1	66.3	2	19.92
4888	B. A. C. 3963	5.8	33 15.86	59.9	2	2.967	− 33 58 9.1	68.3	2	19.92
4889	Anonymous	6.9	33 16.85	64.2	3	2.990	− 27 43 13.0	64.9	3	19.92
4890	92 Leonis	5.5*	33 30.02	60.2	2	3.134	+ 22 7 45.8	62.4	2	19.92
4891	61 Ursæ Majoris	5.6	11 33 40.22	68.3	2	+ 3.179	+ 34 59 36.0	48.0	3	− 19.92
4892	Lacaille 4845	7.4	34 11.52	62.3	2	2.991	− 28 25 39.9	67.8	2	19.93
4893	Weisse XI, 592	9.2	34 17.15	64.8	4	3.076	+ 1 43 41.8	69.0	3	19.93
4894	Lacaille 4849	7.1	34 25.70	64.0	3	2.968	− 34 49 39.7	71.3	2	19.93
4895	Weisse XI, 597	9.0	34 31.22	64.8	4	3.077	+ 1 46 16.3	68.7	3	19.93
4896	Rumker 3697	7.5	11 34 36.97	59.8	2	+ 3.135	+ 22 59 21.8	56.0	3	− 19.93
4897	B. A. C, 3969	5.4	34 44.94	63.6	3	2.981	− 31 43 20.3	65.3	2	19.93
4898	Weisse XI, 605	9.2	34 57.81	67.3	2	3.077	+ 1 47 13.4	70.3	1	19.94
4899	Rumker 3706	8.0	35 26.84	59.3	2	3.104	+ 12 38 23.0	56.6	3	19.94
4900	Weisse XI, 618	9.0	35 39.90	59.2	2	3.058	− 5 38 23.9	54.3	4	19.94
4901	Anonymous	. .	11 36 9.61	65.2	1	+ 3.007	− 25 5	. .	.	− 19.95
4902	Weisse XI, 624	7.9	36 9.75	64.3	15	3.074	+ 0 57 48.1	66.9	2	19.95
4903	B. A. C. 3973	6.0*	36 11.99	59.8	2	3.199	+ 42 29 57.3	53.2	5	19.95
4904	B. A. C. 3974	6.0	36 29.32	62.8	4	2.971	− 36 24 46.7	66.4	2	19.95
4905	Weisse (2) XI, 708	7.0	36 29.55	61.3	2	3.135	+ 24 47 11.9	66.9	2	19.95
4906	Rumker 3715	7.5	11 36 33.87	59.3	3	+ 3.113	+ 17 5 54.5	55.3	2	− 19.95
4907	O. Arg. N. 12020	7.0	36 39.72	64.6	3	3.544	+ 73 55 24.6	65.3	2	19.95
4908	O. Arg. S. 11610	8.5*	36 46.06	62.3	2	2.997	− 28 54 5.1	69.4	1	19.95
4909	B. A. C. 3975	7.6	36 46.10	63.4	3	3.058	− 5 53 55.3	64.8	2	19.95
4910	Weisse XI, 641	7.5	36 58.10	60.6	3	3.037	− 14 40 44.9	61.1	4	19.96

Number.	Name of Star.	Magnitude.	Mean Right Ascension, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.	Mean Declination, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.
			h. m. s.			″	° ′ ″			″
4911	Lacaille 4867 . . .	7.5	11 36 58.23	63.0	3	+ 2.998	− 28 58 21.9	67.8	2	− 19.96
4912	Weisse XI, 643 . .	9.2	37 20.75	65.3	3	3.055	− 7 18 34.5	70.2	2	19.96
4913	Anonymous . . .	8.5	37 28.13	69.3	3	3.177	+ 38 42 0.0	46.4	1	19.96
4914	Weisse XI, 646. . .	7.9	37 29.58	66.8	2	3.056	− 7 2 37.7	68.4	2	19.96
4915	ζ Crateris	5.5	37 40.	. .	.	3.031	− 17 34 22.5	68.4	2	19.96
4916	Weisse XI, 652. . .	9.2	11 37 43.18	66.3	2	+ 3.090	+ 7 50 4.4	68.3	2	− 19.96
4917	Rumker 3727 . . .	5.0	37 57.89	66.8	2	3.106	+ 15 2 26.0	68.8	2	19.96
4918	Weisse (2) XI, 746. .	8.0	38 5.22	59.3	2	3.120	+ 20 40 5.0	55.3	2	19.96
4919	Weisse XI, 662. . .	7.4	38 12.37	62.8	5	3.090	+ 7 49 27.9	68.3	2	19.97
4920	Weisse (2) XI, 750. .	6.8	38 14.42	62.0	3	3.166	+ 36 40 14.3	57.0	3	19.97
4921	Lacaille 4877 . . .	6.8	11 38 27.58	63.3	2	+ 2.968	− 39 44 24.1	65.3	2	− 19.97
4922	Anonymous . . .	7.2	38 30.44	64.3	2	2.978	− 36 50 42.5	68.9	2	19.97
4923	χ Ursæ Majoris . . .	4.0*	38 38.65	60.7	7	3.213	+ 48 33 19.4	57.1	6	19.97
4924	ν Virginis	4.0	38 39.76	63.2	5	3.088	+ 7 18 49.8	58.3	2	19.97
4925	Weisse XI, 673. . .	8.0	38 59.50	67.4	2	3.059	− 5 51 42.0	70.3	2	19.97
4926	Weisse XI, 674. . .	8.5	11 39 1.07	66.8	2	+ 3.057	− 6 59 31.2	70.3	2	− 19.97
4927	Weisse XI, 680. . .	7.8	39 10.62	67.3	2	3.067	− 2 13 30.0	69.3	2	19.97
4928	Lacaille 4881 . . .	7.8	39 18.90	66.8	2	3.010	− 27 11 10.2	69.4	2	19.97
4929	Lacaille 4882 . . .	7.2	39 20.82	63.4	2	2.991	− 33 58 28.5	64.8	2	19.97
4930	Anonymous. . . .	9.0	39 26.66	68.3	2	3.127	+ 24 45 16.5	63.3	2	19.98
4931	Rumker 3738 . . .	6.5	11 39 45.29	61.5	5	+ 3.126	+ 24 29 52.0	61.8	2	− 19.98
4932	B. A. C. 3988 . . .	4.8	39 50.68	63.3	2	2.974	− 39 44 16.4	66.3	3	19.98
4933	Anonymous . . .	9.0	40 2.28	67.3	2	3.017	− 25 11	. .	.	19.98
4934	Lacaille 4886 . . .	5.4	40 5.97	64.6	3	2.990	− 35 7 42.9	70.9	2	19.98
4935	Weisse (2) XI, 786. .	7.8	40 13.26	59.3	2	3.116	+ 20 48 37.0	55.3	2	19.98
4936	Anonymous . . .	9.2	11 40 14.72	65.3	2	+ 3.104	+ 15 21 25.5	69.8	2	− 19.98
4937	Lacaille 4890 . . .	7.0	40 16.06	63.6	4	3.007	− 29 30 1.8	64.8	2	19.98
4938	O. Arg. S. 11656 . .	7.3	40 16.42	65.7	5	3.018	− 25 11 2.9	69.3	3	19.98
4939	Anonymous . . .	8.3	40 31.	. .	.	3.018	− 25 12 29.1	70.3	2	19.98
4940	A^1 Virginis	5.5*	40 43.23	65.4	2	3.090	+ 9 1 24.7	67.4	1	19.99
4941	Weisse (2) XI, 793. .	8.8	11 40 45.08	69.3	3	+ 3.115	+ 21 1 2.6	57.3	2	− 19.99
4942	93 Leonis	5.8	40 45.50	65.5	6	3.115	+ 20 59 48.5	57.3	2	19.99
4943	Anonymous. . . .	9.5	40 54.78	64.9	3	3.058	− 7 21 9.5	70.3	3	19.99
4944	Anonymous. . . .	8.5	41 9.	. .	.	3.020	− 25 11 52.4	70.3	2	19.99
4945	B. A. C. 3992 . . .	6.0	41 26.34	59.3	2	3.101	+ 15 3 43.1	67.8	2	19.99
4946	Anonymous . . .	9.8	11 41 30.06	71.3	1	+ 3.102	+ 15 17 0.2	68.3	1	− 19.99
4947	Anonymous . . .	6.9	41 37.82	64.3	2	2.996	− 35 12 31.7	69.3	2	19.99
4948	B. A. C. 3994 . . .	6.0	41 41.09	65.8	2	3.020	− 25 58 18.2	68.3	2	19.99
4949	Weisse (2) XI, 812. .	8.2	41 46.20	68.0	4	3.101	+ 15 17 26.2	68.4	1	19.99
4950	Weisse (2) XI, 816. .	7.4	41 48.28	62.7	2	3.104	+ 16 54 35.6	59.3	3	19.99

Number.	Name of Star.	Magnitude.	Mean Right Ascension, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.	Mean Declination, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.
			h. m. s.			″	° ′ ″			″
4951	β Leonis	2.5	11 41 55.08	56.9	141	+ 3.101	+ 15 21 17.1	53.4	58	− 19.99
4952	B. A. C. 3997 . . .	6.8	42 0.75	60.3	3	3.104	+ 17 1 22.6	60.0	3	19.99
4953	Weisse (2) XI, 838 . .	9.0	42 51.90	59.8	2	3.106	+ 18 39 47.6	55.8	2	19.99
4954	β Virginis	3.5	43 24.16	59.9	17	3.076	+ 2 33 14.0	58.5	5	20.00
4955	B. A. C. 4003 . . .	6.6	43 33.13	62.7	3	3.024	− 26 30 1.5	66.4	2	20.00
4956	Anonymous . . .	7.5	11 43 33.45	64.8	2	+ 3.000	− 36 54 7.0	69.4	3	− 20.00
4957	Lacaille 4906 . . .	6.7	43 40.22	63.0	3	3.012	− 32 21 47.2	67.9	2	20.01
4958	Lalande 22357 . . .	6.9	43 48.83	68.3	2	3.145	+ 37 36 48.7	47.3	2	20.01
4959	B. A. C. 4006 . . .	6.4	43 52.85	62.4	6	3.064	− 4 33 19.1	68.1	3	20.01
4960	Lacaille 4909 . . .	6.7	44 0.64	62.6	4	3.026	− 26 18 6.5	68.9	2	20.01
4961	Weisse XI, 758. . .	7.3	11 44 1.94	66.3	2	+ 3.060	− 7 12 43.7	69.4	2	− 20.01
4962	Anonymous . . .	7.6	44 8.67	66.8	2	3.004	− 36 9 27.2	67.3	2	20.01
4963	Carrington 1762 . .	8.0	44 33.64	62.5	4	4.789	+ 86 59 59.1	59.8	6	20.01
4964	B. A. C. 4009 . . .	6.7	44 37.32	62.3	1	3.021	− 30 2 44.3	67.3	2	20.01
4965	Groombridge 1830. .	6.5	44 56.48	67.8	11	3.143	+ 38 43 1.7	63.7	14	20.01
4966	Weisse XI, 773. . .	8.4	11 45 6.18	65.3	2	+ 3.094	+ 14 15 57.7	71.3	2	− 20.01
4967	Anonymous. . . .	9.5	45 6.47	67.3	2	3.064	− 5 30 15.7	71.4	1	20.01
4968	Anonymous. . . .	7.5	45 12.62	64.3	2	3.007	− 36 58 24.2	66.3	2	20.01
4969	B. A. C. 4014 . . .	7.0	45 33.18	60.3	2	3.096	+ 16 13 2.1	53.2	5	20.02
4970	Anonymous . . .	7.2	45 38.	. .	.	3.008	− 37 33 39.9	70.3	2	20.02
4971	Weisse XI, 785. . .	7.4	11 45 44.05	65.3	9	+ 3.093	+ 14 12 1.2	65.3	2	− 20.02
4972	Anonymous. . . .	7.8	45 44.25	65.0	4	3.008	− 37 33 39.9	70.3	2	20.02
4973	B. A. C. 4015 . . .	5.0	45 50.55	66.3	2	3.018	− 33 7 48.7	70.3	1	20.02
4974	Weisse (2) XI, 889 . .	8.0	45 58.46	59.3	2	3.098	+ 17 37 42.5	55.2	6	20.02
4975	B. A. C. 4016 . . .	6.2	46 23.09	68.3	2	3.018	− 34 17 12.2	65.3	3	20.02
4976	γ Ursæ Majoris . . .	2.3*	11 46 26.84	50.4	75	+ 3.183	+ 54 28 22.5	49.6	44	− 20.02
4977	B. A. C. 4020 . . .	7.0	46 42.60	61.0	3	3.068	− 2 59 45.1	66.8	1	20.02
4978	B. A. C. 4021 . . .	7.5	46 53.56	65.4	2	3.080	+ 5 39 27.5	66.3	2	20.02
4979	Anonymous. . . .	9.5	46 54.60	63.3	2	3.074	+ 1 6	. .	.	20.02
4980	Lacaille 4930 . . .	7.0	47 5.30	64.3	4	3.019	− 35 12 45.5	65.3	2	20.02
4981	B. A. C. 4023 . . .	6.0	11 47 24.61	68.3	2	+ 3.017	− 36 58 20.3	66.3	2	− 20.03
4982	B. A. C. 4024 . . .	6.0	47 35.26	62.4	2	3.038	− 24 56 15.5	67.8	2	20.03
4983	B. A. C. 4025 . . .	7.3	47 40.70	64.0	7	3.071	− 0 39 38.4	64.8	2	20.03
4984	65 Ursæ Majoris . . .	7.2	47 48.02	59.3	2	3.149	+ 47 15 19.2	60.8	2	20.03
4985	B. A. C. 4028 . . .	7.0*	47 53.68	59.3	2	3.148	+ 47 14 54.4	60.8	2	20.03
4986	Lalande 22450 . . .	6.2	11 47 59.34	68.3	2	+ 3.126	+ 37 32 14.8	47.0	4	− 20.03
4987	Anonymous . . .	10.0	48 21.95	60.3	1	3.028	− 33 15 58.3	68.3	1	20.03
4988	Lacaille 4939 . . .	6.9	48 23.88	62.8	2	3.042	− 24 4 49.5	68.8	2	20.03
4989	Anonymous. . . .	9.0	48 30.59	67.3	2	3.085	+ 11 8 2.6	64.3	1	20.03
4990	Anonymous. . . .	8.8	48 32.04	69.3	1	3.121	+ 36 13 3.0	69.3	2	20.03

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			h. m. s.			″	° ′ ″			″
4991	B. A. C. 4032	6.5	11 48 33.28	62.3	2	+ 3.037	− 27 41 50.3	68.9	2	− 20.03
4992	Weisse (2) XI, 937	6.7	48 45.89	62.3	3	3.120	+ 36 7 13.9	69.9	2	20.03
4993	B. A. C. 4034	6.0	48 49.00	63.8	4	3.019	− 38 54 34.8	70.3	2	20.03
4994	Weisse (2) XI, 954	7.5	49 3.61	63.6	4	3.119	+ 36 13 37.1	60.7	5	20.03
4995	Radcliffe 2768	8.8	49 39.30	65.0	6	3.125	+ 41 8 3.7	67.4	3	20.04
4996	Radcliffe 2769	7.3	11 49 52.17	64.9	7	+ 3.124	+ 41 4 3.3	67.4	3	− 20.04
4997	B. A. C. 4037	6.0*	49 57.57	60.3	2	3.035	− 32 32 11.3	54.4	4	20.04
4998	O. Arg. N. 12195	7.8	49 57.64	65.8	2	3.187	+ 63 0 39.5	69.4	2	20.04
4999	Radcliffe 2771	7.2	50 1.78	64.9	8	3.123	+ 41 8 29.7	67.4	2	20.04
5000	Lacaille 4948	7.3	50 23.80	62.4	2	3.044	− 26 16 27.5	64.7	2	20.04
5001	Lacaille 4955	6.8	11 50 59.37	63.5	5	+ 3.045	− 26 54 16.9	66.3	3	− 20.04
5002	Weisse (2) XI, 1013	6.0	51 4.87	68.3	2	3.107	+ 33 55 38.9	47.3	1	20.04
5003	(* 113) Washington	10.4	51 42.21	64.4	3	3.071	− 1 22	. .	.	20.04
5004	B. A. C. 4042	6.0	51 46.27	63.3	2	3.050	− 25 7 43.2	68.3	2	20.04
5005	B. A. C. 4043	6.0	51 53.71	65.8	2	3.073	+ 1 18 32.7	66.4	2	20.04
5006	Weisse (2) XI, 1011	8.5	11 51 54.26	59.2	2	+ 3.094	+ 24 41 10.8	57.5	5	− 20.04
5007	Lacaille 4967	7.6	52 14.24	62.3	2	3.047	− 29 16 53.4	66.3	2	20.04
5008	Weisse XI, 895	7.9	52 24.24	64.2	9	3.071	− 1 8 16.6	63.3	3	20.05
5009	Lalande 22565	8.6	52 35.40	69.3	2	3.102	+ 34 44 27.3	59.8	2	20.05
5010	Lalande 22567	6.0	52 45.55	69.3	2	3.101	+ 34 48 45.5	70.4	3	20.05
5011	*b* Virginis	5.5*	11 52 46.65	62.7	4	+ 3.075	+ 4 26 5.4	62.5	4	− 20.05
5012	B. A. C. 4050	6.0*	52 54.63	61.7	2	3.353	+ 81 38 2.2	67.4	2	20.05
5013	Weisse (2) XI, 1035	7.4	52 57.70	68.3	2	3.103	+ 37 30 33.0	46.8	4	20.05
5014	Weisse (2) XI, 1037	8.1	53 4.90	68.3	2	3.102	+ 37 30 47.2	47.0	3	20.05
5015	Weisse XI, 908	9.0*	53 14.	. .	.	3.078	+ 8 43 25.8	70.3	1	20.05
5016	O. Arg. S. 11827	8.0	11 53 20.23	69.3	2	+ 3.058	− 21 6 1.7	57.3	2	− 20.05
5017	Anonymous	8.7	53 31.24	68.4	2	3.062	− 15 5 0.6	56.3	2	20.05
5018	O. Arg. S. 11828	6.0*	53 32.98	69.3	2	3.058	− 21 3 27.7	57.1	4	20.05
5019	Lalande 22585	6.0	53 33.69	71.2	3	3.066	− 9 38 57.7	71.3	3	20.05
5020	π Virginis	5.0*	53 41.89	60.8	8	3.077	+ 7 23 41.4	55.0	3	20.05
5021	Weisse XI, 921	8.2	11 53 51.02	62.3	4	+ 3.078	+ 8 41 42.3	70.2	2	− 20.05
5022	O. Arg. S. 11831	7.7	53 51.60	64.3	3	3.055	− 25 42 2.9	67.0	3	20.05
5023	B. A. C. 4055	7.0	54 0.14	61.4	1	3.075	+ 4 24 46.9	66.8	2	20.05
5024	Weisse XI, 926	7.2	54 3.48	67.3	2	3.080	+ 13 9 25.2	70.3	2	20.05
5025	Lacaille 4976	6.8	54 15.97	64.0	6	3.050	− 33 16 14.2	64.3	2	20.05
5026	Weisse (2) XI, 1067	5.9	11 54 29.02	68.6	3	+ 3.096	+ 36 49 29.8	47.0	4	− 20.05
5027	1 Comæ	6.0*	54 33.82	59.7	4	3.085	+ 22 52 25.5	53.3	3	20.05
5028	Lacaille 4979	6.6	54 38.94	63.6	3	3.051	− 33 52 17.2	68.8	2	20.05
5029	67 Ursæ Majoris	6.0	54 59.42	65.9	5	3.100	+ 43 49 20.2	63.8	6	20.05
5030	Anonymous	8.5	55 5.42	65.3	1	3.053	− 33 9	. .	.	20.05

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				h. m. s.			″	° ′ ″			″
5031		O. Arg. S. 11848	8.8	11 55 12.36	66.4	2	+ 3.059	− 25 39 30.2	69.8	2	− 20.05
5032		Anonymous	8.0	55 24.74	61.4	1	3.076	+ 8 40	. .	.	20.05
5033		O. Arg. S. 11850	9.0	55 27.	. .	.	3.059	− 25 35 11.0	70.4	1	20.05
5034		Anonymous	8.5	55 28.95	68.3	1	3.067	− 9 56 0.7	70.4	3	20.05
5035		Anonymous	8.4	55 35.43	68.3	2	3.067	− 9 52 10.2	65.3	3	20.05
5036		Weisse X, 947	9.0	11 55 35.49	61.8	4	+ 3.076	+ 8 36 12.5	59.3	4	− 20.05
5037		Anonymous	8.8	55 38.26	64.3	3	3.054	− 35 7 49.0	67.8	2	20.05
5038		B. A. C. 4063	7.0*	56 25.77	60.9	3	3.070	− 4 41 58.6	54.3	3	20.05
5039		Lacaille 4993	6.0	56 30.41	64.8	4	3.056	− 38 13 41.2	65.3	2	20.05
5040		Weisse XI, 963	9.0	56 47.85	69.2	3	3.073	+ 4 8 17.4	71.3	1	20.05
5041		Weisse (2) XI, 1110	7.5	11 56 51.20	59.2	2	+ 3.079	+ 19 35 51.4	56.6	4	− 20.05
5042	2	Comæ	6.0*	57 6.24	60.3	2	3.079	+ 22 14 19.2	53.2	5	20.05
5043		O. Arg. S. 11876	7.5	57 23.10	65.0	3	3.063	− 30 24 27.5	66.3	2	20.06
5044		B. A. C. 4070	6.7	57 36.92	62.1	26	3.291	+ 86 21 48.5	63.4	3	20.06
5045		Weisse XI, 980	8.4	57 45.55	64.4	8	3.074	+ 9 29 36.2	66.3	2	20.06
5046		Anonymous	7.6	11 58 0.93	68.3	2	+ 3.064	− 33 25 46.3	66.2	2	− 20.06
5047	o	Virginis	4.4	58 4.56	63.8	39	3.074	+ 9 30 39.0	65.1	9	20.06
5048		Lacaille 5013	6.0	58 45.42	63.9	3	3.067	− 34 54 54.1	66.4	2	20.06
5049		Lacaille 5015	6.5	58 54.54	61.3	2	3.068	− 32 10 27.7	63.1	3	20.06
5050		Anonymous	8.0	58 59.23	67.4	2	3.069	− 30 14 51.5	69.3	2	20.06
5051		Lacaille 5016	7.0	11 59 1.36	65.3	2	+ 3.068	− 37 53 45.5	66.3	2	− 20.06
5052		Anonymous	8.5	59 9.12	65.4	1	3.069	− 30 13 46.4	69.3	2	20.06
5053		O. Arg. N. 12337	8.4	59 31.44	67.3	2	3.082	+ 75 27 2.1	67.6	3	20.06
5054		O. Arg. S. 11908	6.5	11 59 50.94	64.3	2	3.072	− 22 59 18.2	69.3	2	20.06
5055		Weisse XI, 1011	7.4	12 0 1.46	63.3	2	3.072	+ 0 8 57.5	66.8	2	20.06
5056		B. A. C. 4080	7.0*	12 0 4.61	60.9	5	+ 3.072	− 5 59 12.9	54.4	3	− 20.06
5057		Weisse (2) XI, 1190	8.5	0 14.25	68.3	2	3.071	+ 37 47 39.4	46.3	1	20.06
5058		O. Arg. S. 11917	9.0	0 24.24	67.3	2	3.073	− 30 37 38.9	70.3	2	20.06
5059		O. Arg. S. 11920	6.0	0 26.20	67.3	2	3.073	− 23 11 15.5	69.3	2	20.06
5060		B. A. C. 4081	7.0	0 26.75	68.3	2	3.071	+ 14 17 46.7	57.6	5	20.06
5061		Weisse XI, 1023	9.0	12 0 32.81	59.3	3	+ 3.072	+ 7 32 51.2	55.6	3	− 20.06
5062		Weisse (2) XI, 1206	8.8	0 54.12	60.8	2	3.070	+ 24 28 53.2	58.3	4	20.06
5063		Weisse XI, 1030	7.8	1 1.98	63.3	5	3.072	− 3 30 28.0	65.4	2	20.06
5064		B. A. C. 4088	6.5	1 7.26	61.0	3	3.076	− 33 53 44.0	67.4	2	20.06
5065	α	Corvi	5.3	1 11.99	62.4	2	3.075	− 23 56 49.5	66.4	2	20.06
5066		Weisse XI, 1033	7.8	12 1 17.56	63.3	4	+ 3.072	− 3 33 29.4	65.4	2	− 20.06
5067		Anonymous	. .	1 20.	. .	.	3.076	− 27 14 32.2	71.3	2	20.06
5068		Anonymous	8.0	1 52.12	68.0	3	3.079	− 32 18 16.0	68.9	2	20.06
5069		O. Arg. S. 11944	8.5	2 9.13	65.3	1	3.078	− 27 12 13.4	70.7	3	20.06
5070		Dorpat 1604, (1st *)	7.6	2 14.41	65.1	5	3.074	− 11 4 18.6	70.2	2	20.06

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			h. m. s.			″	° ′ ″			″
5071	Anonymous	9.2	12 2 15.04	64.3	1	+ 3.075	− 11 1	. .	.	− 20.06
5072	Dorpat 1604, (2d *)	9.0	2 17.65	65.0	4	3.075	− 11 4 21.5	70.2	2	20.06
5073	10 Virginis	6.0	2 30.92	63.8	6	3.071	+ 2 41 3.4	65.8	2	20.06
5074	Lacaille 5042	7.0	2 34.67	62.3	2	3.082	− 32 42 29.6	66.8	2	20.06
5075	Weisse XII, 16.	8.5	2 36.84	69.3	2	3.070	+ 8 57 30.4	58.3	2	20.06
5076	B. A. C. 4095	6.0	12 2 49.28	60.8	2	+ 3.083	− 33 55 31.8	67.8	2	− 20.05
5077	11 Virginis	6.0	2 55.26	59.2	2	3.070	+ 6 35 7.9	56.0	3	20.05
5078	ε Corvi	4.0*	2 55.77	62.1	33	3.079	− 21 50 27.9	57.4	15	20.05
5079	O. Arg. N. 12397	7.0	2 56.64	68.8	2	3.006	+ 75 26 24.7	66.3	2	20.05
5080	Lacaille 5044	6.0	3 15.78	65.8	2	3.081	− 24 10 48.2	66.4	2	20.05
5081	B. A. C. 4098	6.0	12 3 18.65	66.3	2	+ 3.087	− 37 5 24.5	69.3	2	− 20.05
5082	Anonymous	9.0	3 31.22	69.3	2	3.089	− 39 47 19.0	67.3	2	20.05
5083	B. A. C. 4100	6.5*	3 39.07	60.6	2	3.061	+ 28 3 39.1	55.9	5	20.05
5084	Weisse XII, 34	7.9	3 52.87	65.3	2	3.068	+ 9 29 44.5	65.8	2	20.05
5085	Weisse XII, 49	8.4	4 22.11	63.0	4	3.069	+ 8 8 56.2	63.8	2	20.05
5086	B. A. C. 4104	7.0	12 4 30.51	60.8	2	+ 3.070	+ 4 50 5.2	66.9	2	− 20.05
5087	B. A. C. 4106	6.0*	4 37.22	62.3	2	2.868	+ 82 29 22.4	68.9	2	20.05
5088	O. Arg. S. 11982	6.5	4 45.48	67.3	2	3.085	− 25 9 44.1	69.3	2	20.05
5089	Anonymous	. .	4 48.88	59.3	2	3.069	+ 6 7 16.6	56.0	3	20.05
5090	Weisse XII, 53	9.0	4 50.	. .	.	2.858	+ 82 29 41.8	70.4	1	20.05
5091	Weisse XII, 63	8.0	12 5 8.52	60.3	2	+ 3.068	+ 6 39 12.9	58.7	4	− 20.05
5092	4 Draconis	4.7	5 35.47	63.3	6	2.913	+ 78 23 39.8	63.9	20	20.05
5093	O. Arg. S. 11995	7.9	5 39.00	64.3	2	3.092	− 30 31 35.6	68.4	2	20.05
5094	Lacaille 5063	5.8	5 57.83	66.8	2	3.095	− 33 20 48.2	65.8	2	20.05
5095	Lacaille 5065	6.0	6 8.67	64.3	1	3.100	− 38 9 1.2	69.3	2	20.05
5096	12 Virginis	5.2	12 6 18.06	69.6	3	+ 3.065	+ 11 2 29.0	69.4	2	− 20.05
5097	Lacaille 5066	6.2	6 21.15	67.7	9	3.096	− 33 0 49.7	67.3	3	20.05
5098	Lacaille 5067	7.6	6 26.47	62.3	2	3.091	− 26 32 32.3	64.9	2	20.05
5099	Lacaille 5071	7.0	6 47.29	66.8	2	3.096	− 31 36 28.7	65.8	2	20.05
5100	Weisse XII, 91.	9.0	6 56.43	61.3	3	3.068	+ 5 46 42.3	58.6	4	20.05
5101	Groombridge 1860.	8.2	12 7 1.72	70.3	4	+ 2.662	+ 84 16 54.1	66.8	6	− 20.04
5102	Lacaille 5073	7.5	7 2.50	68.3	1	3.099	− 33 0 1.5	65.3	2	20.05
5103	Lalande 22934, (1st *).	7.0	7 3.03	68.8	2	3.045	+ 33 33 48.0	47.3	1	20.05
5104	Lalande 22934, (2d *).	8.2	7 5.18	68.8	2	3.045	+ 33 33 47.0	47.3	1	20.05
5105	Lacaille 5074	7.5	7 51.44	62.4	1	3.097	− 28 16	. .	.	20.04
5106	B. A. C. 4122	6.0*	12 8 26.07	60.3	2	+ 2.929	+ 70 58 46.8	54.3	3	− 20.04
5107	δ Ursæ Majoris	3.8	8 28.71	51.0	7	2.993	+ 57 48 38.0	62.4	6	20.04
5108	γ Corvi	3.5	8 36.69	58.3	2	3.087	− 16 45 51.8	69.7	3	20.04
5109	Weisse XII, 119	9.0	8 41.82	59.2	2	3.065	+ 8 13 29.3	55.8	2	20.04
5110	Anonymous	7.8	8 44.96	64.2	5	3.097	− 25 47 5.9	66.3	3	20.04

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5111	O. Arg. S. 12037	8.5	12 8 47.38	64.1	5	+ 3.100	− 28 50 43.6	65.8	2	− 20.04
5112	Anonymous.	9.0	8 48.22	64.3	2	3.097	− 25 49 7.7	67.7	3	20.04
5113	Weisse XII, 107	6.5	8 58.36	71.3	3	3.080	− 9 29 50.7	71.3	2	20.04
5114	Weisse XII, 130	8.3	9 18.69	59.3	3	3.064	+ 8 7 58.9	55.4	2	20.04
5115	B. A. C. 4128	5.2	9 27.36	68.3	2	3.035	+ 33 50 40.4	47.3	1	20.04
5116	Weisse XII, 114	8.8	12 9 28.	. .	.	+ 3.081	− 9 29 38.9	71.3	1	− 20.04
5117	Anonymous.	6.9	9 36.13	64.2	4	3.098	− 25 49 7.7	66.8	4	20.04
5118	Weisse XII, 144	7.9	10 17.94	63.3	3	3.064	+ 7 22 49.5	62.5	4	20.04
5119	Lacaille 5088	6.0	10 29.20	62.9	5	3.115	− 35 18 57.3	65.3	2	20.04
5120	Weisse XII, 149	8.3	10 34.80	68.8	2	3.063	+ 8 26 34.5	55.3	3	20.04
5121	O. Arg. S. 12057	6.9	12 10 40.45	64.3	3	+ 3.099	− 23 14 7.5	67.9	2	− 20.03
5122	Weisse XII, 160	9.0	11 0.18	60.3	2	3.065	+ 5 52 21.4	62.1	4	20.03
5123	Anonymous.	8.4	11 19.27	66.8	2	3.104	− 25 47 16.8	69.4	3	20.03
5124	13 Virginis.	6.0	11 29.71	62.4	9	3.072	− 0 0 30.8	64.6	3	20.03
5125	Anonymous	8.0	11 31.41	66.0	3	3.042	+ 23 53 53.7	64.1	3	20.03
5126	Weisse XII, 177	9.4	12 12 3.37	65.3	1	+ 3.072	+ 0 10 51.1	70.3	2	− 20.03
5127	Weisse XII, 179	9.0	12 3.60	62.3	2	3.062	+ 7 47 5.8	68.4	2	20.03
5128	Anonymous	8.0	12 10.29	65.3	2	3.106	− 25 19 34.0	69.3	2	20.03
5129	Lacaille 5097	6.5	12 13.80	66.3	2	3.116	− 31 48 41.3	68.4	3	20.03
5130	8 Comæ	6.0	12 14.67	67.0	4	3.040	+ 23 48 44.6	54.4	3	20.03
5131	Weisse XII, 184	8.2	12 12 17.28	62.3	2	+ 3.062	+ 7 46 11.6	60.2	5	− 20.03
5132	Rumker 3907	8.5	12 31.79	62.0	3	3.064	+ 6 19 32.9	56.7	3	20.03
5133	O. Arg. S. 12082	6.7	12 38.99	63.6	3	3.108	− 25 57 31.6	65.3	2	20.03
5134	B. A. C. 4150	7.3	12 42.50	62.7	6	1.547	+ 87 12 51.3	67.4	2	20.02
5135	Anonymous	7.2	12 42.72	64.8	2	3.111	− 27 44 49.5	67.3	1	20.02
5136	η Virginis.	3.4*	12 12 44.65	61.3	87	+ 3.072	+ 0 6 41.4	58.7	19	− 20.02
5137	Lacaille 5102	7.3	12 46.22	63.3	2	3.128	− 37 1 17.1	70.9	2	20.02
5138	Rumker 3911	7.7	12 47.33	63.3	8	3.064	+ 6 26 54.4	61.1	8	20.02
5139	3 Canum Venaticorum	5.5	12 54.04	70.8	6	2.983	+ 49 45 41.2	68.4	2	20.02
5140	Weisse XII, 199	9.0	13 3.29	69.3	1	3.063	+ 6 31 34.4	70.3	1	20.02
5141	c Virginis	5.0*	12 13 14.28	66.3	2	+ 3.066	+ 4 5 34.0	66.3	2	− 20.02
5142	Weisse (2) XII, 268	6.0	13 14.66	68.8	2	3.010	+ 38 40 48.0	46.9	2	20.02
5143	B. A. C. 4153	6.0	13 17.08	60.3	2	3.032	+ 27 24 3.7	54.4	3	20.02
5144	Anonymous	9.0	13 35.73	69.4	1	3.110	− 25 51 32.9	64.2	1	20.02
5145	Lacaille 5109	6.5	13 43.53	66.3	2	3.144	− 41 47 4.7	70.1	3	20.02
5146	Anonymous	. .	12 13 57.	. .	.	+ 3.111	− 25 36 33.1	70.4	1	− 20.02
5147	O. Arg. S. 12101	7.2	13 59.10	66.8	2	3.112	− 25 57 18.5	65.8	2	20.02
5148	Anonymous	7.5	14 5.24	69.3	2	+ 3.117	− 28 56 45.5	69.0	3	20.02
5149	B. A. C. 4165	6.0*	14 19.60	62.2	13	− 0.068	+ 88 28 32.4	65.9	4	20.02
5150	Weisse XII, 221	9.2	14 21.25	59.3	2	+ 3.059	+ 8 35 48.4	70.4	1	20.02

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5151	Anonymous	9.5	12 14 26.	. .	.	+ 3.059	+ 8 39 42.0	70.4	1	− 20.02
5152	Lacaille 5117	7.0	14 52.63	62.8	2	3.139	− 37 40 24.6	71.3	2	20.01
5153	B. A. C. 4166	8.0	15 4.07	69.3	2	2.215	+ 84 9 4.8	46.9	2	20.01
5154	O. Arg. S. 12116	6.3	15 9.87	64.6	3	3.110	− 23 27 32.5	69.4	4	20.01
5155	Anonymous	8.6	15 17.23	66.9	2	3.129	− 32 48	. .	.	20.01
5156	Dorpat 1636, (1st *)	9.6	12 15 24.37	64.9	5	+ 3.062	+ 6 5	. .	.	− 20.01
5157	17 Virginis	7.1	15 24.96	61.3	11	3.062	+ 6 5 2.9	60.6	3	20.01
5158	12 Comæ	5.0*	15 27.83	63.3	3	3.027	+ 26 37 25.2	68.9	2	20.01
5159	Weisse (2) XII, 320	7.5	15 32.29	64.8	2	3.025	+ 27 23 56.8	54.4	2	20.01
5160	Lacaille 5125	7.2	15 43.30	62.6	3	3.113	− 24 5 43.7	63.4	2	20.01
5161	Lacaille 5126	7.1	12 15 52.73	63.6	3	+ 3.141	− 36 42 47.6	67.8	2	− 20.01
5162	Weisse XII, 252	9.2	15 57.16	62.8	2	3.060	+ 7 37 17.4	67.3	2	20.01
5163	B. A. C. 4171	7.0*	15 57.66	60.7	2	3.083	− 6 31 21.7	58.7	5	20.01
5164	O. Arg. S. 12124	7.5	16 4.11	67.3	2	3.117	− 25 41 40.4	68.4	2	20.01
5165	6 Corvi	6.0	16 4.26	62.6	3	3.114	− 24 3 46.4	63.4	2	20.01
5166	B. A. C. 4175	5.8	12 16 22.11	62.8	2	+ 3.147	− 38 8 3.6	68.3	2	− 20.00
5167	Lacaille 5131	6.9	16 28.01	64.7	3	3.126	− 29 33 29.1	66.8	2	20.00
5168	Weisse XII, 261	8.8	16 36.11	63.2	3	3.050	+ 12 41 50.2	68.1	3	20.00
5169	Lalande 23198	7.7	16 45.89	64.2	2	3.118	− 25 14 15.2	64.3	2	20.00
5170	Lacaille 5134	7.0	16 49.30	65.8	2	3.149	− 38 8 15.2	68.3	3	20.00
5171	O. Arg. S. 12134	8.3	12 16 49.72	66.8	2	+ 3.115	− 23 28 0.3	69.4	2	− 20.00
5172	4 Canum Venaticorum	5.0	16 53.26	62.2	4	2.979	+ 43 19 6.9	60.9	7	20.00
5173	Weisse (2) XII, 356	8.5	17 28.02	59.3	2	3.029	+ 22 56 43.3	55.3	3	20.00
5174	Lalande 23219	8.5	17 33.65	66.4	2	3.081	− 4 52 17.9	70.3	3	20.00
5175	Lacaille 5143	7.0	17 57.29	63.5	5	3.121	− 25 12 44.2	64.3	2	19.99
5176	Lacaille 5144	5.5	12 17 58.99	63.4	1	+ 3.125	− 26 58 23.3	67.4	2	− 19.99
5177	k^2 Centauri	5.8	17 59.77	63.3	2	3.146	− 34 24 36.5	68.4	2	19.99
5178	B. A. C. 4184	6.0	18 12.26	65.4	2	3.023	+ 24 42 14.2	66.3	2	19.99
5179	Radcliffe 2860	6.0	18 33.14	62.3	1	2.845	+ 64 34 43.3	65.3	2	19.99
5180	Weisse XII, 291	8.0	18 38.44	65.8	2	3.080	− 4 5 5.8	60.9	3	19.99
5181	Rumker 3966	7.8	12 18 46.17	60.0	3	+ 3.062	+ 4 58 32.2	55.3	3	− 19.99
5182	O. Arg. S. 12161	7.7	19 18.98	64.3	2	3.128	− 26 24 24.3	68.9	2	19.98
5183	Carrington 1849	8.6	19 25.64	65.3	2	1.418	+ 86 4 58.5	58.8	4	19.98
5184	B. A. C. 4193	6.0	19 26.86	68.4	2	1.956	+ 84 12 17.4	46.9	2	19.98
5185	Lalande 23269	7.6	19 28.09	68.3	2	2.984	+ 37 53 21.1	47.4	2	19.98
5186	B. A. C. 4192	5.8	12 19 29.51	63.0	3	+ 3.143	− 32 3 12.5	68.8	2	− 19.98
5187	Lalande 23270	7.3	19 35.65	63.4	1	3.082	− 4 48 57.6	67.8	2	19.98
5188	O. Arg. S. 12165	8.1	19 47.24	68.8	2	3.130	− 26 55 32.6	68.4	2	19.98
5189	Weisse XII, 311	8.8	19 48.08	67.4	2	3.042	+ 14 49 14.9	68.8	2	19.98
5190	16 Comæ	5.5	19 58.97	45.4	1	3.011	+ 27 36 3.7	70.3	2	19.98

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5191	O. Arg. S. 12170 . .	7.2	12 20 6.26	63.8	7	+ 3.131	− 27 56 26.6	66.9	2	− 19.98
5192	O. Arg. S. 12173 . .	8.3	20 7.71	67.4	2	3.138	− 29 18 24.6	70.3	2	19.98
5193	Anonymous . . .	9.0	20 29.12	59.4	1	3.086	− 6 48 19.7	63.4	2	19.98
5194	B. A. C. 4198 . . .	6.7	20 33.52	65.9	2	3.106	− 15 51 23.8	65.3	2	19.97
5195	Weisse (2) XII, 424 .	8.4	20 33.71	59.3	4	3.016	+ 25 0 9.9	54.7	5	19.97
5196	B. A. C. 4200 . . .	6.5*	12 20 40.74	54.7	3	+ 3.080	− 3 50 23.4	71.3	2	− 19.97
5197	Weisse XII, 335 . .	8.0	20 47.24	59.4	2	3.086	− 6 47 32.3	56.3	2	19.97
5198	73 Ursæ Majoris . . .	6.0*	20 54.67	62.8	4	2.888	+ 56 29 17.5	58.4	3	19.97
5199	B. A. C. 4202 . . .	5.6	20 56.49	63.0	3	3.168	− 38 15 56.4	70.4	2	19.97
5200	Weisse XII, 345 . .	9.1	21 11.90	63.2	3	3.043	+ 13 7 18.5	66.7	2	19.97
5201	Anonymous . . .	8.2	12 21 13.72	64.3	4	+ 3.159	− 35 9 21.9	65.3	2	− 19.97
5202	Anonymous . . .	7.5	21 27.36	65.3	1	3.167	− 37 11 31.2	70.3	2	19.97
5203	Anonymous . . .	8.8	21 27.57	69.4	1	3.167	− 37 14 28.8	70.3	2	19.97
5204	Weisse (2) XII, 446 .	8.5	21 46.60	59.3	3	3.019	+ 22 46 43.6	57.3	2	19.97
5205	Anonymous . . .	8.6	21 50.11	68.8	2	3.162	− 35 13 19.0	66.3	2	19.96
5206	Weisse XII, 359 . .	8.3	12 21 55.65	62.0	3	+ 3.057	+ 6 44 8.3	65.9	2	− 19.96
5207	Weisse XII, 360 . .	9.0*	21 57.70	71.2	3	3.055	+ 7 38 25.3	67.4	2	19.96
5208	Anonymous . . .	8.0	22 27.83	64.3	4	3.164	− 35 3 21.3	65.3	2	19.96
5209	Anonymous . . .	8.6	22 33.76	68.3	2	3.173	− 37 33 53.3	66.2	2	19.96
5210	δ Corvi.	5.0	22 37.50	61.4	2	3.109	− 15 44 8.5	65.6	3	19.96
5211	Lacaille 5176 . . .	7.6	12 22 40.23	63.3	3	+ 3.152	− 31 17 5.6	62.3	2	− 19.96
5212	20 Comæ	6.0	22 40.98	61.4	3	3.020	+ 21 40 18.4	64.6	3	19.96
5213	Weisse (2) XII, 478 .	8.0	22 55.76	59.2	2	3.009	+ 25 6 50.9	55.5	6	19.96
5214	B. A. C. 4214 . . .	5.6	22 58.05	67.3	2	3.129	− 22 55 20.2	69.3	2	19.95
5215	7 Canum Venaticorum .	6.0*	23 24.89	59.6	4	2.896	+ 52 18 30.3	53.3	4	19.95
5216	Lacaille 5188 . . .	7.5	12 23 44.84	66.4	2	+ 3.155	− 30 51 39.5	67.6	4	− 19.95
5217	Weisse (2) XII, 500 .	6.8	24 3.67	68.4	2	3.008	+ 24 32 43.4	57.4	2	19.95
5218	Weisse XII, 390 . .	9.5	24 4.17	61.3	2	3.089	− 6 53 24.7	57.3	2	19.95
5219	Anonymous . . .	8.8	24 7.23	71.3	2	3.059	+ 5 26 32.7	67.4	2	19.95
5220	Anonymous . . .	8.3	24 10.12	64.3	3	3.163	− 32 53 45.2	69.8	2	19.94
5221	Lalande 23408 . . .	7.1	12 24 12.80	69.0	6	+ 3.058	+ 5 29 42.3	67.4	2	− 19.94
5222	O. Arg. S. 12219 . .	6.8	24 13.95	64.0	6	3.154	− 30 12 29.4	66.4	1	19.94
5223	Weisse XII, 402 . .	7.2	24 26.90	63.1	5	3.083	− 4 16 48.4	60.9	2	19.94
5224	Lacaille 5189 . . .	6.5	24 29.08	63.3	2	3.193	− 40 16 50.8	70.0	3	19.94
5225	Lacaille 5191 . . .	6.2	24 39.85	63.6	3	3.161	− 31 45 34.9	66.0	3	19.94
5226	Weisse XII, 409 . .	8.0	12 24 43.68	59.8	2	+ 3.056	+ 6 29 0.9	57.8	2	− 19.94
5227	Lacaille 5192 . . .	7.6	24 47.69	62.3	2	3.145	− 26 47 34.7	70.4	3	19.94
5228	Weisse (2) XII, 526 .	8.5	25 8.68	59.3	2	3.014	+ 21 41 34.7	55.3	2	19.93
5229	Lacaille 5193 . . .	7.0	25 10.30	65.2	5	3.162	− 31 41 26.8	69.4	2	19.93
5230	Weisse XII, 416 . .	9.0	25 14.50	59.4	2	3.055	+ 6 28 31.5	57.8	2	19.93

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5231	O. Arg. S. 12232	7.5	12 25 26.50	64.9	8	+ 3.155	− 29 16 17.3	64.8	2	− 19.93
5232	O. Arg. N. 12726	7.5	25 39.05	65.8	2	2.758	+ 64 31 51.5	65.3	2	19.93
5233	Anonymous	7.8	25 39.27	62.3	2	3.161	− 30 52 18.4	69.4	2	19.93
5234	Anonymous	8.5	26 4.03	67.8	2	3.166	− 31 40 50.4	68.4	1	19.93
5235	Anonymous	8.4	26 17.32	66.8	2	3.170	− 32 29 48.5	70.4	2	19.92
5236	O. Arg. S. 12243	7.8	12 26 27.32	67.3	2	+ 3.136	− 22 44 19.4	69.4	2	− 19.92
5237	Weisse XII, 433	9.0*	26 28.78	60.3	2	3.062	+ 3 41 4.5	58.9	4	19.92
5238	*q* Virginis	6.0	26 33.34	63.0	18	3.096	− 8 40 45.3	67.4	2	19.92
5239	Weisse (2) XII, 556	6.3	26 35.37	68.4	2	3.000	+ 25 3 21.5	55.4	1	19.92
5240	Anonymous	7.5	26 39.80	66.7	3	3.168	− 31 42 52.3	69.0	3	19.92
5241	Anonymous	9.5	12 26 41.34	67.4	2	+ 3.159	− 29 22	. .	.	− 19.92
5242	β Corvi	2.3*	27 2.33	53.3	129	3.138	− 22 37 18.8	49.4	37	19.92
5243	Anonymous	9.0	27 10.08	61.3	2	3.064	+ 3 1	. .	.	19.91
5244	Weisse XII, 452	8.2	27 25.32	68.8	2	3.053	+ 6 44 20.4	67.8	2	19.91
5245	O. Arg. S. 12254	8.3	27 27.93	68.7	3	3.139	− 22 42 12.9	71.3	1	19.91
5246	κ Draconis	3.6	12 27 29.15	63.0	15	+ 2.619	+ 70 33 36.5	63.1	17	− 19.91
5247	Weisse (2) XII, 581	7.5	27 32.01	68.3	2	3.008	+ 21 40 23.5	55.3	2	19.91
5248	O. Arg. S. 12258	7.7	27 38.52	67.3	2	3.150	− 25 56 23.7	70.8	2	19.91
5249	Weisse XII, 461	8.5	28 3.12	63.5	5	3.032	+ 13 42 39.3	64.4	2	19.91
5250	B. A. C. 4241	6.7	28 4.88	60.0	4	3.015	+ 19 8 53.7	68.3	2	19.91
5251	24 Comæ	4.5	12 28 6.27	60.3	3	+ 3.015	+ 19 8 53.1	55.8	7	− 19.90
5252	Weisse XII, 463	8.0	28 7.94	61.3	2	3.063	+ 3 1 52.3	65.0	6	19.90
5253	Weisse (2) XII, 599	6.2	28 8.19	59.2	2	3.004	+ 22 39 15.0	54.8	2	19.90
5254	B. A. C. 4243	5.5	28 14.32	63.3	2	3.211	− 40 14 58.2	68.4	2	19.90
5255	Weisse (2) XII, 602	7.3	28 20.16	69.8	2	2.947	+ 37 11 52.0	47.1	3	19.90
5256	Lacaille 5214	6.0	12 28 29.60	69.3	2	+ 3.207	− 39 5 47.3	67.3	2	− 19.90
5257	Anonymous	7.4	28 40.83	69.3	2	3.180	− 32 58 27.5	64.3	2	19.90
5258	O. Arg. S. 12269	9.0	28 42.60	66.9	2	3.151	− 25 13 7.3	68.8	2	19.90
5259	Lacaille 5220	7.5	29 26.26	64.2	5	3.176	− 31 24 12.7	62.4	2	19.89
5260	*f* Virginis	6.0*	29 34.78	63.0	7	3.087	− 5 3 35.0	65.3	2	19.89
5261	O. Arg. S. 12286	7.9	12 29 50.85	64.4	2	+ 3.154	− 25 14 49.2	68.8	2	− 19.89
5262	O. Arg. S. 12288	7.8	30 6.88	68.3	2	3.164	− 27 38 40.2	65.3	2	19.88
5263	Weisse XII, 494	7.8	30 7.48	60.9	2	3.095	− 7 31 40.7	66.9	2	19.88
5264	Weisse (2) XII, 636	8.2	30 11.23	62.6	5	2.954	+ 33 47 51.0	69.4	2	19.88
5265	B. A. C. 4253	5.7	30 17.30	62.7	3	3.159	− 26 21 51.7	63.4	2	19.88
5266	Weisse XII, 497	8.0	12 30 18.68	63.2	5	+ 3.029	+ 13 45 16.5	65.0	3	− 19.88
5267	Lacaille 5226	6.8	30 53.20	63.0	3	3.212	− 38 1 35.5	69.9	2	19.87
5268	Weisse XII, 510	7.6	31 4.07	67.3	4	3.063	+ 2 45 2.5	67.3	2	19.87
5269	B. A. C. 4254	Var.	31 14.05	62.8	5	3.064	+ 2 37 33.4	57.8	3	19.87
5270	Weisse XII, 515	8.5	31 23.06	59.3	2	3.069	+ 0 59 17.0	64.3	2	19.87

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5271	Weisse XII, 516, (1st *)	8.0	12 31 28.83	68.3	2	+ 3.087	− 4 33 11.7	58.2	2	− 19.87
5272	Weisse XII, 516, (2d *)	8.8	31 29.38	68.3	2	3.087	− 4 33 11.7	58.2	2	19.87
5273	B. A. C. 4255	5.7	31 31.50	67.3	2	3.084	− 3 36 10.7	70.9	2	19.87
5274	Weisse XII, 519	7.8	31 32.23	61.6	6	3.024	+ 14 34 38.4	61.3	6	19.87
5275	B. A. C. 4256	6.7	31 36.91	63.4	3	3.177	− 29 39 6.8	68.2	2	19.86
5276	Anonymous	9.4	12 31 45.65	67.3	2	+ 3.027	+ 13 37 46.9	69.8	2	− 19.86
5277	Anonymous	9.0	31 48.55	62.7	3	3.024	+ 14 34 26.1	61.0	3	19.86
5278	Weisse XII, 525	9.0	31 57.67	59.4	2	3.024	+ 14 38 17.7	57.8	2	19.84
5279	Weisse XII, 526	9.3	31 57.83	62.3	4	3.024	+ 14 33 30.5	69.9	2	19.85
5280	Lacaille 5230	7.6	31 58.11	62.7	3	3.174	− 28 46 0.3	64.9	2	19.86
5281	χ Virginis	4.8	12 32 1.35	63.0	20	+ 3.096	− 7 13 29.3	54.4	2	− 19.86
5282	B. A. C. 4262	5.5	32 18.33	69.3	2	3.225	− 39 12 59.1	67.3	2	19.86
5283	Lacaille 5232	7.6	32 21.76	62.6	4	3.176	− 28 53 7.0	69.4	2	19.86
5284	Lalande 23653	6.8	32 27.88	68.4	2	2.931	+ 36 43 19.4	47.3	2	19.86
5285	Lacaille 5234	7.2	32 43.35	64.9	5	3.216	− 37 5 13.3	66.3	2	19.85
5286	O. Arg. S. 12332	8.2	12 33 18.70	64.3	2	+ 3.167	− 26 3 37.9	70.8	2	− 19.84
5287	Lalande 23666	6.0	33 19.47	68.8	2	2.937	+ 34 56 7.8	47.4	2	19.84
5288	Lacaille 5239	8.5	33 25.94	62.7	3	3.171	− 26 56 36.0	67.4	1	19.84
5289	Weisse XII, 549	7.5	33 26.76	59.8	2	3.097	− 7 40 23.6	66.7	3	19.84
5290	Lacaille 5238	6.7	33 31.40	66.3	2	3.256	− 43 19 57.1	70.9	2	19.84
5291	O. Arg. S. 12338	6.8	12 33 47.86	65.9	2	+ 3.173	− 27 8 20.1	65.3	1	− 19.84
5292	O. Arg. S. 12342	7.3	34 3.52	64.5	5	3.161	− 24 13 30.1	69.4	2	19.83
5293	Weisse XII, 564	9.0	34 23.53	65.3	2	3.062	+ 2 45 58.0	56.9	2	19.83
5294	γ^2 Virginis	3.8*	34 33.89	64.9	6	3.074	− 0 40 53.4	70.4	2	19.83
5295	γ^1 Virginis	3.5*	34 33.96	61.4	18	3.074	− 0 40 50.4	64.2	4	19.83
5296	28 Virginis	6.0*	12 34 43.41	60.5	6	+ 3.096	− 6 43 47.0	65.4	2	− 19.83
5297	Lacaille 5252	7.4	34 58.50	63.3	2	3.226	− 37 8 3.7	67.3	2	19.82
5298	Weisse XII, 580	8.5	35 0.58	39.3	2	3.018	+ 14 55 39.5	55.3	2	19.82
5299	Weisse XII, 579	8.2	35 2.13	68.3	2	3.089	− 4 50 7.5	58.3	2	19.82
5300	Weisse XII, 583	9.0	35 14.73	67.3	3	3.063	+ 2 23 8.6	61.1	3	19.82
5301	Weisse XII, 584	8.5	12 35 19.74	61.8	2	+ 3.064	+ 2 5 56.8	57.8	2	− 19.82
5302	Weisse XII, 585	7.5	35 23.25	68.3	2	3.089	− 4 41 52.5	58.2	2	19.82
5303	Lalande 23711	7.5	35 31.10	68.4	2	2.930	+ 34 27 42.6	47.4	1	19.81
5304	Anonymous	8.2	35 40.16	65.1	4	3.218	− 35 14 32.1	69.4	2	19.81
5305	Lacaille 5256	6.7	35 48.12	62.9	2	3.165	− 24 13 18.7	67.0	3	19.81
5306	Lacaille 5254	6.5	12 35 48.82	65.8	2	+ 3.243	− 39 24 34.9	67.3	2	− 19.81
5307	Anonymous	7.0	35 53.11	64.9	3	3.250	− 40 33 16.2	71.3	2	19.81
5308	Lacaille 5257	6.5	36 6.30	69.3	2	3.172	− 25 32 0.6	66.4	2	19.81
5309	Anonymous	8.0	36 7.28	69.3	2	3.217	− 34 38 44.9	67.8	2	19.81
5310	Lacaille 5261	7.0	36 26.47	63.3	2	3.217	− 34 21 1.7	69.3	2	19.80

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5311	B. A. C. 4277	6.0*	12 36 26.76	60.3	2	+ 3.075	− 0 48 22.8	54.3	3	− 19.80
5312	B. A. C. 4278	5.7	36 33.24	63.3	4	3.182	− 27 33 18.1	65.3	2	19.80
5313	Anonymous	8.0	36 40.47	69.4	3	3.229	− 36 28 4.2	68.7	3	19.80
5314	B. A. C. 4281	6.0*	37 14.87	65.6	2	0.861	+ 84 24 43.8	61.7	3	19.79
5315	Anonymous	9.0	37 24.61	63.4	1	3.017	+ 14 14 45.6	66.4	1	19.79
5316	Weisse XII, 626	9.0	12 37 31.68	62.3	2	+ 3.017	+ 14 7 0.2	66.7	3	− 19.79
5317	O. Arg. S. 12389	6.2	37 48.35	64.2	2	3.189	− 27 59 54.0	67.9	2	19.78
5318	B. A. C. 4282	6.8	37 50.13	68.9	2	2.853	+ 44 52 11.2	65.4	2	19.78
5319	O. Arg. S. 12390	7.7	37 51.21	66.8	2	3.194	− 29 0 56.3	66.4	2	19.78
5320	Weisse XII, 632	8.2	37 53.48	64.8	9	3.016	+ 14 15 27.7	66.3	2	19.78
5321	Anonymous	7.2	12 38 2.73	64.3	2	+ 3.239	− 37 3 15.6	68.3	3	− 19.78
5322	Weisse XII, 638	9.0	38 9.96	59.3	2	3.065	+ 1 49 27.9	58.3	2	19.78
5323	10 Canum Venaticorum	6.0*	38 21.66	59.4	2	2.885	+ 40 2 22.7	53.8	9	19.78
5324	Weisse XII, 646	8.0	38 24.84	63.3	6	3.016	+ 14 10 54.2	65.4	2	19.77
5325	*d*² Virginis	6.2	38 32.61	61.7	3	3.039	+ 8 26 21.8	69.4	2	19.77
5326	Weisse XII, 652	8.0	12 38 53.95	63.9	11	+ 3.014	+ 14 20 56.5	66.4	3	− 19.77
5327	Anonymous	10.0	39 3.17	65.3	1	3.013	+ 14 29 22.3	68.3	1	19.77
5328	Lacaille 5278	5.8	39 13.26	63.8	5	3.217	− 32 32 56.3	66.4	2	19.76
5329	Weisse XII, 661	8.2	39 22.11	59.2	2	3.072	− 0 3 20.6	55.7	3	19.76
5330	Weisse XII, 665	8.8	39 34.67	60.8	4	3.016	+ 13 43 46.0	66.3	2	19.76
5331	Weisse XII, 668	8.0	12 39 50.74	59.3	2	+ 3.106	− 8 26 53.6	55.4	2	− 19.75
5332	Lalande 23832	7.5	40 3.00	64.5	11	3.012	+ 14 22 55.9	65.4	3	19.75
5333	Lacaille 5282	7.0	40 26.98	62.7	3	3.178	− 24 14 56.2	62.8	2	19.74
5334	Lacaille 5283	6.6	40 27.56	62.7	3	3.177	− 24 5 15.4	71.3	2	19.74
5335	Lacaille 5281	6.7	40 31.28	66.3	2	3.299	− 43 57 10.4	70.3	2	19.74
5336	35 Virginis	6.0*	12 40 43.74	62.4	3	+ 3.054	+ 4 20 18.0	71.6	3	− 19.74
5337	Lacaille 5284	6.7	40 45.53	64.2	4	3.217	− 31 33 33.9	72.0	3	19.74
5338	Weisse XII, 685	7.5	40 49.68	68.3	2	3.012	+ 14 11 22.1	67.3	2	19.74
5339	B. A. C. 4298	6.5	40 52.73	65.6	2	1.506	+ 81 23 17.5	67.4	2	19.74
5340	O. Arg. N. 12996	9.2	40 54.73	65.4	4	1.948	+ 78 4 16.8	69.4	2	19.74
5341	B. A. C. 4297	5.9	12 40 58.90	63.1	3	+ 3.192	− 26 49 50.3	70.9	2	− 19.74
5342	28 Comæ	5.8	41 13.56	64.8	14	3.011	+ 14 19 7.8	61.4	5	19.73
5343	O. Arg. S. 12444	9.0	41 37.17	66.8	2	3.185	− 25 5 45.7	71.4	1	19.73
5344	Rumker 4137	6.9	41 44.66	68.8	2	3.108	− 8 27 16.7	55.4	2	19.72
5345	Lalande 23896	7.0	41 47.07	68.4	2	2.889	+ 37 6 24.7	47.3	1	19.72
5346	Weisse XII, 706	8.8	12 41 48.86	59.2	2	+ 3.008	+ 14 48 3.1	56.7	3	− 19.72
5347	29 Comæ	6.4	41 53.22	57.7	12	3.007	+ 14 53 15.0	60.0	8	19.72
5348	Anonymous	8.6	41 53.74	69.3	2	2.991	+ 18 29 58.9	55.3	1	19.72
5349	Lacaille 5291	7.5	41 56.86	65.8	2	3.236	− 34 1 38.4	69.7	3	19.72
5350	11 Canum Venaticorum	6.0*	42 14.77	65.4	2	2.788	+ 49 13 49.9	67.4	2	19.72

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5351	Lalande 23919 . . .	7.8	12 42 32.78	68.9	2	+ 2.892	+ 36 5 9.3	47.1	1	− 19.71
5352	O. Arg. S. 12460 . .	7.8	42 41.26	64.3	3	3.188	− 25 4 36.2	69.3	2	19.71
5353	Weisse XII, 722 . .	9.2	42 45.64	64.8	2	3.126	− 12 17 48.2	69.4	2	19.71
5354	Lacaille 5295 . . .	7.2	42 52.34	64.3	2	3.215	− 29 48 52.3	64.8	2	19.71
5355	Anonymous . . .	8.1	42 57.00	64.8	2	3.261	− 37 10 22.0	68.4	2	19.70
5356	Weisse XII, 728 . .	7.5	12 43 9.81	64.9	3	+ 3.126	− 12 16 16.3	68.7	3	− 19.70
5357	Weisse (2) XII, 877 .	8.0	43 17.39	60.3	4	2.988	+ 18 24 59.5	54.6	6	19.70
5358	B. A. C. 4311 . . .	5.8	43 31.01	68.8	2	2.873	+ 38 16 45.7	46.6	6	19.70
5359	Weisse XII, 736 . .	8.9	43 33.37	62.1	5	3.072	+ 0 0 36.2	63.9	2	19.69
5360	Weisse XII, 743 . .	8.5*	44 8.47	67.3	2	3.130	− 12 42 56.1	65.8	2	19.68
5361	Anonymous . . .	8.8	12 44 9.52	64.8	2	+ 3.192	− 25 4 8.5	70.3	2	− 19.68
5362	Lacaille 5301 . . .	6.8	44 11.62	66.7	2	3.222	− 30 19 15.4	67.9	2	19.68
5363	B. A. C. 4313 . . .	6.3	44 15.12	63.0	3	3.279	− 38 55 3.5	67.3	2	19.68
5364	Lacaille 5302 . . .	6.5	44 17.20	66.7	2	3.223	− 30 26 22.2	68.7	2	19.68
5365	Lacaille 5304 . . .	6.5	44 29.39	62.7	3	3.198	− 25 58 36.7	63.4	2	19.68
5366	Weisse XII, 757 . .	7.7	12 44 41.48	61.8	4	+ 3.068	+ 0 50 54.7	63.0	8	− 19.68
5367	Anonymous . . .	. .	44 41.56	69.4	2	3.068	+ 0 57 16.3	58.2	1	19.68
5368	Anonymous . . .	9.0	45 4.49	68.9	2	3.280	− 38 33 0.8	65.3	1	19.67
5369	Weisse XII, 764 . .	9.0	45 17.64	65.5	6	3.067	+ 0 59 31.2	61.7	3	19.67
5370	Lacaille 5311 . . .	7.5	45 21.55	65.4	1	3.282	− 38 37 42.5	65.3	2	19.66
5371	O. Arg. S. 12495 . .	7.5	12 45 44.23	62.9	6	+ 3.220	− 29 15 12.4	64.8	4	− 19.66
5372	38 Virginis	6.0*	46 1.03	64.8	6	3.086	− 2 47 29.2	58.3	2	19.65
5373	Weisse XII, 786 . .	8.4	46 26.18	68.3	2	3.068	+ 0 52 21.1	64.0	3	19.65
5374	Anonymous . . .	7.5	46 30.43	68.4	1	3.287	− 38 34 48.1	64 3	1	19.64
5375	Anonymous . . .	. .	46 41.07	69.3	1	3.289	− 38 43 1.0	71.3	1	19.64
5376	Anonymous, (1st *) .	7.0	12 46 44.18	69.3	2	+ 3.211	− 27 11 51.5	65.3	2	− 19.64
5377	Anonymous, (2d *) .	8.5	46 44.76	69.3	1	3.211	− 27 11 51.5	65.3	2	19.64
5378	Anonymous . . .	8.5	46 59.72	69.3	2	3.290	− 38 44 46.0	69.4	3	19.63
5379	ψ Virginis	4.8	47 4.53	62.0	12	3.114	− 8 46 41.1	58.4	2	19.63
5380	B. A. C. 4331 . . .	6.0	47 11.45	66.3	2	3.330	− 43 23 2.3	68.4	2	19.63
5381	Lacaille 5320 . . .	6.8	12 47 19.43	65.8	2	+ 3.315	− 41 31 48.9	71.3	2	− 19.63
5382	Weisse XII, 803 . .	8.6	47 33.98	62.8	4	3.119	− 9 40 26.4	60.8	2	19.63
5383	O. Arg. S. 12520 . .	6.6	47 58.18	64.5	7	3.228	− 29 18 35.9	64.8	4	19.63
5384	32 Camelopardi, (1st *) .	5.8	48 0.51	62.3	4	0.344	+ 84 10 43.2	64.4	3	19.62
5385	32 Camelopardi, (2d *) .	5.4	48 8.40	62.3	6	0.340	+ 84 10 26.2	63.9	7	19.62
5386	O. Arg. S. 12523 . .	8.3	12 48 11.91	69.1	4	+ 3.212	− 26 39 33.0	67.9	2	− 19.61
5387	Weisse XII, 818 . .	6.8	48 28.76	64.9	5	3.068	+ 0 48 53.4	57.2	5	19.61
5388	Weisse XII, 819 . .	8.8	48 29.30	62.6	4	3.077	− 0 57 33.5	59.8	2	19.61
5389	Weisse XII, 820 . .	7.0	48 29.40	68.6	3	3.086	− 2 47 29.9	63.9	2	19.61
5390	δ Virginis	5.5	48 33.11	60.7	3	3.052	+ 4 9 31.9	67.3	2	19.61

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5391	O. Arg. S. 12529	8.1	12 49 2.58	64.3	2	+ 3.214	− 26 36 37.1	69.0	3	− 19.60
5392	Weisse XII, 834	7.5	49 5.29	65.3	3	3.144	− 14 11 19.8	67.8	2	19.60
5393	O. Arg. S. 12533	7.2	49 13.50	66.7	3	3.215	− 26 37 24.8	69.4	2	19.59
5394	Weisse XII, 835	8.0	49 15.74	67.0	3	3.073	− 0 11 33.3	68.9	2	19.59
5395	B. A. C. 4345	6.7*	49 27.10	64.3	8	2.840	+ 39 4 16.7	56.0	16	19.59
5396	*a* Canum Venaticorum	3.0*	12 49 28.55	53.0	84	+ 2.840	+ 39 4 30.3	54.6	33	− 19.59
5397	O. Arg. S. 12538	8.0	49 43.07	67.3	2	3.185	− 21 24 45.1	70.7	3	19.59
5398	Anonymous	7.6	49 50.49	68.0	4	3.255	− 32 23 48.2	65.4	2	19.58
5399	8 Draconis	6.0*	49 53.22	67.0	3	2.417	+ 66 11 54.8	62.3	3	19.58
5400	Lacaille 5340	7.0	49 59.72	63.8	2	3.250	− 31 32 28.8	70.3	2	19.58
5401	Lacaille 5342	7.0	12 50 18.31	67.4	2	+ 3.301	− 38 9 33.6	67.4	1	− 19.58
5402	Weisse XII, 857	8.2	50 35.44	69.1	5	3.143	− 13 35 14.9	65.3	2	19.57
5403	Anonymous	6.5	50 43.27	68.9	2	3.146	− 14 13 37.6	69.0	3	19.57
5404	Lacaille 5346	7.5	51 7.38	64.7	3	3.306	− 38 20 53.0	68.7	2	19.56
5405	Anonymous	8.5	51 10.06	67.4	2	3.314	− 39 17	. .	.	19.56
5406	Weisse (2) XII, 1019	8.2	12 51 14.16	68.4	2	+ 2.844	+ 37 29 11.8	46.3	2	− 19.56
5407	Lacaille 5347	7.0	51 16.17	66.3	2	3.348	− 42 56 51.0	71.3	4	19.56
5408	Lacaille 5348	7.5	51 21.74	63.1	3	3.238	− 29 14 28.7	63.0	3	19.55
5409	Weisse XII, 878	8.2	51 48.51	62.8	5	3.079	− 1 19 23.3	58.4	2	19.55
5410	Weisse XII, 880	7.5	51 51.11	71.2	2	3.120	− 9 5 1.5	71.3	2	19.54
5411	O. Arg. S. 12564	8.0	12 51 58.18	67.3	2	+ 3.190	− 21 22 13.2	71.9	2	− 19.54
5412	Anonymous	7.8	52 19.93	68.3	2	3.287	− 35 25 29.4	65.3	2	19.53
5413	*k* Virginis	6.0*	52 26.88	68.3	4	3.088	− 3 3 19.7	70.4	2	19.53
5414	O. Arg. S. 12573	7.1	52 43.17	64.3	3	3.202	− 23 9 26.5	69.3	2	19.53
5415	Lalande 24193	8.2	52 43.65	59.4	2	3.069	+ 0 31 34.0	56.3	3	19.53
5416	Anonymous	8.3	12 53 10.	. .	.	+ 2.251	+ 69 27 46.8	71.4	1	− 19.51
5417	46 Virginis	6.5	52 23.53	64.8	2	3.086	− 2 36 52.7	67.9	2	19.51
5418	37 Comæ	5.0*	53 34.24	59.8	2	2.882	+ 31 32 25.8	53.3	4	19.51
5419	Weisse (2) XII, 1066	7.0	53 44.24	62.9	2	2.874	+ 32 32 7.5	67.4	2	19.51
5420	Groombridge 1947	8.0*	53 45.94	71.2	3	2.239	+ 69 31 54.4	71.4	2	19.51
5421	Lacaille 5363	7.0	12 53 59.62	68.3	2	+ 3.324	− 38 51 45.5	67.8	2	− 19.50
5422	Weisse XII, 918	8.3	54 4.66	63.0	4	3.129	− 10 24 3.3	56.4	2	19.50
5423	Lacaille 5364	8.5	54 4.92	62.4	2	3.211	− 23 54 38.3	64.9	2	19.50
5424	O. Arg. S. 12588	7.5	54 10.50	64.6	4	3.253	− 30 4 38.3	67.9	2	19.50
5425	B. A. C. 4363	7.0*	54 22.76	62.4	3	3.060	+ 2 16 31.5	65.3	2	19.49
5426	Weisse XII, 929	8.2	12 54 25.65	60.6	3	+ 2.994	+ 13 55 22.5	55.9	6	− 19.49
5427	9 Draconis	5.2	54 36.93	62.0	3	2.316	+ 67 21 10.4	67.4	3	19.49
5428	78 Ursæ Majoris	5.0*	54 42.80	63.4	3	2.583	+ 57 7 16.7	58.3	4	19.49
5429	Weisse XII, 933	9.0	54 43.22	61.3	2	2.994	+ 13 55 43.1	55.9	2	19.49
5430	Lacaille 5367	6.9	54 47.81	62.4	2	3.237	− 27 31 56.2	65.3	2	29.48

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			h. m. s.			″	° ′ ″			″
5431	Lacaille 5368	6.5	12 54 49.38	62.8	2	+ 3.244	− 28 30 40.6	69.3	2	− 19.48
5432	ε Virginis	5.0	55 12.45	60.9	4	3.006	+ 11 42 44.5	56.8	5	19.48
5433	Lacaille 5371	7.8	55 19.68	66.9	3	3.284	− 33 32 17.3	69.4	2	19.47
5434	Lacaille 5374	7.7	55 46.36	63.4	2	3.250	− 28 54 38.3	70.7	3	19.46
5435	Lalande 24271	7.5	55 48.80	68.3	2	2.819	+ 38 6 4.8	47.4	1	19.46
5436	B. A. C. 4369	7.0	12 56 3.24	66.9	3	+ 3.286	− 33 29 49.0	69.4	2	− 19.46
5437	O. Arg. S. 12615	7.8	56 19.13	64.3	2	3.224	− 25 2 57.3	65.4	2	19.45
5438	Lacaille 5379	7.6	56 24.20	62.4	2	3.215	− 23 45 55.6	70.4	3	19.45
5439	Anonymous	8.4	56 37.08	64.9	5	3.171	− 16 51 58.5	70.4	1	19.45
5440	48 Virginis	6.0*	56 41.72	69.1	4	3.089	− 2 54 32.7	54.4	2	19.44
5441	Anonymous	9.5	12 56 45.81	64.9	2	+ 3.319	− 37 2 24.6	69.9	2	− 19.44
5442	Lacaille 5382	6.0	56 47.65	66.3	2	3.244	− 27 39 5.9	64.7	3	19.44
5443	O. Arg. S. 12620	8.5	56 47.83	64.9	2	3.232	− 25 55 54.9	69.4	2	19.44
5444	Anonymous	9.3	56 48.24	67.3	2	3.159	− 14 54	. .	.	19.44
5445	O. Arg. S. 12626	9.1	57 35.18	67.3	2	3.160	− 14 44	. .	.	19.43
5446	Lacaille 5387	7.5	12 57 35.39	66.4	2	+ 3.248	− 27 45 53.4	67.3	2	− 19.43
5447	O. Arg. S. 12629	8.4	57 36.84	64.8	4	3.173	− 16 55 21.6	65.9	2	19.43
5448	O. Arg. S. 12630	9.4	57 53.37	65.4	2	3.160	− 14 50	. .	.	19.42
5449	Anonymous	7.3	58 2.29	64.3	3	3.301	− 34 21 38.5	71.0	3	19.42
5450	B. A. C. 4378	5.2	58 40.09	63.3	2	3.364	− 40 50 14.0	67.9	2	19.40
5451	Radcliffe 2959	8.4*	12 58 50.76	61.8	2	+ 0.002	+ 83 41 17.8	60.0	5	− 19.40
5452	B. A. C. 4382	6.5*	59 4.04	60.3	3	3.158	− 14 9 58.3	54.4	3	19.39
5453	B. A. C. 4383	5.5	59 7.33	68.3	2	3.312	− 35 6 31.3	66.8	2	19.39
5454	14 Canum Venaticorum	5.0*	59 11.34	68.3	2	2.819	+ 36 32 57.0	46.6	3	19.39
5455	Lacaille 5405	7.5	59 58.77	63.7	7	3.269	− 29 41 6.2	64.8	2	19.37
5456	41 Comæ	5.5	13 0 27.46	46.8	4	+ 2.884	+ 28 22 35.1	68.4	2	− 19.36
5457	Weisse XII, 1036	9.0	0 30.32	66.6	3	2.991	+ 13 4 31.1	67.4	2	19.36
5458	O. Arg. S. 12662	7.7	0 33.55	68.9	2	3.253	− 27 27 19.8	65.3	2	19.36
5459	g Virginis	5.5	0 33.94	60.6	2	3.134	− 9 59 26.2	67.4	2	19.36
5460	Lacaille 5407	6.0	0 35.18	68.8	2	3.321	− 35 28 33.3	65.3	2	19.36
5461	Weisse XII, 1038	9.0	13 0 35.91	64.0	3	+ 2.991	+ 13 1 24.8	56.3	1	− 19.36
5462	Anonymous	9.0	0 42.13	68.9	2	2.992	+ 12 50 1.7	57.3	2	19.36
5463	Weisse XII, 1047	8.8	1 6.25	69.3	2	2.991	+ 12 56 36.8	55.4	2	19.35
5464	O. Arg. S. 12671	7.6	1 8.05	65.4	3	3.222	− 23 4 23.5	69.4	2	19.35
5465	Weisse XII, 1054	8.8	1 18.48	68.9	2	2.992	+ 12 49 0.3	57.3	2	19.34
5466	ψ Hydræ	4.5*	13 1 31.07	57.4	2	+ 3.218	− 22 22 8.0	68.4	2	− 19.34
5467	Weisse XIII, 1063	7.0*	1 45.28	71.4	2	3.035	+ 5 58 47.4	71.3	2	19.33
5468	50 Virginis	6.0*	2 25.85	64.3	2	3.133	− 9 34 51.0	69.6	4	19.32
5469	Weisse XIII, 16	9.0	2 42.11	66.2	5	3.102	− 4 47	. .	.	19.31
5470	θ Virginis	4.5*	2 42.24	63.7	110	3.102	− 4 47 26.9	60.9	12	19.31

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			h. m. s.			s.	° ′ ″			″
5471	O. Arg. S. 12687 . .	8.0	13 2 46.	. .	.	+ 3.226	− 23 6 51.8	67.4	1	− 19.31
5472	Anonymous . . .	9.0	3 6.74	67.0	3	2.988	+ 13 4 3.2	54.5	5	19.30
5473	B. A. C. 4407 . . .	5.5	3 10.96	68.3	2	2.786	+ 38 10 12.7	47.0	3	19.30
5474	B. A. C. 4405 . . .	5.3	3 11.18	66.3	2	3.394	− 41 29 10.4	68.4	2	19.30
5475	Lacaille 5426 . . .	5.5	3 42.63	65.3	2	3.323	− 34 23 14.0	70.3	2	19.29
5476	Anonymous . . .	8.0	13 3 52.18	69.3	2	+ 3.346	− 36 39 6.0	68.3	3	− 19.28
5477	Anonymous . . .	8.0	3 57.11	68.8	2	3.145	− 11 10 50.1	63.4	2	19.28
5478	Lacaille 5428 . . .	6.3	4 2.85	66.3	2	3.250	− 25 48 22.1	67.4	2	19.28
5479	Weisse XIII, 44 . .	8.8	4 18.36	69.0	3	2.987	+ 12 57 32.8	56.4	2	19.27
5480	53 Virginis	5.0	4 36.79	64.0	5	3.175	− 15 26 34.5	67.9	2	19.26
5481	Anonymous . . .	9.0	13 4 39.34	61.4	1	+ 2.986	+ 13 5 10.0	68.1	3	− 19.26
5482	Lacaille 5440 . . .	7.7	5 18.14	62.4	2	3.275	− 28 21 20.3	69.3	2	19.25
5483	β Comæ	4.5*	5 20.18	60.4	2	2.867	+ 28 35 19.7	61.5	7	19.25
5484	B. A. C. 4423 . . .	6.0	5 34.86	65.4	2	2.990	+ 12 18 7.0	58.0	6	19.24
5485	Anonymous . . .	8.0	5 52.97	67.3	2	3.339	− 35 12 6.5	69.4	2	19.23
5486	Weisse XIII, 81 . .	7.8	13 6 8.14	67.3	2	+ 3.090	− 2 45 1.6	65.3	2	− 19.23
5487	Weisse XIII, 87 . .	8.5	6 30.88	65.9	2	3.145	− 10 48 36.0	63.3	3	19.22
5488	B. A. C. 4431 . . .	6.5	6 49.65	45.4	1	3.057	+ 2 12 3.9	68.9	2	19.21
5489	Lacaille 5454 . . .	6.7	6 52.89	65.9	2	3.240	− 23 32 30.9	65.9	2	19.21
5490	Lalande 24579 . . .	6.0	7 8.63	68.4	2	2.774	+ 37 37 51.7	47.4	2	19.20
5491	Lacaille 5457 . . .	6.5	13 7 17.99	68.8	2	+ 3.349	− 35 37 43.1	68.7	3	− 19.20
5492	O. Arg. S. 12733 . .	8.0	7 21.50	67.4	2	3.291	− 29 26 18.1	70.0	3	19.20
5493	B. A. C. 4433 . . .	5.0*	7 21.66	65.4	2	2.736	+ 40 53 42.8	57.4	4	19.20
5494	Weisse XIII, 104 . .	6.5	7 32.14	61.4	2	2.989	+ 12 4 34.6	60.7	3	19.19
5495	Σ Cat. Gen. 1510, (1st *) .	7.5	7 36.26	63.4	2	3.145	− 10 36 54.8	69.0	38	19.19
5496	Σ Cat. Gen. 1510, (2d *) .	8.3	13 7 39.56	63.4	2	+ 3.145	− 10 36 19.9	69.0	3	− 19.19
5497	Lalande 24598 . . .	9.2	8 20.03	65.4	2	3.106	− 4 53 29.5	67.4	2	19.17
5498	57 Virginis	4.5	8 24.99	57.4	2	3.209	− 19 11 51.5	68.4	2	19.17
5499	Lalande 24615 . . .	6.8	8 40.54	69.3	2	2.783	+ 36 11 14.6	47.4	1	19.16
5500	Lalande 24610 . . .	7.9	8 48.21	65.4	3	3.106	− 4 55 33.5	66.7	3	19.16
5501	B. A. C. 4437 . . .	5.0	13 9 7.	. .	.	+ 3.309	− 30 45 50.2	71.3	2	− 19.15
5502	Lacaille 5467 . . .	7.4	9 8.82	62.4	2	3.300	− 29 51 5.3	66.9	2	19.15
5503	Lalande 24624 . . .	7.4	9 24.75	65.4	2	3.106	− 4 49 51.1	67.9	2	19.14
5504	Weisse XIII, 145 . .	8.2	9 46.28	69.3	2	3.052	− 2 55 38.6	65.0	3	19.13
5505	e Virginis	6.0	9 50.05	45.4	1	3.000	+ 10 9 25.3	68.5	2	19.13
5506	58 Virginis	6.5	13 10 7.26	61.1	6	+ 3.142	− 9 48 27.1	68.4	2	− 19.12
5507	Lacaille 5478 . . .	7.5	10 42.04	67.3	2	3.284	− 27 35 27.3	69.3	2	19.11
5508	Anonymous . . .	8.0	10 46.94	68.9	2	2.806	+ 33 13 51.3	47.4	1	19.11
5509	Weisse XIII, 169 . .	8.0	11 2.06	69.3	2	3.108	− 5 3 0.0	68.3	2	19.10
5510	61 Virginis	4.5	11 5.05	62.3	2	3.201	− 17 32 1.0	67.4	2	19.10

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			h. m. s.			"	° ′ "			"
5511	γ Hydræ	4.5	13 11 18.97	45.4	4	+ 3.241	− 22 25 54.4	68.4	2	− 19.09
5512	Weisse XIII, 181	9.0	11 42.78	65.4	2	3.085	− 1 47 33.3	58.6	5	19.08
5513	B. A. C. 4455	7.0	12 22.03	65.9	2	3.152	− 10 56 5.8	68.4	2	19.06
5514	O. Arg. S. 12800	8.5	12 41.	. .	.	3.256	− 23 46 17.1	68.7	2	19.06
5515	O. Arg. S. 12802	7.5	12 48.58	66.8	2	3.282	− 26 40 21.8	70.8	2	19.05
5516	62 Virginis	6.7	13 12 59.01	70.4	2	+ 3.150	− 10 34 4.1	69.4	2	− 19.05
5517	Weisse (2) XIII, 241	9.5	13 3.03	71.4	1	2.769	+ 35 52 30.1	71.4	3	19.04
5518	Weisse XIII, 208	9.0	13 6.81	60.4	2	2.992	+ 10 44 14.4	58.0	6	19.04
5519	O. Arg. S. 12808	7.5	13 9.08	65.4	3	3.250	− 23 1 36.1	67.9	2	19.04
5520	Lacaille 5499	6.8	13 27.12	62.4	2	3.257	− 23 44 5.8	68.9	2	19.03
5521	O. Arg. S. 12811	6.0	13 13 27.72	68.9	2	+ 3.239	− 21 38 48.6	67.8	2	− 19.03
5522	B. A. C. 4462	7.0	13 29.48	61.4	2	3.031	+ 5 33 47.2	67.4	2	19.03
5523	Anonymous	8.3	13 36.33	68.8	2	2.975	+ 12 59 3.3	56.4	1	19.03
5524	Weisse XIII, 218	9.5	13 50.75	65.9	2	3.064	+ 1 5	. .	.	19.02
5525	Lacaille 5503	7.2	13 55.33	68.8	2	3.373	− 35 22 35.7	65.4	4	19.02
5526	Lacaille 5502	7.0	13 13 57.98	64.4	4	+ 3.405	− 38 7 2.9	70.9	2	− 19.02
5527	Weisse XIII, 223	7.2	14 13.08	65.4	2	3.155	− 11 0 41.6	67.9	2	19.01
5528	Weisse XIII, 225	9.0	14 15.90	62.9	2	3.097	− 3 21 58.1	66.4	1	19.01
5529	Weisse (2) XIII, 265	7.7	14 20.37	71.5	1	2.663	+ 43 50 59.8	71.4	2	19.01
5530	B. A. C. 4468	6.0*	14 28.28	60.3	2	2.958	+ 14 53 5.0	54.4	3	19.01
5531	Lacaille 5510	7.1	13 14 48.58	63.8	4	+ 3.273	− 25 6 25.0	66.8	2	− 19.00
5532	Weisse (2) XIII, 274	7.0	14 49.55	68.3	2	2.730	+ 38 35 31.0	46.7	5	19.00
5533	Weisse XIII, 235	8.0	14 56.59	63.4	3	3.102	− 3 55 41.4	66.4	1	18.99
5534	Lacaille 5514	7.0	15 17.62	65.2	6	3.346	− 32 27 23.1	67.9	2	18.98
5535	65 Virginis	6.0	16 3.76	65.4	2	3.104	− 4 11 27.3	66.8	2	18.96
5536	Lalande 24816	7.2	13 16 35.42	64.3	2	+ 3.271	− 24 23 52.3	64.4	2	− 18.95
5537	Lalande 24841	7.0	16 57.59	48.3	1	2.700	+ 40 9 39.2	68.4	2	18.94
5538	Weisse XIII, 268	8.2	17 11.17	62.9	2	3.069	+ 0 24 59.1	59.4	5	18.93
5539	B. A. C. 4479	6.5	17 32.89	64.8	2	2.728	+ 37 45 56.3	57.4	4	18.92
5540	α Virginis	1.3	17 49.32	56.5	317	3.154	− 10 25 45.8	53.7	60	18.91
5541	ζ Ursæ Majoris	4.0	13 18 17.18	68.3	2	+ 2.417	+ 55 39 26.5	67.1	3	− 18.90
5542	B. A. C. 4486	6.5	18 18.10	68.3	2	2.417	+ 55 39 14.0	68.4	2	18.90
5543	Weisse XIII, 294	7.3	18 54.68	61.9	4	3.095	− 2 55 53.2	58.6	4	18.88
5544	Anonymous	8.5	19 4.54	64.6	4	3.387	− 34 53 23.9	68.9	3	18.87
5545	ι Virginis	5.8	19 19.65	71.4	2	3.168	− 11 58 39.9	68.3	2	18.87
5546	Weisse XIII, 303	9.6	13 19 26.33	65.3	2	+ 3.053	+ 2 27 50.2	67.4	2	− 18.86
5547	Weisse XIII, 304	8.2	19 29.11	64.7	3	3.116	− 5 34 21.5	68.9	2	18.86
5548	g Ursæ Majoris	5.2	19 37.00	68.3	2	2.404	+ 55 43 5.4	64.9	2	18.86
5549	Weisse XIII, 312	8.6	19 52.26	63.8	2	3.056	+ 1 57 37.8	68.9	2	18.85
5550	Anonymous	7.8	19 59.00	67.6	3	3.391	− 34 56 29.9	65.4	2	18.85

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			h. m. s.			s.	° ′ ″			″
5551	69 Virginis	5.5	13 19 59.40	64.3	2	+ 3.197	− 15 14 47.4	69.4	2	− 18.85
5552	Lacaille 5553 . . .	6.0	20 18.86	65.8	2	3.293	− 25 40 28.4	67.9	2	18.84
5553	Weisse XIII, 318 . .	9.0	20 19.28	67.7	3	+ 3.069	+ 0 21 5.1	63.9	2	18.84
5554	B. A. C. 4498 . . .	6.0*	20 24.45	62.0	3	− 2.749	+ 85 29 11.8	66.9	2	18.83
5555	Anonymous. . . .	8.9	20 41.15	65.1	3	+ 3.369	− 32 42 37.7	69.4	1	18.82
5556	Lacaille 5559 . . .	7.3	13 20 48.14	62.4	2	+ 3.304	− 26 40 22.0	69.4	2	− 18.82
5557	Weisse XIII, 324 . .	9.0	20 52.90	67.1	3	3.069	+ 0 24 39.0	62.4	2	18.82
5558	B. A. C. 4496 . . .	6.8	21 5.91	63.4	3	3.073	− 0 5 52.8	69.3	3	18.81
5559	Weisse XIII, 331 . .	7.5	21 9.71	65.9	2	2.998	+ 9 5 4.1	56.4	4	18.81
5560	Anonymous . . .	7.0	21 24.99	64.2	2	3.396	− 34 50 32.9	66.3	2	18.80
5561	Weisse XIII, 334 . .	8.6	13 21 26.73	68.4	2	+ 3.011	+ 7 25 46.7	56.3	3	− 18.80
5562	Lacaille 5563 . . .	7.6	21 45.99	62.4	2	3.306	− 26 39 46.1	69.4	2	18.79
5563	Weisse (2) XIII, 419 .	8.7	21 52.49	62.0	3	2.824	+ 27 56 25.2	68.9	2	18.79
5564	71 Virginis	6.0	22 16.88	64.3	3	2.976	+ 11 32 43.8	66.8	2	18.78
5565	Weisse XIII, 354 . .	9.0	22 25.63	65.3	5	3.052	+ 2 26 5.3	66.3	2	18.77
5566	Weisse (2) XIII, 437 .	8.2	13 22 46.48	68.8	2	+ 2.716	+ 37 2 11.5	46.3	1	− 18.76
5567	O. Arg. S. 12908 . .	7.5	22 49.60	66.8	2	3.272	− 22 55 25.3	69.4	2	18.76
5568	O. Arg. N. 13647 . .	9.0	22 50.71	69.4	1	2.184	+ 61 57 2.1	62.3	1	18.76
5569	B. A. C. 4507 . . .	5.0	22 56.26	65.4	3	3.451	− 38 41 0.8	70.4	2	18.76
5570	Weisse XIII, 365 . .	6.5	22 58.91	63.2	5	3.006	+ 7 54 11.6	58.6	5	18.76
5571	Weisse XIII, 370 . .	8.0	13 23 21.86	59.3	1	+ 3.004	+ 8 8 21.9	56.9	2	− 18.74
5572	Lalande 24977 . . .	7.5	23 24.09	68.9	2	3.293	− 24 55 57.1	66.4	2	18.74
5573	Lamont 4065 . . .	8.4	23 30.81	68.4	2	3.085	− 1 33 3.3	68.4	4	18.74
5574	Anonymous . . .	9.4	23 43.92	66.4	4	3.400	− 34 28	. .	.	18.73
5575	Anonymous . . .	9.2	23 44.37	68.4	2	2.998	+ 8 48 11.2	57.4	2	18.73
5576	Anonymous . . .	8.7	13 23 46.39	64.4	1	+ 3.400	− 34 29	. .	.	− 18.73
5577	Lacaille 5573 . . .	6.2	23 46.91	64.4	4	3.320	− 27 23 22.9	68.4	1	18.73
5578	O. Arg. S. 12920 . .	7.3	23 55.94	64.3	3	3.352	− 30 19 55.7	67.9	2	18.73
5579	Lamont 4068 . . .	7.5	23 58.03	66.0	3	3.085	− 1 32 20.6	69.4	4	18.72
5580	Weisse XIII, 392 . .	9.0	24 24.26	63.3	3	2.998	+ 8 46 42.1	57.4	1	18.71
5581	Lamont 4071 . . .	7.0	13 24 34.60	68.4	1	+ 3.086	− 1 36 17.1	67.4	3	− 18.71
5582	l^2 Virginis	5.0	24 41.35	66.6	3	3.119	− 5 31 54.7	61.0	3	18.70
5583	Lacaille 5580 . . .	6.0	24 48.64	63.4	2	3.329	− 27 58 13.4	69.8	2	18.70
5584	Lacaille 5582 . . .	7.6	25 9.21	62.9	2	3.307	− 25 51 56.5	68.3	2	18.69
5585	B. A. C. 4519 . . .	6.0*	25 11.06	60.9	2	2.622	+ 42 49 37.7	53.7	6	18.69
5586	Weisse XIII, 413 . .	7.6	13 25 18.04	63.7	3	+ 3.012	+ 7 4 19.4	55.4	2	− 18.68
5587	75 Virginis	5.0	25 23.14	64.8	2	3.199	− 14 38 30.1	65.4	2	18.68
5588	*h* Virginis	5.4	25 35.88	59.0	7	3.153	− 9 26 31.7	64.4	2	18.67
5589	Anonymous . . .	8.0	25 44.68	65.4	2	3.086	− 1 36	. .	.	18.67
5590	B. A. C. 4527 . . .	5.4	25 47.77	66.4	2	0.468	+ 79 22 3.2	67.9	2	18.67

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			h. m. s.			"	° ' "			"
5591	Weisse XIII, 426	6.0	13 26 5.76	69.3	2	+ 3.131	− 6 54 7.7	66.9	2	− 18.66
5592	Anonymous	8.0	26 59.63	67.3	2	3.443	− 36 50 11.5	68.8	2	18.63
5593	O. Arg. S. 12959	8.9	27 2.07	71.4	2	3.320	− 26 34 17.2	69.1	4	18.63
5594	Anonymous	9.2	27 12.47	69.4	1	3.419	− 34 55 49.1	65.4	3	18.62
5595	ζ Virginis	3.4*	27 33.64	63.8	89	3.071	+ 0 7 16.0	63.8	11	18.61
5596	Weisse XIII, 458	8.5	13 27 41.34	65.3	2	+ 3.023	+ 5 37 52.4	60.8	4	− 18.61
5597	Anonymous	7.6	27 50.37	65.2	5	3.380	− 31 39 18.7	68.8	2	18.60
5598	Weisse XIII, 461	8.5	27 55.38	65.4	2	3.009	+ 7 10 16.7	58.9	6	18.60
5599	Weisse XIII, 472	8.4	28 13.54	64.3	3	3.008	+ 7 13 39.1	60.7	7	18.59
5600	B. A. C. 4536	5.5*	28 32.41	50.9	5	+ 2.680	+ 37 54 2.7	56.1	8	18.58
5601	(* 48) Washington	8.5	13 28 40.37	62.4	2	− 0.048	+ 80 48 55.0	58.7	3	− 18.57
5602	Anonymous	9.0	28 47.09	65.9	2	+ 3.008	+ 7 16 39.1	66.4	1	18.57
5603	Anonymous	9.0	28 50.29	71.4	2	3.384	− 31 41 11.0	68.9	2	18.57
5604	B. A. C. 4541, (1st *)	7.3	29 2.65	62.4	2	3.317	− 25 46 45.7	64.7	3	18.56
5605	B. A. C. 4541, (2d *)	6.5	29 2.82	62.4	2	3.317	− 25 46 56.3	65.4	2	18.56
5606	Anonymous	7.8	13 29 27.27	68.4	2	+ 3.440	− 35 51 23.4	67.3	2	− 18.55
5607	Anonymous	7.8	29 28.90	65.4	4	3.287	− 22 53 51.8	67.4	2	18.55
5608	Lacaille 5613	7.2	29 33.16	63.3	2	3.420	− 34 19 57.0	66.9	2	18.54
5609	Lacaille 5615	7.2	29 46.93	63.3	2	3.421	− 34 20 53.4	66.9	2	18.54
5610	Weisse XIII, 501	8.5	30 6.72	65.3	2	3.109	− 4 5 15.9	57.7	3	18.53
5611	O. Arg. S. 13003	7.5*	13 30 30.58	65.4	2	+ 3.359	− 29 7 29.0	67.9	2	− 18.51
5612	B. A. C. 4547	7.0	30 32.89	62.2	6	3.095	− 2 31 13.5	58.4	6	18.51
5613	O. Arg. S. 13005	8.0	30 32.96	67.3	2	3.290	− 22 58 39.2	67.4	2	18.51
5614	B. A. C. 4548	6.0	30 50.49	66.4	2	3.356	− 28 50 40.6	68.4	2	18.50
5615	Lacaille 5621	6.0	30 51.90	65.8	2	3.400	− 32 23 47.5	70.4	2	18.50
5616	Anonymous	8.5	13 30 55.21	65.3	1	+ 3.471	− 37 41	. .	.	− 18.50
5617	Anonymous	7.4	30 56.24	64.3	2	3.330	− 26 32 47.6	66.4	2	18.50
5618	25 Canum Venaticorum	6.0	31 14.21	68.4	2	2.681	+ 37 0 27.0	47.3	2	18.49
5619	Lacaille 5626	7.4	31 17.34	62.4	2	3.304	− 24 8 54.3	67.4	2	18.49
5620	B. A. C. 4553	7.5*	31 23.72	60.4	2	2.849	+ 23 14 40.6	54.4	4	18.48
5621	Anonymous	8.5	13 31 29.95	65.4	2	+ 3.374	− 30 10 21.1	70.4	3	− 18.48
5622	Lacaille 5625	8.0	31 35.71	68.9	2	3.498	− 39 20 15.1	67.4	2	18.47
5623	Anonymous	8.6	32 3.85	63.9	5	0.806	+ 77 0 42.2	68.3	2	18.46
5624	Anonymous	8.0	32 4.34	64.8	2	3.332	− 26 26 19.6	69.9	2	18.46
5625	Lacaille 5635	6.5	32 19.83	66.3	2	3.338	− 26 51 54.4	71.1	4	18.45
5626	Lacaille 5636	7.0	13 32 28.90	63.3	2	+ 3.422	− 33 38 48.7	69.9	2	− 18.45
5627	O. Arg. N. 13847	7.4	32 53.15	63.8	4	0.740	+ 77 15 42.3	66.3	2	18.43
5628	Lacaille 5639	7.3	32 59.63	63.4	3	3.425	− 33 44 51.2	67.9	2	18.43
5629	Weisse XIII, 563	8.5	33 8.55	59.3	3	3.114	− 4 32 7.5	55.4	2	18.42
5630	Anonymous	8.0	33 32.46	70.9	5	3.186	− 12 9 27.4	67.4	1	18.41

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5631	B. A. C. 4560 . .	7.0	13 33 32.52	61.3	3	+ 3.186	− 12 4 18.5	64.9	2	− 18.41
5632	Weisse XIII, 569 . .	8.0	33 35.:	. .	.	3.146	− 7 57 26.4	67.4	1	18.41
5633	Lacaille 5646 . . .	6.7	33 39.06	62.4	2	3.329	− 25 49 16.2	71.3	2	18.40
5634	Lacaille 5645 . . .	6.0	33 44.86	62.8	2	3.416	− 32 53 17.8	70.4	2	18.40
5635	*m* Virginis	5.4	34 16.08	55.8	20	3.147	− 7 59 42.3	61.9	4	18.38
5636	Lacaille 5649, (1st *) .	7.0*	13 34 18.91	64.6	5	+ 3.423	− 33 16 17.6	71.9	2	− 18.38
5637	Lacaille 5649, (2d *) .	. .	34 18.93	64.6	5	3.423	− 33 16 20.9	71.4	1	18.38
5638	2 Bootis	6.0*	34 24.92	60.4	3	2.842	+ 23 12 23.6	54.4	5	18.38
5639	Weisse XIII, 583 . .	7.7	34 27.84	68.4	3	3.136	− 6 50 45.5	66.9	2	18.38
5640	Anonymous . . .	9.0	34 49.27	64.6	3	3.486	− 37 37 35.0	70.9	2	18.36
5641	Lacaille 5655 . . .	5.8	13 35 6.17	69.3	2	+ 3.377	− 29 28 28.5	67.8	2	− 18.35
5642	*o* Virginis	6.0*	36 1.55	62.9	2	3.032	+ 4 14 52.0	65.3	2	18.32
5643	O. Arg. S. 13085 . .	8.2	36 3.70	65.1	4	3.361	− 27 57 31.2	67.4	2	18.32
5644	Anonymous . . .	8.4	36 6.93	68.9	2	3.466	− 35 51 10.3	67.3	2	18.32
5645	Weisse (2) XIII, 749 .	5.8	36 28.86	68.8	2	+ 2.679	+ 35 41 44.9	47.4	2	18.30
5646	Radcliffe 3077 . . .	7.2*	13 36 40.70	60.2	2	− 0.053	+ 80 3 50.3	63.4	6	− 18.30
5647	Weisse XIII, 630 . .	8.5	36 50.75	69.3	1	+ 3.191	− 12 14 24.6	69.9	2	18.29
5648	Anonymous . . .	9.0	36 51.51	60.3	2	2.842	+ 22 43 26.1	68.4	2	18.29
5649	83 Virginis	5.5	36 56.91	65.3	2	3.224	− 15 28 24.3	69.4	2	18.29
5650	Lacaille 5663 . . .	6.3	36 58.55	63.4	4	3.326	− 24 47 40.3	65.4	2	18.29
5651	Weisse (2) XIII, 777 .	8.0*	13 37 21.19	49.3	1	+ 2.843	+ 22 31 26.7	68.4	2	− 18.27
5652	Lacaille 5665 . . .	6.4	37 21.87	63.0	3	3.461	− 35 13 9.8	66.3	2	18.27
5653	B. A. C. 4578 . . .	7.0*	37 36.93	45.4	1	3.139	− 6 55 46.5	66.9	2	18.26
5654	Weisse (2) XIII, 784 .	8.8	37 38.53	62.4	5	2.803	+ 25 59 22.9	66.9	2	18.26
5655	Weisse (2) XIII, 782 .	8.5*	37 41.71	49.3	1	2.842	+ 22 34 29.8	68.4	2	18.26
5656	*i* Centauri	5.2	13 37 44.32	63.7	3	+ 3.422	− 32 20 5.0	68.4	1	− 18.26
5657	B. A. C. 4581 . . .	5.9	37 48.52	63.4	2	3.336	− 25 24 41.6	68.9	2	18.26
5658	85 Virginis	6.0	38 3.03	61.1	5	3.221	− 15 3 43.7	69.8	2	18.25
5659	Anonymous . . .	8.3	38 5.13	64.9	2	3.453	− 34 28 8.5	69.4	2	18.25
5660	Weisse XIII, 651 . .	7.5	38 9.98	65.9	2	3.187	− 11 40 51.9	67.4	2	18.24
5661	Anonymous . . .	8.0	13 38 22.16	68.4	2	+ 2.648	+ 37 17 58.5	46.4	1	− 18.24
5662	Weisse XIII, 654 . .	8.2	38 22.30	59.3	2	3.193	− 12 15 39.7	69.9	2	18.24
5663	86 Virginis	5.9	38 28.96	58.5	16	3.188	− 11 43 24.5	63.4	1	18.23
5664	Anonymous . . .	9.0	38 39.84	71.4	1	2.916	+ 15 38 48.7	71.4	2	18.22
5665	Weisse (2) XIII, 814 .	9.0	38 45.54	49.3	1	2.841	+ 22 29 21.9	49.3	1	18.22
5666	B. A. C. 4586 . . .	5.8	13 38 47.38	68.4	2	+ 3.471	− 35 32 57.7	64.3	1	− 18.22
5667	Weisse XIII, 674 . .	9.0	39 54.25	61.3	2	3.194	− 12 12 2.1	67.4	2	18.18
5668	Weisse XIII, 676 . .	8.2	39 59.55	68.4	2	3.149	− 7 47 58.7	65.4	1	18.18
5669	Anonymous . . .	7.9	40 0.91	66.4	2	3.507	− 37 33 39.6	71.4	2	18.18
5670	B. A. C. 4593 . . .	7.0*	40 7.	. .	.	3.132	− 6 0 12.5	71.4	1	18.17

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			h. m. s.			″	° ′ ″			″
5671	3 Bootis	5.0	13 40 13.20	61.3	3	+ 2.791	+ 26 24 21.0	55.0	6	− 18.17
5672	B. A. C. 4595	6.0	40 15.19	47.5	2	2.610	+ 39 12 21.8	70.0	2	18.17
5673	O. Arg. S. 13149	8.0	40 25.41	65.9	4	3.400	− 30 2 56.1	69.7	3	18.16
5674	Lacaille 5680	6.6	40 29.52	63.3	3	3.491	− 36 25 37.9	69.8	2	18.16
5675	τ Bootis	5.0*	40 36.53	61.5	2	2.886	+ 18 9 23.3	67.4	2	18.15
5676	Weisse XIII, 694	7.5	13 40 41.72	67.3	2	+ 3.145	− 7 19 14.8	70.9	2	− 18.15
5677	Lacaille 5682	5.8	40 51.74	69.3	3	3.471	− 34 59 52.9	68.4	2	18.14
5678	Weisse (2) XIII, 854	8.5*	40 57.50	63.8	2	2.688	+ 34 0 31.8	58.3	1	18.14
5679	n Virginis	7.0	40 58.23	45.4	1	3.133	− 6 8 13.6	70.5	1	18.14
5680	O. Arg. S. 13156	6.7	41 1.56	64.4	4	3.402	− 30 0 41.5	65.9	2	18.14
5681	Lacaille 5686	7.7	13 41 8.14	62.4	2	+ 3.371	− 27 39 58.7	67.3	2	− 18.13
5682	O. Arg. S. 13159	7.5*	41 16.	. .	.	3.281	− 20 2 56.9	62.4	2	18.13
5683	O. Arg. S. 13158	7.7	41 16.56	65.3	2	3.303	− 22 1 29.8	69.4	2	18.13
5684	g Centauri	5.2	41 20.64	63.7	3	3.454	− 33 45 0.6	67.4	2	18.13
5685	84 Ursæ Majoris	6.0*	41 21.85	60.4	2	2.251	+ 55 7 59.4	53.3	3	18.13
5686	Weisse (2) XIII, 866	7.0	13 41 26.10	66.4	3	+ 2.615	+ 38 35 37.3	48.4	1	− 18.12
5687	Weisse XIII, 708	8.2	41 28.02	65.3	2	3.147	− 7 29 24.3	70.9	2	18.12
5688	Anonymous	8.4	41 30.95	68.9	2	3.487	− 35 54 29.3	67.9	2	18.12
5689	O. Arg. S. 13167	7.4	41 59.78	64.4	2	3.372	− 27 29 16.6	69.1	3	18.10
5690	(* 50), Washington	9.4	42 0.06	61.4	2	0.276	+ 78 21 56.6	59.4	2	18.10
5691	Anonymous	. .	13 42 0.62	49.3	2	+ 2.831	+ 22 42 56.1	61.1	3	− 18.10
5692	η Ursæ Majoris	2.0*	42 1.38	48.3	150	2.386	+ 50 0 47.4	50.9	66	18.10
5693	O. Arg. S. 13169	8.7	42 6.20	64.4	2	3.372	− 27 29 11.4	71.4	1	18.10
5694	B. A. C. 4614	6.0	42 6.55	65.9	2	0.171	+ 78 45 56.5	69.0	2	18.10
5695	89 Virginis	5.5*	42 16.22	61.7	18	3.253	− 17 26 7.3	58.4	2	18.09
5696	Weisse (2) XIII, 891	5.9	13 42 19.56	63.0	3	+ 2.713	+ 31 53 13.1	69.4	2	− 18.09
5697	Lacaille 5699	6.5	42 21.56	65.8	2	3.410	− 30 22 9.6	67.4	1	18.09
5698	Weisse (2) XIII, 894	9.0	42 28.31	69.0	3	2.827	+ 22 58 56.6	49.3	1	18.08
5699	B. A. C. 4613	6.8	42 33.15	68.9	2	3.285	− 20 10	. .	.	18.08
5700	Anonymous	7.2	42 34.28	65.4	4	3.515	− 37 26 23.1	72.4	1	18.08
5701	Weisse (2) XIII, 900	7.5	13 42 34.38	59.4	2	+ 2.570	+ 40 56 39.8	70.9	2	− 18.08
5702	Weisse (2) XIII, 899	8.0	42 42.87	68.3	4	2.877	+ 18 34 36.6	71.4	1	18.08
5703	υ Bootis	4.0*	42 43.60	53.7	4	2.900	+ 16 29 37.1	53.4	3	18.07
5704	O. Arg. S. 13177	8.0	42 50.71	69.3	2	3.375	− 27 36 40.8	69.3	3	18.07
5705	Weisse XIII, 731	7.3	42 51.84	68.2	3	3.200	− 12 24 48.9	67.4	1	18.07
5706	O. Arg. S. 13182	8.2	13 43 4.30	69.3	2	+ 3.375	− 27 33 46.8	69.7	3	− 18.06
5707	e Bootis	5.5	43 5.58	66.5	3	2.838	+ 21 57 38.1	67.3	2	18.06
5708	Weisse (2) XIII, 910	8.5	43 7.47	63.9	2	2.673	+ 34 26 23.9	71.5	1	18.06
5709	Weisse XIII, 737	8.5	43 16.12	59.3	2	2.925	+ 14 11 0.5	56.4	4	18.05
5710	B. A. C. 4620	6.0	43 25.81	63.3	3	3.492	− 35 44 2.4	68.9	2	18.05

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5711	Anonymous	9.0	13 43 37.08	64.4	2	+ 0.355	+ 77 52	. .	.	− 18.04
5712	Lacaille 5710	6.7	43 38.16	62.4	2	3.328	− 23 41 2.1	64.3	2	18.04
5713	Weisse (2) XIII, 930	6.8	43 38.84	68.9	2	2.626	+ 37 19 42.1	46.4	2	18.04
5714	Lalande 25494	7.5	43 44.09	65.9	2	2.836	+ 21 57 5.8	71.9	2	18.04
5715	Anonymous	. .	43 44.39	49.3	2	2.828	+ 22 39 41.3	49.3	2	18.04
5716	k Centauri, (1st *)	6.0	13 43 45.37	63.7	3	+ 3.442	− 32 17 50.4	72.0	2	− 18.04
5717	k Centauri, (2d *)	7.0	43 46.06	63.4	2	3.442	− 32 17 53.2	72.0	2	18.03
5718	Piazzi XIII, 220	7.0	43 47.01	65.9	2	2.836	+ 21 58 22.9	72.4	1	18.03
5719	Anonymous	8.5	44 0.92	64.7	3	3.529	− 37 55 27.9	68.3	1	18.03
5720	Rumker 4483	8.4	44 4.00	66.4	2	2.944	+ 12 16 30.3	68.4	1	18.02
5721	B. A. C. 4627	7.0*	13 44 53.61	60.4	2	+ 2.651	+ 35 28 2.5	53.3	3	− 17.99
5722	Anonymous	7.3	45 9.12	64.9	2	3.392	− 28 23	. .	.	17.98
5723	Lacaille 5724	7.0*	45 16.16	63.4	2	3.528	− 37 34 20.7	68.1	3	17.98
5724	B. A. C. 4631	6.0	45 22.46	63.3	2	3.487	− 34 58 16.7	67.4	2	17.97
5725	Weisse (2) XIII, 976	7.5	45 24.18	68.9	2	2.601	+ 38 24 46.0	46.4	1	17.97
5726	B. A. C. 4632	5.8	13 45 36.80	68.5	2	+ 2.654	+ 35 8 22.8	47.4	1	− 17.96
5727	Weisse (2) XIII, 978	9.0	45 37.34	63.9	2	2.807	+ 24 1 0.1	67.9	2	17.96
5728	Lacaille 5729	5.6	45 44.74	64.2	5	3.483	− 34 37 12.2	68.0	2	17.96
5729	Weisse (2) XIII, 984	8.0	45 46.32	65.4	2	2.633	+ 36 24 32.5	63.4	4	17.96
5730	O. Arg. S. 13215	7.0	45 48.98	65.2	5	3.363	− 26 0 54.3	69.9	2	17.96
5731	Weisse (2) XIII, 994	8.1	13 46 17.58	63.9	4	+ 2.805	+ 24 1 34.8	69.9	2	− 17.94
5732	Lacaille 5739	6.5*	46 19.35	66.9	4	3.391	− 28 3 6.0	69.4	2	17.94
5733	Weisse (2) XIII, 997	8.0	46 20.96	59.3	2	2.631	+ 36 22 20.3	64.9	2	17.93
5734	B. A. C. 4636	6.3	46 21.63	62.4	2	3.389	− 27 52 34.1	69.5	2	17.93
5735	Rumker 4501	7.5	46 26.28	63.3	2	2.929	+ 13 26 4.7	66.9	2	17.93
5736	Weisse XIII, 785	8.5	13 46 30.28	63.3	2	+ 2.968	+ 9 49 12.3	67.4	2	− 17.93
5737	Lacaille 5743	6.5	46 30.42	63.4	2	3.475	− 33 54 18.1	70.8	2	17.93
5738	Anonymous	7.3	46 32.10	68.9	2	1.682	+ 66 40 25.1	62.3	1	17.93
5739	Anonymous	9.2	46 34.43	68.9	4	0.288	+ 77 50 53.7	55.3	2	17.93
5740	B. A. C. 4640	6.5	46 49.23	60.4	3	2.734	+ 29 20 17.2	54.4	4	17.92
5741	Weisse XIII, 794	8.8	13 46 53.96	63.3	2	+ 2.928	+ 13 22 25.9	62.4	1	− 17.91
5742	Weisse XIII, 797	7.7	47 3.29	68.9	2	2.956	+ 10 55 33.3	58.4	2	17.90
5743	i Draconis	7.2	47 20.67	63.1	3	1.753	+ 65 24 56.2	61.4	3	17.90
5744	Weisse XIII, 808	8.2	47 42.42	59.3	2	3.198	− 11 45 33.9	56.3	2	17.88
5745	Lacaille 5754	6.7	47 52.91	64.1	3	3.421	− 29 53 22.1	66.4	2	17.87
5746	Anonymous	8.0	13 47 55.68	65.4	3	+ 3.546	− 37 58 27.4	72.4	2	− 17.87
5747	η Bootis	3.0*	48 1.15	50.3	237	2.862	+ 19 6 6.5	52.8	54	17.87
5748	Weisse XIII, 813	8.0	48 2.90	59.4	2	3.196	− 11 32 3.4	56.3	2	17.87
5749	Lacaille 5758	6.9	48 23.73	64.8	8	3.542	− 37 37 52.3	67.9	2	17.85
5750	Anonymous	7.0	48 29.	. .	.	3.543	− 37 42 37.6	70.4	1	17.85

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			h. m. s.			"	° ' "			"
5751	Anonymous . . .	. .	13 48 30.96	63.3	1	+ 3.543	− 37 39 57.8	67.4	1	− 17.85
5752	Lalande 25625 . . .	7.2	48 35.00	68.4	2	2.599	+ 37 45 55.4	47.4	2	17.85
5753	Lacaille 5763 . . .	6.5	48 35.30	65.9	2	3.382	− 26 57 1.0	67.9	2	17.85
5754	Rumker 4517 . . .	6.4	49 5.12	63.3	2	2.911	+ 14 44 36.9	66.9	2	17.83
5755	Weisse (2) XIII, 1077 .	8.5	49 28.41	63.4	3	2.782	+ 25 12 58.7	67.4	2	17.81
5756	Lalande 25635 . . .	6.3	13 49 40.67	70.0	2	+ 3.325	− 22 20 13.8	67.3	2	− 17.80
5757	Lacaille 5769 . . .	7.5	49 41.50	63.4	2	3.544	− 37 28 57.9	69.4	3	17.80
5758	Weisse (2) XIII, 1084.	6.5	49 43.70	60.4	3	2.726	+ 29 21 31.3	54.4	3	17.80
5759	Rumker 4522 . . .	7.0	49 43.94	64.7	3	2.764	+ 26 36 19.3	58.3	1	17.80
5760	Anonymous . . .	8.0	49 52.62	69.3	2	3.432	− 30 16 39.1	64.4	2	17.79
5761	B. A. C. 4652 . . .	7.0*	13 49 57.66	60.3	2	+ 2.675	+ 32 43 0.3	54.4	3	− 17.79
5762	Lacaille 5773 . . .	6.9	50 5.43	64.6	4	3.364	− 25 18 47.5	63.9	2	17.79
5763	Lacaille 5774 . . .	6.7	50 9.56	63.4	2	+ 3.416	− 29 3 28.5	67.4	2	17.78
5764	Radcliffe 3117 . . .	6.7	50 33.94	64.8	2	− 0.337	+ 79 41 11.2	67.4	2	17.77
5765	47 Hydræ	5.5	50 40.26	62.4	2	+ 3.352	− 24 17 13.7	65.9	2	17.76
5766	Lalande 25674 . . .	8.0*	13 50 48.52	59.4	2	+ 2.795	+ 24 3 16.1	49.3	2	− 17.76
5767	Anonymous . . .	7.0	50 50.22	65.4	4	3.539	− 36 54 42.8	70.8	2	17.76
5768	Anonymous . . .	8.0	50 50.47	65.4	1	3.536	− 36 42 58.5	71.4	1	17.76
5769	Weisse XIII, 866 . .	7.5	50 57.45	59.4	2	3.221	− 13 26 17.3	55.3	2	17.75
5770	Rumker 4529 . . .	6.0*	51 1.55	61.9	2	2.773	+ 25 41 5.8	57.2	4	17.75
5771	Anonymous . . .	8.1	13 51 50.	. .	.	+ 2.799	+ 23 33 6.8	49.3	1	− 17.71
5772	Anonymous . . .	. .	52 2.88	65.0	3	3.540	− 36 42 38.2	68.3	1	17.71
5773	Anonymous . . .	9.0	52 6.38	62.0	3	2.798	+ 23 33 34.0	71.9	2	17.70
5774	48 Hydræ	5.8	52 10.14	62.4	2	3.356	− 24 19 30.7	66.4	2	17.70
5775	Anonymous . . .	9.0	52 24.70	71.4	2	3.554	− 37 26 32.7	68.9	2	17.69
5776	Lacaille 5779 . . .	6.5	13 52 31.25	63.3	2	+ 3.671	− 43 31 58.4	68.9	2	− 17.69
5777	Weisse XIII, 893 . .	9.0	52 34.81	59.3	3	3.206	− 12 1 31.7	64.4	2	17.68
5778	Σ Cat. Gen. 1570, (1st *) .	8.5	52 39.10	63.3	1	2.757	+ 26 29 49.8	71.4	2	17.68
5779	Σ Cat. Gen. 1570, (2d *) .	8.0	52 39.44	62.9	4	2.757	+ 26 29 55.7	62.4	2	17.68
5780	Lacaille 5785 . . .	6.6	52 41.75	62.9	2	3.374	− 25 34 48.8	68.5	2	17.68
5781	Brisbane 4727 . . .	7.0	13 52 48.05	65.0	3	+ 3.546	− 36 47 18.2	70.4	4	− 17.67
5782	B. A. C. 4667 . . .	5.8	52 52.63	64.1	3	3.594	− 39 32 30.8	68.3	2	17.67
5783	Anonymous . . .	7.2	52 52.85	64.3	1	3.576	− 38 34 12.9	66.3	1	17.67
5784	Anonymous . . .	8.7	53 2.95	71.4	2	3.543	− 36 39 4.8	68.3	1	17.66
5785	Weisse (2) XIII, 1167 .	8.3	53 10.54	71.1	4	2.795	+ 23 36 52.5	68.4	1	17.66
5786	Anonymous . . .	8.0	13 53 21.07	68.9	2	+ 3.582	− 38 45 30.0	65.4	2	− 17.65
5787	Anonymous . . .	8.8	53 25.06	68.4	2	2.790	+ 23 58 50.8	49.3	2	17.65
5788	Anonymous . . .	6.5	53 47.80	67.9	2	3.549	− 36 48	. .	.	17.63
5789	Anonymous . . .	8.6	53 50.40	62.6	4	0.324	+ 76 56 53.8	67.4	2	17.63
5790	Anonymous . . .	7.2	54 5.47	69.4	2	3.527	− 35 30 2.4	64.3	1	17.62

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5791	B. A, C. 4671 . . .	6.0	13 54 25.57	62.9	2	+ 3.395	− 26 45 6.3	66.9	2	− 17.61
5792	Weisse XIII, 931 . .	9.3	54 26.48	64.7	3	3.047	+ 2 13 53.5	68.7	4	17.61
5793	Anonymous . . .	8.4	54 26.71	71.4	4	0.258	+ 77 11 7.3	69.4	2	17.60
5794	Anonymous . . .	8.2	54 26.94	63.4	2	0.280	+ 77 5	. .	.	17.61
5795	Rumker 4551 . . .	7.4	54 30.86	61.6	4	2.805	+ 22 39 24.1	57.4	3	17.60
5796	τ Virginis.	4.7	13 54 31.42	62.5	59	+ 3.047	+. 2 13 24.0	62.7	5	− 17.60
5797	Anonymous . . .	8.8	54 39.78	67.0	3	0.609	+ 75 24 20.4	71.4	1	17.60
5798	Lacaille 5790 . . .	7.4	54 42.10	62.4	2	3.387	− 26 10 12.5	69.0	2	17.60
5799	11 Bootis	7.2	54 49.52	68.4	2	2.730	+ 28 3 50.8	65.9	2	17.59
5800	Weisse XIII, 942 . .	9.2	54 54.	. .	.	3.047	+ 2 13 56.0	71.4	1	17.59
5801	Weisse (2) XIII, 1201 .	9.0	13 54 59.36	59.3	2	+ 2.787	+ 23 53 0.5	49.3	2	− 17.58
5802	Lalande 25762 . . .	9.0	55 0.71	59.4	2	3.229	− 13 40 48.1	56.4	2	17.58
5803	Anonymous . . .	8.8	55 27.40	65.8	2	0.597	+ 75 23 3.8	71.4	1	17.56
5804	Anonymous . . .	7.6	55 40.95	64.4	2	3.561	− 37 5 48.5	65.4	1	17.55
5805	Lacaille 5798, (1st *) .	8.0	55 44.46	67.3	2	3.553	− 36 36 27.3	69.8	2	17.55
5806	Lacaille 5798, (2d *) .	7.0	13 55 46.60	67.3	2	3.552	− 36 35 16.1	69.8	2	− 17.55
5807	Lacaille 5800 . . .	7.1	56 20.32	63.4	2	3.527	− 34 58 15.1	67.4	2	17.53
5808	O. Arg. S. 13349 . .	8.0	56 21.38	65.4	3	3.416	− 27 55 28.1	67.9	2	17.53
5809	Weisse XIII, 974 . .	8.8	56 32.10	59.9	2	3.244	− 14 48 38.1	55.3	2	17.52
5810	Anonymous . . .	8.0	56 32.31	67.9	2	3.574	− 37 36 19.8	67.4	1	17.52
5811	Weisse XIII, 797 . .	8.0	13 56 42.64	59.3	3	+ 3.204	− 11 27 17.9	55.4	3	− 17.51
5812	B. A. C. 4680 . . .	6.0	56 56.94	45.4	1	3.171	− 8 35 0.7	70.4	2	17.50
5813	O. Arg. S. 13357 . .	7.7	57 4.57	64.4	2	3.417	− 27 50 38.1	67.4	2	17.50
5814	Lacaille 5812 . . .	8.0	57 34.23	64.1	4	3.568	− 37 3 24.1	67.9	2	17.47
5815	B. A. C. 4682 . . .	7.5*	57 36.64	60.4	2	3.256	− 15 39 48.4	54.4	3	17.47
5816	Anonymous . . .	9.0	13 57 36.96	65.4	3	+ 3.500	− 33 5 59.3	71.5	1	− 17.47
5817	Anonymous . . .	8 0	57 40.	. .	.	3.499	− 33 1 23.2	72.1	3	17.47
5818	Lacaille 5819 . . .	6.0	58 14.39	63.3	3	3.521	− 34 13 39.4	63.4	2	17.45
5819	π Hydræ	3.1	58 24.41	55.8	5	3.394	− 26 0 21.8	62.5	2	17.44
5820	θ Centauri	2.5*	58 27.83	48.0	12	3.546	− 35 40 42.7	56.2	5	17.44
5821	Lalande 25860 . . .	7.3	13 58 29.21	68.4	3	+ 2.608	+ 35 5 43.7	47.4	2	− 17.43
5822	Lacaille 5822 . . .	6.6	58 50.60	63.9	4	3.533	− 34 49 19.4	66.3	2	17.42
5823	94 Virginis.	6.0*	58 53.18	60.5	6	3.167	− 8 13 16.3	64.4	2	17.42
5824	Anonymous . . .	9.0	58 54.18	66.9	2	3.248	− 14 50 19.3	68.9	2	17.42
5825	O. Arg. S. 13387 . .	6.7	59 2.72	65.4	2	3.406	− 26 41 1.9	70.4	2	17.41
5826	Anonymous . . .	9.1	13 59 3.59	66.9	2	+ 3.248	− 14 51 13.9	71.4	1	− 17.41
5827	Weisse XIII, 1035. .	6.8	59 7.84	63.4	2	3.232	− 13 32 1.7	64.4	2	17.41
5828	Weisse XIII, 1037. .	8.8	59 11.34	59.4	2	3.231	− 13 25 34.9	55.4	2	17.40
5829	Anonymous . . .	9.0	59 21.36	69.3	2	2.778	+ 23 52 4.8	49.3	1	17.40
5830	Lacaille 5824 . . .	6.4	59 31.01	63.3	2	3.526	− 34 16 50.9	64.8	2	17.39

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5831	Anonymous	. .	13 59 31.19	49.3	1	+ 2.749	+ 25 52 42.7	49.3	1	− 17.39
5832	B. A. C. 4691	7.0*	59 36.69	61.3	3	3.257	− 15 31 16.1	68.5	3	17.39
5833	Weisse (2) XIII, 1309	8.8	59 50.20	68.4	2	2.774	+ 24 3 32.2	49.3	2	17.38
5834	O. Arg. S. 13394	7.0	13 59 56.25	64.9	2	3.408	− 26 40 34.8	70.1	3	17.37
5835	Anonymous	7.7	14 0 9.76	64.4	3	3.497	− 32 23 5.5	67.4	2	17.36
5836	B. A. C. 4694	7.0*	14 0 13.66	60.3	3	+ 2.661	+ 31 31 15.6	54.4	3	− 17.36
5837	Anonymous	8.0	0 34.89	66.9	2	3.399	− 25 59 4.5	67.4	2	17.34
5838	*a* Draconis	3.4*	0 36.06	57.8	18	1.629	+ 65 2 44.7	63.6	26	17.34
5839	Weisse XIII, 1071	7.2	0 59.18	59.3	3	3.205	− 11 9 44.4	56.4	2	17.33
5840	Anonymous	7.7	1 3.74	65.1	4	3.408	− 26 31 40.2	67.4	2	17.32
5841	Anonymous	8.0	14 1 7.58	65.1	4	+ 3.408	− 26 31 38.3	67.4	2	− 17.32
5842	Anonymous	9.0	1 34.56	59.4	2	2.614	+ 34 4 10.3	57.4	3	17.30
5843	Anonymous	9.2	1 49.88	69.4	2	3.145	− 6 8 50.0	56.3	2	17.29
5844	Weisse (2) XIV, 11	7.0	1 50.42	60.4	2	2.756	+ 24 58 52.7	57.4	2	17.29
5845	Anonymous	9.1	1 56.38	61.4	4	1.529	+ 66 16 23.9	59.7	3	17.28
5846	Lacaille 5837	7.0	14 2 6.12	62.7	3	+ 3.463	− 29 57 19.6	68.4	2	− 17.28
5847	Weisse (2) XIV, 21	7.8	2 14.76	68.3	2	2.552	+ 37 24 56.1	46.4	1	17.27
5848	Lacaille 5838	7.2	2 17.07	62.9	4	3.456	− 29 25 25.1	66.4	2	17.27
5849	Anonymous	. .	2 27.16	65.4	1	3.405	− 26 4 8.8	67.4	1	17.26
5850	Lacaille 5839	6.5	2 40.92	64.1	7	3.488	− 31 24 43.9	64.9	2	17.25
5851	Anonymous	7.2	14 2 58.39	64.4	1	+ 3.406	− 26 4	. .	.	− 17.24
5852	O. Arg. S. 13432	8.0	2 58.75	67.3	2	3.386	− 24 39 27.7	70.5	2	17.24
5853	Weisse XIV, 31	8.8	3 7.95	61.7	3	3.143	− 5 53 45.9	59.7	3	17.23
5854	B. A. C. 4700	5.5	3 12.01	60.0	5	3.264	− 15 38 20.8	58.5	8	17.23
5855	Weisse (2) XIV, 40	8.8	3 13.10	59.4	2	2.770	+ 23 49 7.5	58.4	2	17.23
5856	Lacaille 5842	7.6	14 3 13.46	63.1	3	+ 3.454	− 29 7 18.8	68.4	2	− 17.23
5857	Lacaille 5843	6.8	3 17.56	63.3	3	3.492	− 31 30 23.1	67.1	3	17.22
5858	O. Arg. S. 13438	7.8	3 22.46	67.3	2	3.402	− 25 40 54.7	70.2	4	17.22
5859	O. Arg. S. 13444	8.3	3 34.70	63.4	2	3.274	− 16 21 38.7	67.9	2	17.21
5860	Anonymous	8.0	3 42.	. .	.	3.385	− 24 31 9.5	71.7	3	17.20
5861	Lalande 26013	7.0	14 3 50.62	68.4	2	+ 2.535	+ 37 59 34.9	47.4	2	− 17.20
5862	*d* Bootis	5.5*	4 0.84	61.4	6	+ 2.739	+ 25 45 23.4	58.6	5	17.19
5863	Groombridge 2099	7.0*	4 26.90	61.9	4	− 7.993	+ 86 25 40.4	67.4	2	17.17
5864	Lacaille 5855	6.8	4 29.76	63.1	3	+ 3.376	− 23 42 10.1	65.9	2	17.17
5865	50 Hydræ	5.4	4 45.23	63.2	7	3.419	− 26 35 1.0	67.4	2	17.16
5866	Anonymous	8.8	14 4 57.95	65.4	3	+ 3.521	− 32 54 34.3	68.4	2	− 17.15
5867	Anonymous	9.1	5 1.74	65.4	4	3.520	− 32 50 57.7	67.2	3	17.14
5868	Anonymous	8.8	5 8.46	65.4	5	3.521	− 32 51 30.3	67.7	3	17.14
5869	B. A. C. 4714	6.0	5 8.60	68.3	2	2.622	+ 32 57 19.3	47.4	1	17.14
5870	B. A. C. 4711	6.6	5 13.43	55.7	7	3.410	− 25 57 9.9	55.2	5	17.14

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5871	O. Arg. S. 13471	8.4	14 5 20.29	65.4	3	+ 3.263	− 15 23 28.7	58.5	2	− 17.13
5872	κ Virginis	4.0*	5 25.90	60.0	18	3.190	− 9 37 14.0	60.4	3	17.13
5873	Weisse XIV, 83	8.8	6 3.65	60.4	5	3.174	− 8 20 20.7	65.5	2	17.10
5874	Lacaille 5860	6.0	6 4.79	63.4	3	3.684	− 41 10 48.1	67.5	2	17.10
5875	Weisse XIV, 88	9.0	6 12.81	59.3	3	3.176	− 8 28 47.2	55.4	2	17.09
5876	Lalande 26054	8.0	14 6 30.68	59.4	2	+ 3.284	− 16 48 25.3	54.7	3	− 17.08
5877	B. A. C. 4719	6.3	6 55.37	62.0	6	3.456	− 28 37 33.3	66.3	2	17.06
5878	Anonymous	9.0	7 21.08	66.9	2	3.602	− 36 56 40.9	69.4	2	17.04
5879	14 Bootis	5.5*	7 21.26	60.3	2	2.901	+ 13 37 3.8	54.4	3	17.04
5880	B. A. C. 4722	5.0	7 41.54	59.8	2	3.296	− 17 32 45.4	66.4	2	17.02
5881	Lacaille 5872	5.3	14 8 1.73	65.0	7	+ 3.525	− 32 35 17.5	65.9	1	− 17.01
5882	Lacaille 5873	6.5	8 5.66	63.3	3	3.505	− 31 25 13.1	67.4	2	17.00
5883	O. Arg. S. 13501	7.3	8 11.53	68.4	2	3.268	− 15 25 41.0	55.4	2	17.00
5884	Lacaille 5877	7.9	8 21.78	67.4	3	3.558	− 34 21 18.5	69.9	2	16.99
5885	Weisse XIV, 130	8.8	8 32.28	59.9	2	3.182	− 8 43 25.7	55.9	2	16.98
5886	ι Virginis	5.6	14 8 40.71	71.0	3	+ 3.138	− 5 19 54.2	68.4	2	− 16.98
5887	Lacaille 5878	6.7	9 9.66	63.4	2	3.714	− 41 56 25.2	68.9	2	16.95
5888	O. Arg. N. 14403	8.6	9 11.60	65.4	2	1.973	+ 56 58 22.5	65.4	2	16.95
5889	α Bootis	1.0	9 16.98	55.0	357	+ 2.813	+ 19 55 3.5	51.5	110	16.95
5890	4 Ursæ Minoris	5.5	9 27.64	68.4	2	− 0.355	+ 78 12 18.3	64.2	12	16.94
5891	B. A. C. 4731	6.0	14 9 29.26	60.4	2	+ 2.818	+ 19 33 53.9	53.4	3	− 16.94
5892	Lacaille 5880	6.0	9 32.84	63.0	2	3.426	− 26 18 27.4	67.6	4	16.94
5893	Anonymous	9.0	9 47.33	62.6	4	3.128	− 4 29 56.9	58.4	3	16.92
5894	Anonymous	7.0	9 50.68	68.4	2	2.565	+ 35 14 4.1	49.3	1	16.92
5895	Weisse (2) XIV, 196	6.5	10 2.21	68.5	1	2.799	+ 20 46 34.0	69.4	2	16.91
5896	Lacaille 5883	5.5	14 10 7.29	65.0	7	+ 3.531	− 32 34 11.1	66.9	2	− 16.91
5897	Anonymous	7.7	10 22.32	67.4	2	3.609	− 36 41 50.8	67.4	2	16.90
5898	Weisse XIV, 171	9.0	10 32.53	62.7	3	3.129	− 4 29 1.1	63.7	3	16.89
5899	Weisse XIV, 173	7.5	10 34.	. . .	.	3.139	− 5 19 19.9	68.4	2	16.89
5900	Weisse XIV, 174	9.0	10 38.60	63.1	4	3.129	− 4 29 37.9	61.6	5	16.88
5901	Weisse (2) XIV, 228	8.0	14 10 46.04	59.3	2	+ 2.443	+ 41 3 12.0	57.4	3	− 16.88
5902	Lacaille 5886	5.6	10 56.65	63.3	2	3.604	− 36 21 13.9	69.9	2	16.87
5903	B. A. C. 4740	6.0	11 4.67	66.5	2	3.412	− 25 10 52.0	66.5	2	16.86
5904	Weisse XIV, 179	8.3	11 5.54	68.4	2	3.184	− 8 45 38.9	55.9	2	16.86
5905	ι Bootis	4.0*	11 12.24	65.4	2	2.144	+ 52 0 50.5	65.9	2	16.86
5906	λ Virginis	5.7	14 11 32.35	63.5	16	+ 3.236	− 12 43 29.7	65.9	2	− 16.84
5907	Lalande 26172	7.5	11 41.76	60.6	3	3.306	− 17 52 33.6	58.4	8	16.83
5908	. . . .	. .	. . .	. .	.	. .	. . . . .	. .	.	. .
5909	Weisse (2) XIV, 245	7.5	11 42.12	68.9	2	2.440	+ 41 1 17.6	57.4	3	16.83
5910	Weisse (2) XIV, 248	8.5	11 58.02	60.4	2	2.738	+ 24 38 50.2	58.1	3	16.82

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			h. m. s.			″	° ′ ″			″
5911	Weisse XIV, 199, (1st *)	8.0	14 11 58.08	65.4	3	+ 3.241	− 13 3 44.0	69.1	3	− 16.82
5912	Weisse XIV, 199, (2d *)	7.0	11 58.24	65.4	3	3.241	− 13 3 44.0	69.1	3	16.82
5913	ψ Centauri	5.0	12 3.21	63.4	3	3.626	− 37 14 22.7	69.8	3	16.82
5914	O. Arg. S. 13541	7.0	12 3.35	64.1	4	3.450	− 27 24 8.3	70.4	2	16.82
5915	A Bootis	6.0*	12 4.54	60.4	2	2.539	+ 36 9 24.8	53.3	4	16.82
5916	Lacaille 5898	7.0	14 12 15.67	63.4	2	+ 3.565	− 34 1 54.9	67.9	2	− 16.81
5917	Weisse XIV, 209	8.8	12 21.43	66.9	2	3.130	− 4 30 1.5	68.4	2	16.80
5918	B. A. C. 4752	6.0	12 22.41	66.1	3	2.139	+ 51 57 20.4	53.4	3	16.80
5919	18 Bootis	6.0*	12 29.88	65.0	2	2.894	+ 13 39 6.6	54.4	3	16.80
5920	O. Arg. S. 13544	7.2	12 38.66	64.9	2	3.396	− 23 51 40.5	61.4	3	16.79
5921	Weisse XIV, 221	9.2	14 12 53.81	62.0	3	+ 3.118	− 3 36 34.2	68.4	2	− 16.78
5922	Lalande 26210	8.0	13 4.39	60.9	2	3.320	− 18 41 21.4	60.1	3	16.77
5923	Anonymous.	7.0	13 14.59	65.5	1	3.646	− 38 2 10.7	67.9	2	16.76
5924	Lacaille 5906	7.6	13 37.61	63.5	2	3.442	− 26 40 41.3	69.5	3	16.74
5925	Lacaille 5910	6.7	13 55.92	63.8	5	3.459	− 27 39 56.9	68.5	3	16.73
5926	B. A. C. 4757	6.0	14 13 56.91	63.4	4	+ 3.572	− 34 8 41.3	70.5	2	− 16.73
5927	Weisse XIV, 236	7.8	14 0.16	68.3	2	3.131	− 4 34 17.4	69.4	3	16.72
5928	O. Arg. N. 14464	6.5	14 17.14	62.4	2	1.996	+ 55 30 32.2	62.4	2	16.71
5929	Anonymous	8.7	14 36.57	68.4	2	3.597	− 35 20 17.4	67.9	2	16.70
5930	Lacaille 5915	7.8	14 38.43	62.5	2	3.436	− 26 8 45.9	69.4	2	16.69
5931	Weisse XIV, 254	9.0	14 14 48.95	68.4	1	+ 3.131	− 4 34 40.0	71.4	2	− 16.68
5932	Weisse XIV, 252	9.3	14 49.74	63.1	3	3.193	− 9 15 12.3	59.4	2	16.68
5933	Weisse XIV, 257	9.0	14 57.93	59.3	1	3.133	− 4 40 5.6	72.4	2	16.68
5934	51 Hydræ	5.2	15 2.33	54.4	6	3.452	− 27 6 32.7	57.0	5	16.67
5935	Anonymous	8.2	15 34.25	67.0	2	3.447	− 26 42 30.0	71.4	2	16.65
5936	Anonymous	8.5	14 15 44.38	65.1	4	+ 3.461	− 27 30 43.0	70.4	2	− 16.64
5937	Lacaille 5922	7.4	15 44.83	62.8	3	3.486	− 29 2 13.9	69.5	3	16.64
5938	2 Libræ	6.0*	15 53.88	66.1	8	3.218	− 11 4 21.2	60.8	3	16.63
5939	Lacaille 5923	6.8	15 55.45	64.4	4	3.547	− 32 26 53.9	69.4	2	16.63
5940	O. Arg. S. 13584	7.5	16 11.64	59.3	2	3.332	− 19 10	. .	.	16.62
5941	O. Arg. S. 13589	8.8	14 16 17.86	69.3	2	+ 3.332	− 19 6	. . .	.	− 16.61
5942	Lacaille 5926	8.4	16 26.23	62.8	3	3.487	− 28 58 50.7	70.0	2	16.61
5943	Lacaille 5925	6.8	16 29.40	66.0	2	3.633	− 36 48 31.1	70.9	2	16.60
5944	Lalande 26293	8.0	16 38.55	59.3	3	3.331	− 19 2 47.4	55.4	3	16.60
5945	B. A. C. 4767	6.0	16 49.84	62.7	3	3.409	− 24 10 6.1	66.0	2	16.59
5946	Weisse XIV, 293	7.0	14 16 59.78	65.4	5	+ 3.252	− 13 26 37.5	68.4	2	− 16.58
5947	B. A. C. 4769	7.5	17 2.55	64.9	2	2.987	+ 6 27 37.1	66.4	2	16.58
5948	Anonymous	7.4	17 5.77	64.7	3	3.464	− 27 29 38.5	68.4	2	16.57
5949	Lacaille 5932	6.9	17 11.47	63.6	4	3.549	− 32 20 9.7	68.9	2	16.57
5950	B. A. C. 4773	5.8	17 13.43	63.7	3	2.987	+ 6 27 25.4	66.4	2	16.57

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5951	Weisse XIV, 314	9.0*	14 17 35.37	70.5	2	+ 3.030	+ 3 10 23.7	67.4	1	− 16.55
5952	B. A. C. 4778	6.2	17 40.72	68.3	2	2.485	+ 37 50 31.1	46.8	2	16.54
5953	Anonymous	8.6	17 42.46	66.9	2	3.442	− 26 5 53.8	70.4	3	16.54
5954	B. A. C. 4776	7.0	17 43.47	62.0	8	3.444	− 26 12 52.8	62.5	2	16.54
5955	Weisse XIV, 316	8.0	17 47.69	65.4	4	+ 3.253	− 13 27 4.6	65.4	1	16.54
5956	Schwerd 835	8.0	14 17 56.27	64.1	3	− 1.214	+ 79 59	. .	.	− 16.53
5957	O. Arg. S. 13611	7.5	17 58.74	65.3	2	+ 3.451	− 26 35 25.4	68.9	2	16.53
5958	Lacaille 5941	7.2	18 6.86	63.4	2	3.557	− 32 36 58.1	67.9	2	16.52
5959	(* 112) Washington	9.0	18 41.12	62.9	2	3.030	+ 3 10 22.1	64.9	2	16.49
5960	Rumker 4697	7.0	18 48.47	59.3	2	3.050	+ 1 37 41.7	56.7	3	16.49
5961	Radcliffe 3200	8.0	14 18 56.32	59.4	2	+ 2.244	+ 47 24 17.2	56.4	4	− 16.48
5962	Lacaille 5945	7.0	19 3.67	63.5	2	3.602	− 34 48 48.3	66.4	2	16.48
5963	O. Arg. S. 13626	8.0	19 12.55	66.4	1	3.466	− 27 17 18.0	70.4	2	16.47
5964	O. Arg. S. 13629	7.6	19 21.41	66.3	4	3.466	− 27 16 18.5	65.4	3	16.46
5965	B. A. C. 4783	6.5*	19 46.27	53.3	11	2.451	+ 39 1 37.4	53.9	6	16.44
5966	52 Hydræ	5.8	14 19 59.00	53.8	7	+ 3.495	− 28 51 36.7	58.0	6	− 16.43
5967	Weisse XIV, 362	8.0	20 7.23	59.4	2	3.087	− 1 6 29.7	55.4	2	16.42
5968	Anonymous	8.5	20 14.61	66.9	2	3.450	− 26 13 3.8	68.4	2	16.42
5969	θ Bootis	4.0*	20 25.72	63.4	6	2.070	+ 52 29 56.2	63.6	4	16.41
5970	O. Arg. S. 13647	7.0	20 26.64	65.3	4	3.469	− 27 17 21.4	64.4	2	16.41
5971	Weisse XIV, 371	8.0	14 20 46.30	59.4	2	+ 3.087	− 1 8 15.8	55.4	3	− 16.39
5972	Lacaille 5953	7.0	20 58.65	62.7	3	3.491	− 28 29 6.1	67.4	2	16.38
5973	106 Virginis	6.0	21 18.85	45.4	2	3.157	− 6 16 12.6	68.5	2	16.36
5974	O. Arg. S. 13663	6.4	21 27.61	64.2	5	3.439	− 25 23 7.6	64.9	2	16.35
5975	Lacaille 5955	6.5	21 42.40	63.4	2	3.719	− 39 51 0.9	68.4	2	16.34
5976	Lacaille 5959	7.5	14 21 47.40	62.9	2	+ 3.432	− 24 54 51.6	69.5	3	− 16.34
5977	Anonymous	7.7	22 25.56	68.4	2	2.460	+ 38 11 3.0	46.4	1	16.31
5978	Lacaille 5962	6.2	22 27.43	65.9	2	3.720	− 39 45 40.2	68.5	2	16.30
5979	B. A. C. 4797	6.0	22 28.60	52.7	8	2.489	+ 36 49 30.2	47.4	2	16.30
5980	Lacaille 5963	5.5	22 31.22	67.4	2	3.686	− 38 14 43.9	68.4	2	16.30
5981	Anonymous	10.0	14 22 38.45	64.3	2	+ 2.166	+ 49 18	. .	.	− 16.29
5982	O. Arg. S. 13679	7.5	22 38.87	64.0	5	3.456	− 26 12 36.5	62.5	2	16.29
5983	B. A. C. 4798	6.5*	22 42.41	59.3	2	3.052	+ 1 27 17.6	56.8	5	16.29
5984	Anonymous	9.0	22 43.83	61.4	2	3.114	− 3 5 38.6	68.4	2	16.29
5985	Lacaille 5967	7.5	24 44.32	63.5	2	3.599	− 34 3 21.5	69.4	2	16.29
5986	Anonymous	8.3	14 22 49.33	66.4	2	+ 3.444	− 25 29 8.3	69.4	2	− 16.29
5987	B. A. C. 4800	7.3	22 58.63	63.1	3	3.431	− 24 41 23.0	68.7	3	16.28
5988	Weisse XIV, 422	9.0	23 36.73	60.9	2	3.116	− 3 10 27.5	58.1	3	16.25
5989	Lacaille 5975	6.4	23 40.30	63.4	2	3.554	− 31 33 45.7	65.9	2	16.24
5990	Weisse XIV, 423	8.0	23 41.57	61.3	4	3.143	− 5 10 41.4	58.4	2	16.24

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5991	O. Arg. S. 13694	7.0	14 23 46.14	65.5	5	+ 3.420	− 23 56 9.2	65.4	6	− 16.24
5992	O. Arg. S. 13697	7.7	23 57.85	63.8	4	3.474	− 27 4 59.1	66.1	3	16.23
5993	B. A. C. 4805	6.0*	24 5.72	60.1	4	2.353	+ 42 25 45.8	53.8	5	16.22
5994	O. Arg. S. 13702	7.2	24 5.87	63.2	5	3.458	− 26 9 37.8	62.5	3	16.22
5995	Rumker 4730	8.8	24 15.41	59.4	2	3.051	+ 1 32 3.3	56.7	3	16.21
5996	Anonymous	. .	14 24 39.44	61.4	2	+ 2.159	+ 49 9 58.3	62.9	2	− 16.19
5997	Weisse XIV, 445	8.0	24 50.02	59.4	2	3.088	− 1 10 5.3	57.8	3	16.18
5998	O. Arg. S. 13711	5.0	24 52.41	65.4	3	3.530	− 30 5 36.5	67.4	3	16.18
5999	Lacaille 5988	6.8	25 45.22	63.3	2	3.556	− 31 20 16.2	64.9	2	16.13
6000	ρ Bootis	4.0*	25 47.71	63.1	34	2.595	+ 30 59 15.0	61.0	5	16.13
6001	Anonymous.	9.5	14 26 7.90	66.9	2	+ 3.534	− 30 6	. .	.	− 16.12
6002	26 Bootis	6.0*	26 10.73	59.8	2	2.736	+ 22 52 40.3	53.3	3	16.11
6003	Lacaille 5991	7.0	26 14.12	66.0	2	3.626	− 34 50 40.3	66.9	2	16.11
6004	Lalande 26560	7.5	26 15.49	67.1	3	2.596	+ 30 52 44.7	67.4	2	16.11
6005	γ Bootis	3.5*	26 26.36	48.4	15	2.428	+ 38 55 17.5	52.8	5	16.10
6006	Rumker 4737	8.8	14 26 46.71	62.4	3	+ 3.052	+ 1 28 6.1	55.4	3	− 16.08
6007	B. A. C. 4814	7.0	26 58.30	59.6	6	3.360	− 19 49 22.1	57.6	8	16.07
6008	Anonymous.	8.8	27 4.06	64.9	2	2.086	+ 50 56 26.0	57.4	2	16.07
6009	B. A. C. 4816	6.0	27 37.00	47.4	2	2.454	+ 37 34 46.2	72.5	1	16.04
6010	Lacaille 6000	7.5	27 37.02	63.4	2	3.620	− 34 17 31.9	66.4	2	16.04
6011	Lacaille 5999	5.8	14 27 40.11	65.9	2	+ 3.722	− 38 58 57.1	65.9	2	− 16.03
6012	5 Ursæ Minoris	4.3	27 52.02	62.8	11	− 0.231	+ 76 19 5.5	64.1	29	16.02
6013	Weisse XIV, 503	8.0	28 5.83	61.4	3	+ 3.146	− 5 13 3.8	61.4	3	16.01
6014	O. Arg. S. 13747	7.8	28 19.26	65.4	2	3.494	− 27 38 35.1	68.9	2	16.00
6015	Anonymous	7.8	28 21.64	66.0	2	3.620	− 34 10 53.6	68.4	2	16.00
6016	Anonymous	7.3	14 28 31.22	65.4	2	+ 3.678	− 36 55 9.7	68.9	2	− 15.99
6017	σ Bootis	5.0	28 35.01	58.8	9	2.599	+ 30 21 18.3	64.5	2	15.99
6018	Lamont 4429	9.2	28 39.44	69.4	1	3.049	+ 1 39 55.3	68.4	2	15.99
6019	Anonymous.	8.3	28 50.	. .	.	3.495	− 27 37 42.4	68.9	2	15.97
6020	Weisse XIV, 519	8.5	28 53.41	60.4	3	3.117	− 3 10 6.0	58.5	2	15.97
6021	Rumker 4760	7.0	14 28 55.06	62.4	2	+ 1.978	+ 53 30 54.4	62.4	2	− 15.97
6022	B. A. C. 4825	6.0*	28 55.10	47.5	6	2.457	+ 37 14 32.6	47.3	2	15.97
6023	Anonymous	8.5	28 55.19	68.4	1	3.496	− 27 41 23.3	70.4	2	15.97
6024	O. Arg. S. 13757	8.1	28 59.52	64.4	2	3.452	− 25 11 6.4	67.0	2	15.96
6025	Rumker 4761	9.0	29 26.14	59.4	2	+ 3.048	+ 1 40 4.0	58.4	2	15.94
6026	O. Arg. N. 14695	7.5	14 29 27.84	68.3	2	− 0.279	+ 76 23 13.8	66.4	3	− 15.94
6027	Lacaille 6015	6.0	29 35.80	66.0	2	+ 3.711	− 38 10 57.8	68.4	2	15.93
6028	B. A. C. 4830	6.0*	29 45.96	60.4	2	2.104	+ 49 58 47.9	54.4	3	15.92
6029	Weisse XIV, 540	7.8	29 50.89	59.9	3	3.119	− 3 16 47.5	59.7	6	15.92
6030	Lacaille 6020	6.5	29 53.60	64.3	3	3.635	− 34 39 54.4	69.1	3	15.92

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6031	Lacaille 6027 . . .	6.5	14 30 49.85	66.7	3	+ 3.598	− 32 46 14.4	68.0	2	− 15.87
6032	3 Libræ	6.6	31 17.42	63.4	3	3.444	− 24 25 12.1	67.0	2	15.84
6033	B. A. C. 4838 . . .	7.3	31 32.02	62.5	2	3.474	− 26 6 55.6	62.5	2	15.83
6034	Lacaille 6035 . . .	7.5	31 48.64	63.4	4	3.482	− 26 31 30.5	64.4	2	15.81
6035	Lacaille 6040 . . .	7.7	32 10.62	63.2	3	3.523	− 28 41 41.5	66.4	2	15.79
6036	O. Arg. S. 13813 . .	7.2	14 32 17.57	64.2	5	+ 3.468	− 25 39 2.0	65.8	5	− 15.79
6037	O. Arg. S. 13814 . .	8.5	32 22.41	64.7	3	3.468	− 25 38 33.7	68.7	3	15.78
6038	Lacaille 6038 . . .	5.5	32 25.96	66.8	3	3.661	− 35 31 48.0	72.4	2	15.78
6039	Lacaille 6047 . . .	7.6	32 47.95	64.5	5	3.472	− 25 49 29.5	63.4	2	15.76
6040	B. A. C. 4841 . . .	6.0*	32 56.95	60.1	6	2.266	+ 44 14 50.8	53.3	3	15.75
6041	B. A. C. 4842 . . .	5.3	14 33 16.52	63.4	2	+ 3.701	− 37 11 23.5	65.9	2	− 15.74
6042	Weisse (2) XIV, 697 .	8.3	33 25.93	63.0	3	2.723	+ 22 47 11.5	64.9	2	15.73
6043	Lacaille 6051 . . .	6.8	33 28.87	66.1	3	3.534	− 29 5 43.1	69.3	5	15.72
6044	Anonymous . . .	7.5	33 33.71	66.4	7	3.595	− 32 12 42.7	66.4	2	15.72
6045	Weisse XIV, 606 . .	8.2	33 36.53	60.4	2	3.157	− 5 51 19.7	58.4	2	15.72
6046	Lacaille 6053 . . .	8.1	14 33 38.77	63.2	3	+ 3.528	− 28 45 12.3	68.4	2	− 15.72
6047	Weisse XIV, 608 . .	8.2	33 45.54	60.4	2	3.230	− 10 45 39.9	58.4	2	15.71
6048	Lacaille 6054 . . .	7.0	33 48.50	65.0	7	3.595	− 32 9 50.8	68.8	5	15.71
6049	π Bootis	3.5	34 8.83	47.4	2	2.817	+ 17 1 14.2	68.4	2	15.69
6050	Lacaille 6060 . . .	7.2	34 13.72	64.1	4	3.500	− 27 11 8.5	64.9	2	15.68
6051	ζ Bootis	4.8	14 34 27.96	45.4	1	+ 2.859	+ 14 19 49.1	68.5	2	− 15.67
6052	O. Arg. S. 13856 . .	7.1	34 50.52	61.8	3	3.442	− 23 53 26.8	59.9	4	15.65
6053	B. A. C. 4852 . . .	5.0	35 6.30	62.4	2	3.649	− 34 34 7.2	66.4	2	15.64
6054	4 Libræ	6.1	35 8.46	54.7	9	3.452	− 24 23 53.5	56.0	5	15.63
6055	Lacaille 6064 . . .	8.0	35 8.75	66.4	3	3.548	− 29 36 28.3	67.9	2	15.63
6056	Weisse (2) XIV, 752 .	7.0	14 35 23.36	68.3	2	+ 2.399	+ 38 44 40.6	46.4	1	− 15.62
6057	Lacaille 6067 . . .	8.0	35 26.02	62.4	2	3.545	− 29 23 48.4	68.0	2	15.62
6058	O. Arg. S. 13870 . .	8.2	35 26.59	61.8	3	3.443	− 23 51 38.4	59.9	4	15.62
6059	μ Virginis	4.5	35 41.17	62.8	6	3.146	− 5 2 51.3	61.0	4	15.60
6060	B. A. C. 4857 . . .	6.4	36 14.61	63.2	4	3.439	− 23 31 58.0	67.9	2	15.57
6061	B. A. C. 4858 . . .	5.8	14 36 24.59	63.4	2	+ 3.654	− 34 35 47.1	67.9	2	− 15.56
6062	Rumker 4800 . . .	7.0	36 28.66	62.4	2	1.959	+ 52 50 16.8	65.4	2	15.56
6063	Anonymous . . .	7.5	36 48.06	66.9	2	3.717	− 37 21 35.5	70.4	2	15.54
6064	Anonymous . . .	9.5	36 55.29	64.4	2	3.470	− 25 14 0.5	64.5	2	15.54
6065	Weisse (2) XIV, 788 .	7.0	36 59.73	68.4	2	2.426	+ 37 21 17.6	46.3	1	15.53
6066	Weisse XIV, 668 . .	8.0	14 37 0.81	61.4	6	+ 3.158	− 5 47 36.5	58.4	2	− 15.53
6067	34 Bootis	6.0	37 16.14	60.1	3	+ 2.638	+ 27 7 28.5	57.9	2	15.52
6068	Schwerd 853 . .	6.9	37 37.17	64.9	4	− 1.874	+ 80 15 49.9	66.5	2	15.50
6069	54 Hydræ, (1st *) . . .	6.0	37 54.22	64.4	8	+ 3.465	− 24 50 46.8	67.5	3	15.48
6070	54 Hydræ, (2d *) . . .	7.6	37 54.66	64.9	6	3.465	− 24 50 53.0	69.5	2	15.48

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6071	5 Libræ	6.1	14 38 14.89	62.4	7	+ 3.298	− 14 52 1.9	69.5	2	− 15.46
6072	Anonymous	9.1	38 18.57	68.4	2	2.636	+ 27 6 32.6	50.4	1	15.46
6073	Lacaille 6086	5.5	38 19.06	63.4	2	3.730	− 37 41 46.7	68.5	2	15.46
6074	108 Virginis	6.5*	38 22.47	61.1	8	3.053	+ 1 18 37.2	57.8	4	15.46
6075	Lamont 4482	8.0	38 27.24	65.9	2	3.069	+ 0 13 44.0	70.6	4	15.45
6076	ο Bootis	4.5*	14 38 42.56	60.3	2	+ 2.802	+ 17 33 33.2	53.3	3	− 15.44
6077	ε Bootis, (1st *)	. .	38 52.25	63.3	3	2.624	+ 27 39 59.3	70.5	1	15.43
6078	ε Bootis, (2d *)	2.3*	38 52.39	54.1	217	2.624	+ 27 39 58.6	53.1	67	15.43
6079	55 Hydræ	6.1	39 14.49	62.9	2	3.472	− 25 2 4.8	62.5	2	15.41
6080	Lalande 26923	7.5	39 22.34	68.4	2	2.508	+ 33 22 1.5	47.4	1	15.40
6081	Lacaille 6099	6.8	14 39 30.13	66.4	2	+ 3.511	− 27 6 31.5	67.9	2	− 15.39
6082	56 Hydræ	5.5	39 34.92	63.4	6	3.490	− 25 29 53.3	64.4	2	15.39
6083	57 Hydræ	5.8	39 46.72	63.4	2	3.492	− 26 3 25.0	62.5	2	15.38
6084	Lacaille 6100	7.0	39 54.26	66.4	2	3.679	− 35 15 13.7	69.0	2	15.37
6085	Anonymous.	8.2	40 9.63	68.4	2	3.721	− 37 2 44.6	67.8	3	15.35
6086	B. A. C. 4884	7.2	14 40 22.14	62.8	3	+ 3.472	− 24 54 21.5	67.0	2	− 15.34
6087	Weisse XIV, 748	7.3	40 23.72	67.1	3	3.067	+ 0 18 43.7	65.5	2	15.34
6088	Anonymous	7.2	40 24.20	68.4	2	2.412	+ 37 29 2.8	46.3	1	15.34
6089	O. Arg. S. 13951	8.1	41 10.98	68.5	3	3.451	− 23 40 43.5	57.4	2	15.30
6090	B. A. C. 4888	6.0	41 13.78	64.6	7	3.451	− 23 39 58.1	60.0	4	15.29
6091	Weisse XIV, 759	8.5	14 41 16.16	61.4	3	+ 3.171	− 6 31 14.5	58.4	2	− 15.29
6092	Lacaille 6109	7.0	41 20.60	68.9	2	3.609	− 31 50 26.0	67.4	2	15.29
6093	Anonymous	9.0	41 22.34	64.4	1	3.720	− 36 48 36.8	67.9	2	15.29
6094	μ Libræ	4.5	41 38.87	62.2	8	3.281	− 13 33 49.0	59.7	4	15.27
6095	Lacaille 6113	7.0	41 40.01	66.4	2	3.542	− 28 27 0.7	66.9	2	15.27
6096	Lacaille 6112	7.0*	14 41 43.	. .	.	+ 3.605	− 31 35 24.6	68.4	1	− 15.29
6097	O. Arg. S. 13958	7.8	41 50.63	68.5	2	3.452	− 23 38 8.3	57.8	3	15.26
6098	58 Hydræ	5.0	42 4.51	66.0	2	3.522	− 27 22 29.0	70.4	5	15.25
6099	Lalande 27023	7.2	42 31.06	68.4	2	2.386	+ 38 15 21.4	48.4	1	15.22
6100	O. Arg. S. 13978	7.8	42 38.07	65.0	5	3.530	− 27 44 28.7	65.0	4	15.21
6101	Weisse XIV, 787	8.5	14 42 38.75	65.4	2	+ 3.172	− 6 34 49.9	58.4	2	− 15.21
6102	8 Libræ	6.0	42 56.86	63.6	14	3.313	− 15 24 44.6	53.6	11	15.20
6103	Weisse XIV, 793	7.5	43 0.45	66.4	2	3.249	− 11 26 9.6	61.1	3	15.19
6104	α Libræ	1.0	43 8.35	55.5	214	+ 3.314	− 15 27 26.8	52.4	57	15.19
6105	Lalande F., 2537	8.0	43 17.70	64.4	2	− 2.086	+ 80 22 55.7	67.9	2	15.18
6106	Weisse (2) XIV, 936	8.0	14 43 24.45	69.4	2	+ 2.421	+ 36 39 16.7	46.4	1	− 15.17
6107	B. A. C. 4897	6.0	43 36.69	69.0	2	2.378	+ 38 23 22.3	47.4	4	15.16
6108	11 Libræ	5.5	43 45.64	62.9	2	3.098	− 1 42 47.8	60.0	2	15.15
6109	O. Arg. S. 13996	7.2	43 43.48	68.4	2	3.457	− 23 42 30.7	65.4	3	15.15
6110	Anonymous.	. .	43 49.08	46.2	1	3.286	− 13 43 11.1	46.2	1	15.15

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6111	B. A. C. 4902 . . .	6.0*	14 43 56.71	60.9	2	+ 2.582	+ 29 11 50.1	53.4	3	— 15.14
6112	B. A. C. 4901 . . .	4.8	44 4.75	66.4	2	3.739	— 37 13 28.4	68.0	2	15.13
6113	Anonymous. . . .	8.0	44 14.31	68.9	2	2.406	+ 37 10 30.7	48.2	1	15.12
6114	B. A. C. 4906 . . .	6.0	44 57.88	68.9	2	2.387	+ 37 50 53.1	47.4	2	15.08
6115	Σ Cat. Gen. 1668 . . .	6.3	44 59.82	62.4	2	1.945	+ 51 57 19.7	65.5	2	15.08
6116	Anonymous . . .	9.0	14 45 17.	. .	.	+ 3.738	— 37 2 56.3	65.9	2	— 15.06
6117	Lacaille 6134 . . .	7.5	45 29.13	65.1	6	3.538	— 27 49 47.3	65.0	2	15.05
6118	B. A. C. 4910 . . .	7.6	45 48.20	62.5	2	3.455	— 23 23 56.4	66.0	2	15.03
6119	Rumker 4840 . . .	8.8	45 49.58	64.9	2	3.052	+ 1 18 31.7	55.5	3	15.03
6120	Lacaille 6135 . . .	6.7	45 50.52	63.4	2	3.660	— 33 34 2.8	68.5	1	15.03
6121	B. A. C. 4911 . . .	6.4	14 46 3.54	65.2	9	+ 3.539	— 27 46 25.0	63.7	4	— 15.02
6122	B. A. C. 4912 . . .	5.3	46 5.40	63.8	6	3.642	— 32 43 36.7	66.5	2	15.01
6123	12 Libræ	6.0*	46 12.75	57.6	7	3.468	— 24 4 0.6	59.4	8	15.01
6124	O. Arg. S. 14042 . .	8.5	46 18.55	67.0	2	3.538	— 27 42 3.8	67.4	2	15.00
6125	Weisse XIV, 872 . .	8.5	46 35.98	61.4	2	3.070	+ 0 8 56.2	59.8	5	14.99
6126	Weisse XIV, 874 . .	8.0	14 46 39.10	61.4	2	+ 3.069	+ 0 10 14.8	59.8	5	— 14.98
6127	Lacaille 6135 . . .	6.0	46 50.30	71.4	1	3.659	— 33 24 3.7	67.5	1	14.98
6128	O. Arg. S. 14046 . .	8.2	46 57.10	68.4	2	3.565	— 28 57 39.3	66.4	2	14.97
6129	O. Arg. S. 14065 . .	8.5*	47 52.	. .	.	3.513	— 26 13 56.2	65.4	1	14.91
6130	Lacaille 6152 . . .	6.5	47.54.20	66.4	2	3.678	— 34 3 39.0	67.9	2	14.91
6131	Weisse XIV, 906 . .	8.3	14 48 25.06	68.4	2	+ 3.051	+ 1 18 7.5	55.5	2	— 14.88
6132	O. Arg. S. 14080 . .	6.0	48 44.92	64.7	3	3.504	— 25 42 57.3	68.0	2	14.86
6133	Anonymous . . .	8.0	48 45.58	64.4	2	3.515	— 26 13 59.2	69.5	3	14.86
6134	Lacaille 6157 . . .	6.4	48 48.02	63.4	4	3.639	— 32 15 55.7	68.4	2	14.86
6135	Lacaille 6162 . . .	6.2	48 52.92	66.5	2	3.562	— 28 35 21.1	66.9	2	14.85
6136	Lacaille 6164 . . .	7.0	14 49 8.69	63.4	4	+ 3.640	— 32 15 49.1	68.4	2	— 14.84
6137	ζ² Libræ	5.0	49 10.60	55.7	14	3.244	— 10 50 31.5	58.1	3	14.84
6138	B. A. C. 4923, (1st *) .	7.8	49 17.39	67.8	3	3.414	— 20 47 4.9	69.7	4	14.83
6139	B. A. C. 4923, (2d *) .	6.6	49 18.46	68.6	4	3.414	— 20 47 9.1	69.7	4	14.83
6140	14 Libræ	6.0	49 21.07	62.8	3	3.490	— 24 52 30.5	69.8	3	14.83
6141	O. Arg. S. 14094 . .	7.5	14 49 24.30	67.4	2	+ 3.428	— 21 34 59.7	68.5	2	— 14.82
6142	Anonymous . . .	7.6	50 14.90	68.4	2	2.352	+ 38 32 32.0	48.4	1	14.77
6143	59 Hydræ	5.5	50 22.55	54.8	7	3.535	— 27 5 33.2	54.7	4	14.76
6144	Lacaille 6178 . . .	6.8	50 24.24	65.9	2	3.762	— 37 19 0.5	68.5	2	14.76
6145	Groombridge 2168 . .	8.5	50 49.52	60.4	3	2.214	+ 43 25 31.7	56.7	3	14.74
6146	O. Arg. N. 14971 . .	8.3	14 50 51.19	68.4	2	+ 2.003	+ 49 42 3.1	70.7	4	— 14.74
6147	Groombridge 2169 . .	8.0	50 51.36	59.9	2	2.216	+ 43 21 31.7	56.9	2	14.74
6148	Anonymous . . .	8.2	51 1.13	62.8	3	+ 2.199	+ 43 52 50.3	68.9	2	14.73
6149	β Ursæ Minoris . . .	1.7	51 9.27	53.9	155	— 0.254	+ 74 43 38.9	54.6	113	14.72
6150	O. Arg. N. 14975 . .	8.6	51 16.24	68.4	2	+ 2.002	+ 49 38 56.9	69.1	5	14.71

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6151	Lalande 27298	9.0*	14 51 20.	. .	.	+ 1.810	+ 54 13 48.1	70.4	2	− 14.71
6152	B. A. C. 4937	5.0	51 44.44	62.4	2	1.979	+ 50 12 5.5	66.4	2	14.68
6153	Weisse (2) XIV, 1127	7.5	52 7.58	67.0	2	2.286	+ 40 43 32.6	70.1	3	14.66
6154	Weisse (2) XIV, 1130	8.8	52 8.40	65.4	1	2.286	+ 40 43 43.4	71.1	3	14.66
6155	Lacaille 6186	6.0	52 21.44	66.4	2	3.773	− 37 29 52.9	68.0	2	14.65
6156	Weisse (2) XIV, 1139	8.5	14 52 22.53	67.0	2	+ 2.285	+ 40 44 19.3	69.9	2	− 14.65
6157	Weisse (2) XIV, 1146	8.2	52 43.48	67.4	2	2.283	+ 40 47 4.3	70.1	3	14.62
6158	Weisse (2) XIV, 1154	8.6	52 57.87	64.3	7	2.188	+ 43 58 30.1	59.2	4	14.61
6159	O. Arg. N. 14996	8.0*	53 0.	. .	.	1.489	+ 59 56 38.0	71.5	1	14.61
6160	Weisse (2) XIV, 1162	8.6	53 14.04	67.4	2	2.188	+ 43 56 44.1	70.0	2	14.59
6161	Lacaille 6190	5.8	14 53 19.44	63.4	3	+ 3.686	− 33 48 5.0	69.0	2	− 14.59
6162	Lalande 27336	8.5	53 19.69	68.4	2	2.360	+ 37 47 33.4	48.4	1	14.59
6163	Lalande 27340	9.0	53 27.01	68.4	2	2.360	+ 37 48 30.2	58.4	1	14.58
6164	Anonymous	8.8	53 27.88	68.5	2	3.645	− 31 57 15.7	65.9	2	14.58
6165	δ Libræ	4.5*	53 29.76	63.1	3	3.200	− 7 57 38.0	69.0	2	14.58
6166	O. Arg. N. 15005	8.5	14 53 44.55	66.4	4	+ 1.537	+ 59 5 21.0	61.7	3	− 14.56
6167	60 Hydræ	6.0*	53 46.25	62.7	3	3.551	− 27 30 10.7	57.6	5	14.56
6168	Anonymous	9.3	53 53.16	66.4	3	2.186	+ 43 55	. .	.	14.55
6169	Anonymous	. .	53 58.28	66.0	2	1.535	+ 59 5 48.7	63.4	2	14.55
6170	Weisse (2) XIV, 1183	8.7	54 1.72	66.7	3	2.186	+ 43 53 49.6	63.2	4	14.55
6171	B. A. C. 4941	6.0	14 54 3.59	59.0	2	+ 3.107	− 2 11 51.6	70.5	2	− 14.55
6172	Lacaille 6198	5.4	54 25.72	63.9	2	3.650	− 32 5 17.9	65.3	2	14.52
6173	2 Serpentis	5.6	54 38.91	62.1	6	3.065	+ 0 24 57.8	60.7	3	14.51
6174	Weisse XIV, 1016	8.5	54 42.44	59.4	2	3.255	− 11 11 12.1	56.7	3	14.51
6175	Lacaille 6199	7.0	54 49.86	63.5	2	3.728	− 35 23 24.5	68.4	2	14.50
6176	Lacaille 6204, (1st *)	8.5	14 55 14.73	62.8	3	+ 3.549	− 27 17 6.0	67.5	3	− 14.47
6177	Lacaille 6204, (2d *)	. .	55 15.13	62.8	3	3.549	− 27 16 59.9	68.0	2	14.47
6178	Anonymous	9.2	55 40.52	67.4	2	2.901	+ 10 28	. .	.	14.45
6179	Anonymous	7.0	55 41.78	68.4	2	3.555	− 27 30 35.8	68.0	2	14.44
6180	20 Libræ	3.6	55 53.01	61.1	20	3.500	− 24 43 44.6	64.4	2	14.43
6181	ω Bootis	5.5	14 55 58.52	60.4	2	+ 2.628	+ 25 33 48.0	54.4	3	− 14.43
6182	Anonymous	7.8	56 6.75	68.4	2	3.776	− 37 8 17.9	65.8	2	14.42
6183	Anonymous	. .	56 7.17	65.5	1	2.898	+ 10 28	. .	.	14.42
6184	Lacaille 6215	7.0	56 11.88	63.0	2	3.561	− 27 44 52.1	62.5	2	14.41
6185	Weisse XIV, 1048	7.0	56 18.58	68.5	2	3.244	− 10 27 4.8	65.4	2	14.41
6186	β Bootis	3.0*	14 56 40.34	64.5	8	+ 2.264	+ 40 56 39.8	59.1	5	− 14.39
6187	Lacaille 6218	6.6	56 52.29	66.0	2	3.598	− 29 26 27.5	71.4	2	14.37
6188	Lacaille 6219	5.8	57 5.78	63.3	2	3.611	− 30 0 23.0	68.0	2	14.36
6189	Anonymous	8.2	57 6.50	67.0	2	3.533	− 26 18 6.3	68.1	3	14.36
6190	Σ Cat. Gen. 1683, (1st *)	7.5	57 9.49	66.4	2	2.973	+ 6 2 49.1	65.0	2	14.36

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6191	Σ Cat. Gen. 1683, (2d *)	7.3	14 57 9.69	66.4	2	+ 2.973	+ 6 2 38.4	65.0	2	− 14.36
6192	Anonymous	9.5	57 11.45	65.4	2	2.900	+ 10 27 51.2	72.5	2	14.35
6193	Weisse XIV, 1072.	9.0	57 18.06	64.9	2	3.268	− 11 50 46.2	57.4	2	14.35
6194	Lacaille 6221	6.8	57 27.02	63.5	2	+ 3.744	− 35 43 4.8	69.4	2	14.34
6195	Groombridge 2210.	7.5	57 28.68	65.7	2	−12.326	+ 86 31 31.0	71.4	2	14.34
6196	O. Arg. S. 14230	6.7	14 57 33.88	64.4	2	+ 3.513	− 25 14 30.8	69.9	2	− 14.33
6197	Anonymous	7.1	57 58.50	64.4	2	3.448	− 21 51 28.5	69.5	2	14.31
6198	B. A. C. 4963	6.2	58 1.24	65.9	2	3.481	− 23 34 54.9	62.5	3	14.30
6199	B. A. C. 4965	6.5	58 9.82	59.9	2	2.128	+ 45 11 35.8	63.5	2	14.29
6200	Anonymous	7.6	58 13.23	68.9	2	3.656	− 31 54 20.5	65.0	4	14.29
6201	O. Arg. S. 14246	6.2	14 58 21.92	65.4	3	+ 3.441	− 21 29 3.8	71.9	2	− 14.28
6202	ψ Bootis	5.2	58 26.77	62.5	21	2.583	+ 27 29 44.0	57.9	2	14.28
6203	Weisse XIV, 1091	8.8	58 29.90	71.4	2	3.249	− 10 39 4.5	71.4	2	14.27
6204	Anonymous	7.0	58 34.00	70.8	3	3.536	− 26 16 47.1	68.1	3	14.27
6205	Lacaille 6229	7.2	58 37.74	63.4	2	3.668	− 32 21 55.7	68.0	2	14.27
6206	ν Libræ	5.2	14 58 49.36	62.7	4	+ 3.337	− 15 42 40.2	71.2	4	− 14.25
6207	O. Arg. S. 14257	8.0	58 49.89	68.9	2	3.592	− 28 57 34.4	64.4	1	14.26
6208	B. A. C. 4972	6.7	59 6.70	66.4	2	3.484	− 23 39 1.2	62.5	3	14.24
6209	*i* Bootis, (1st *)	7.0	59 10.21	62.4	2	2.018	+ 48 11 59.6	70.5	3	14.23
6210	*i* Bootis, (2d *)	7.0	59 10.55	62.4	2	2.018	+ 48 12 2.2	70.5	2	14.23
6211	Weisse XIV, 1110	8.5	14 59 17.64	64.4	2	+ 3.101	− 1 47 26.7	69.4	1	− 14.23
6212	Weisse XIV, 1118	8.5	59 45.50	59.9	2	3.101	− 1 45 18.1	60.4	3	14.20
6213	Lacaille 6237	7.2	59 48.74	65.9	2	3.785	− 37 2 51.7	65.8	2	14.19
6214	Weisse XIV, 1121	8.0	14 59 54.34	59.9	2	+ 3.101	− 1 44 19.2	60.4	3	14.19
6215	B. A. C. 4982	6.0	15 0 4.29	68.9	2	− 4.724	+ 83 5 0.0	64.7	7	14.18
6216	O. Arg. S. 14277	8.4	15 0 5.60	66.8	3	+ 3.537	− 26 10 25.0	70.5	2	− 14.18
6217	Lacaille 6239	6.8	0 5.90	68.5	2	3.811	− 37 59 35.3	67.4	2	14.17
6218	Weisse XIV, 1129	8.0	0 15.29	61.4	3	3.063	+ 0 34 15.2	67.5	2	14.17
6219	O. Arg. S. 14279	9.0	0 17.31	64.4	2	3.446	− 21 33 21.2	69.1	3	14.16
6220	O. Arg. S. 14278	7.7	0 17.55	68.9	2	3.593	− 28 49 27.9	64.4	2	14.16
6221	Weisse XIV, 1131	9.0	15 0 19.60	61.4	2	+ 3.064	+ 0 27 22.5	61.4	2	− 14.16
6222	O. Arg. S. 14289	7.0	0 40.70	67.4	4	3.534	− 25 57 26.2	69.6	4	14.14
6223	Weisse XIV, 1142.	8.2	0 50.90	60.9	4	3.064	+ 0 29 2.7	58.2	5	14.13
6224	Anonymous	9.0	0 52.78	68.9	2	3.664	− 31 57 7.3	66.0	2	14.13
6225	O. Arg. S. 14294	9.0	1 0.	. .	.	3.440	− 21 42 2.7	72.0	2	14.12
6226	Weisse XIV, 1144	9.0	15 1 2.52	67.4	2	+ 3.260	− 11 11 11.4	71.5	2	− 14.12
6227	O. Arg. S. 14297	8.2	1 2.90	67.8	3	3.440	− 21 40 37.2	72.1	3	14.12
6228	Weisse (2) XIV, 1326	7.0*	1 6.05	47.5	1	2.356	+ 36 59 46.5	46.4	2	14.11
6229	Anonymous	8.5	1 7.40	63.5	1	3.709	− 33 50 39.9	67.5	1	14.11
6230	*c* Bootis	5.5	1 9.36	71.4	2	2.621	+ 25 24 57.7	71.5	4	14.11

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6231	Weisse XIV, 1149	7.8	15 1 18.28	65.4	2	+ 3.261	− 11 15 4.2	67.5	2	− 14.10
6232	Weisse XIV, 1150	7.0	1 19.54	61.4	4	3.300	− 13 27 41.6	59.4	3	14.10
6233	Anonymous	7.5	1 21.22	70.1	3	3.787	− 36 56 14.0	69.4	2	14.10
6234	B. A. C. 4984	5.5	1 41.64	65.5	2	3.485	− 23 29 53.3	69.0	2	14.08
6235	Weisse XV, 2	8.3	1 55.51	59.8	4	3.106	− 2 2 19.2	59.4	4	14.06
6236	Weisse XV, 3	8.2	15 2 1.00	65.4	2	+ 3.258	− 11 2 16.6	65.4	2	− 14.06
6237	B. A. C. 4985	6.0	2 2.21	63.5	4	3.533	− 25 47 47.1	64.9	2	14.05
6238	Weisse XV, 10	7.0	2 13.60	67.4	2	3.153	− 4 51 19.9	67.9	2	14.04
6239	*b* Bootis	5.5	2 21.18	66.4	2	2.589	+ 26 50 12.6	58.4	2	14.04
6240	B. A. C. 4993	6.0*	2 29.58	60.3	3	2.613	+ 25 38 46.6	53.8	8	14.02
6241	Anonymous	. .	15 2 34.27	69.4	1	+ 3.792	− 36 58 13.4	65.8	2	− 14.02
6242	Lacaille 6258	6.5	3 5.09	63.7	3	3.697	− 33 6 19.4	67.5	2	13.99
6243	Lacaille 6261	7.0	3 51.80	63.5	2	3.796	− 36 59 30.4	66.7	3	13.94
6244	O. Arg. N. 15139	8.0	3 59.34	65.4	2	2.040	+ 47 0 50.4	67.9	2	13.93
6245	Anonymous	9.5	4 3.86	69.5	1	3.522	− 25 5 22.9	68.5	1	13.93
6246	ι^1 Libræ	5.5*	15 4 14.81	61.3	28	+ 3.408	− 19 15 33.1	59.8	8	− 13.92
6247	Dorpat 1914, (1st *)	9.3	4 21.44	67.4	2	3.155	− 4 56 32.2	70.0	2	13.91
6248	Dorpat 1914, (2d *)	8.3	4 22.25	65.4	4	3.155	− 4 57 2.6	69.8	3	13.91
6249	O. Arg, S. 14349	7.9	4 28.89	67.6	7	3.525	− 25 9 16.1	69.0	2	13.90
6250	Anonymous	7.8	4 46.49	70.0	5	3.800	− 37 0 59.5	68.4	3	13.88
6251	B. A. C. 5001	6.5	15 5 0.64	68.4	2	+ 2.520	+ 29 45 44.3	66.0	2	− 13.87
6252	B. A. C. 4998	6.5	5 6.86	62.9	2	3.492	− 23 28 42.9	62.5	2	13.86
6253	Lacaille 6267	6.5	5 11.27	68.4	2	3.826	− 37 57 50.2	65.0	2	13.85
6254	23 Libræ	7.4	5 18.18	62.5	2	3.518	− 24 46 42.5	68.4	2	13.85
6255	ι^2 Libræ	5.0	5 21.03	61.4	3	3.407	− 19 7 2.0	67.5	2	13.85
6256	B. A. C. 5006	6.0	15 5 36.14	63.8	5	+ 3.537	− 25 39 57.2	68.0	2	− 13.83
6257	Anonymous	8.0	5 39.35	64.4	2	3.534	− 25 31 27.6	70.4	2	13.83
6258	1 Lupi	5.2	6 3.18	56.1	7	3.655	− 30 59 36.8	54.7	4	13.80
6259	Weisse XV, 79	7.5	6 3.33	60.1	4	3.305	− 13 29 47.2	59.4	3	13.80
6260	Weisse (2) XV, 140	8.5	6 32.87	62.1	3	2.065	+ 46 0 37.0	58.8	3	13.77
6261	Weisse XV, 91	7.2	15 6 34.19	59.7	3	+ 3.309	− 13 40 59.2	55.5	2	− 13.77
6262	26 Libræ	6.0	6 40.16	45.4	1	3.374	− 17 14 34.8	70.0	2	13.76
6263	Weisse XV, 99	7.0	6 49.00	71.4	2	3.086	− 0 48 27.4	71.4	2	13.75
6264	B. A. C. 5018	7.0	6 52.32	63.5	2	3.575	− 27 19 59.2	67.5	2	13.75
6265	B. A. C. 5020	6.5	7 17.65	64.0	2	3.570	− 27 4 27.9	66.5	2	13.72
6266	Lacaille 6289	7.5	15 7 28.28	65.5	2	+ 3.863	− 39 2 22.2	69.5	2	− 13.71
6267	O. Arg S. 14402	9.0	7 43.80	67.4	2	3.436	− 20 24 58.8	69.5	2	13.70
6268	Lacaille 6293	7.4	8 0.44	63.5	2	3.834	− 37 55 36.2	69.2	3	13.68
6269	Lalande 27803	7.8	8 2.64	68.5	2	2.377	+ 35 24 23.7	49.3	1	13.68
6270	3 Serpentis	6.0*	8 13.88	62.4	2	2.978	+ 5 27 40.3	60.8	3	13.66

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6271	Anonymous	. .	15 8 14.	. .	.	+ 3.809	− 36 58 43.9	65.9	2	− 13.66
6272	B. A. C. 5026	6.5	8 15.71	68.5	1	2.285	+ 38 47 28.3	47.7	3	13.66
6273	B. A. C. 5027	7.1	8 36.42	65.9	2	3.498	− 23 29 24.3	62.5	2	13.64
6274	2 Lupi	5.0	9 19.18	63.1	3	3.631	− 29 37 51.7	64.3	2	13.59
6275	O. Arg. S. 14421	9.0	9 24.48	69.4	2	3.639	− 29 57 34.4	69.8	3	13.59
6276	β Libræ	2.0*	15 9 28.65	55.4	217	+ 3.225	− 8 51 49.4	49.6	74	− 13.58
6277	O. Arg. S. 14428	6.7	9 48.34	65.5	2	3.434	− 20 12 14.0	67.9	2	13.56
6278	δ Bootis	5.0	9 51.52	69.4	2	2.412	+ 33 50 20.5	64.6	5	13.56
6279	O. Arg. S. 14435	9.3	10 14.21	68.9	2	3.649	− 30 18 32.8	64.4	1	13.53
6280	O. Arg. S. 14436	8.0	10 17.02	65.1	3	3.438	− 20 20 41.3	68.0	2	13.53
6281	Anonymous	8.7	15 10 28.73	68.4	2	+ 3.818	− 37 3 37.3	66.7	3	− 13.52
6282	Lalande 27852	7.5	10 39.77	59.5	2	3.443	− 20 35 21.2	57.4	3	13.49
6283	B. A. C. 5039	7.0	10 56.98	64.0	2	3.507	− 23 45 2.1	63.1	3	13.49
6284	Weisse (2) XV, 237	6.2	11 0.87	68.5	2	2.310	+ 37 35 9.0	47.3	2	13.48
6285	Lacaille 6318	7.2	11 25.72	66.4	2	3.751	− 34 24 45.5	69.1	3	13.46
6286	B. A. C. 5041	7.3	15 11 27.64	64.0	2	+ 3.508	− 23 45 22.6	63.1	3	− 13.45
6287	Lalande 27880	7.5	11 28.35	68.9	2	3.407	− 18 39 19.2	57.4	3	13.45
6288	O. Arg. S. 14459	8.5	11 45.78	66.9	2	3.440	− 20 21 22.8	68.0	2	13.43
6289	Anonymous	9.5	11 58.88	67.4	2	3.524	− 24 27 56.4	67.9	2	13.42
6290	B. A. C. 5048	6.0*	12 7.84	60.3	2	2.689	+ 21 5 11.9	53.3	3	13.41
6291	O. Arg. N. 15259	7.5*	15 12 9.04	61.4	2	+ 0.686	+ 67 22 36.6	67.5	1	− 13.41
6292	5 Serpentis	5.5*	12 10.13	60.9	2	3.032	+ 2 17 52.6	56.9	4	13.41
6293	Anonymous.	. .	12	. .	.	0.688	+ 67 21 43.9	69.5	1	13.40
6294	Lalande 27907	9.0	12 18.48	66.9	2	3.469	− 21 44 54.3	68.4	2	13.40
6295	Anonymous	8.8	12 19.72	70.1	3	3.824	− 37 5 45.7	68.4	1	13.40
6296	B. A. C. 5051	7.5	15 12 23.16	63.2	3	+ 3.546	− 25 28 28.7	65.9	2	− 13.39
6297	Lacaille 6329	6.8	12 29.46	63.8	3	3.842	− 37 42 31.3	64.9	2	13.39
6298	Weisse XV, 210	9.0	12 37.10	62.2	4	3.310	− 13 27 26.3	62.5	1	13.38
6299	Anonymous	8.0	12 53.89	68.4	3	3.824	− 37 2 23.9	66.7	3	13.36
6300	28 Libræ	6.0	12 57.66	63.4	2	3.389	− 17 38 51.8	61.6	5	13.36
6301	Lacaille 6337	6.8	15 13 12.61	69.8	6	+ 3.828	− 37 7 39.8	66.8	3	− 13.32
6302	Weisse XV, 221	9.0	13 19.83	61.5	4	3.308	− 13 18 39.2	57.7	4	13.33
6303	Lacaille 6342	6.5	13 30.26	63.9	2	3.689	− 31 40 57.7	66.9	2	13.33
6304	Lacaille 6343	7.7	13 37.12	71.5	3	3.752	− 34 12 7.2	69.7	3	13.32
6305	Lacaille 6344	7.2	13 42.75	65.4	3	3.738	− 33 39 6.4	69.0	2	13.31
6306	O. Arg. N. 15272	7.3	15 13 52.65	62.4	2	+ 2.052	+ 45 31 38.0	69.5	2	− 13.30
6307	O. Arg. S. 14487	8.5	13 57.62	68.5	2	3.647	− 29 52 25.5	67.4	2	13.29
6308	Lalande 27996	7.4	13 59.69	68.5	2	2.281	+ 38 17 47.8	48.5	1	13.29
6309	φ^2 Lupi	5.0	14 13.17	61.7	3	3.810	− 36 21 12.8	54.5	2	13.27
6310	Lacaille 6351	7.5	14 15.30	62.5	2	3.624	− 28 50 10.4	69.7	4	13.27

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6311	o Coronæ Borealis . .	6.0*	15 14 22.02	59.5	2	+ 2.490	+ 30 7 33.5	53.4	3	− 13.27
6312	B. A. C. 5062 . . .	7.0	14 35.64	62.5	2	3.566	− 26 11 4.5	63.0	2	13.25
6313	Anonymous . . .	7.2	14 38.54	69.4	2	3.695	− 31 48 34.7	67.4	2	13.25
6314	Lacaille 6354 . . .	7.5	14 45.93	66.4	2	3.756	− 34 14 17.0	69.1	3	13.24
6315	Weisse XV, 249 . .	8.5	14 49.52	60.9	2	3.329	− 14 22 26.8	56.8	3	13.23
6316	Weisse XV, 254 . .	8.8	15 15 6.06	62.5	5	+ 3.306	− 13 5 26.5	67.2	3	− 13.22
6317	B. A. C. 5064 . . .	6.0	15 6.10	65.4	2	1.842	+ 50 43 20.1	69.0	2	13.22
6318	Anonymous . . .	8.0	15 7.06	69.4	2	3.310	− 13 17 47.6	56.8	4	13.22
6319	O. Arg. S. 14508 . .	8.8	15 13.60	66.0	2	3.579	− 26 45 14.1	69.5	2	13.21
6320	o^2 Libræ	5.5	15 13.64	60.5	3	3.335	− 14 37 53.8	70.0	2	13.21
6321	Anonymous . . .	8.2	15 15 14.07	68.4	3	+ 3.832	− 37 3 53.0	66.7	3	− 13.20
6322	O. Arg. S. 14511 . .	9.0	15 19.37	69.4	2	3.573	− 26 27 31.0	67.5	2	13.20
6323	Anonymous . . .	. .	15 26.	. .	.	2.177	+ 41 38 31.7	71.5	1	13.19
6324	B. A. C. 5066 . . .	7.0	15 38.99	62.4	6	3.581	− 26 48 8.2	69.5	2	13.18
6325	Rumker 5048 . . .	9.5	15 41.25	47.5	1	2.172	+ 41 45 7.2	71.5	2	13.18
6326	Weisse XV, 265 . . .	8.0	15 15 43.62	59.9	2	+ 3.320	− 13 50 45.9	72.4	2	− 13.18
6327	Anonymous . . .	7.8	15 56.72	68.4	2	3.832	− 37 0 3.3	68.4	1	13.16
6328	O. Arg. S. 14513 . .	8.5	16 1.87	64.7	3	3.484	− 22 13 20.3	68.5	2	13.16
6329	Lacaille 6359 . . .	7.4	16 4.63	63.5	2	3.851	− 37 40 7.6	68.4	2	13.15
6330	Anonymous . . .	. .	16 11.	. .	.	3.833	− 37 0 2.2	71.0	2	13.14
6331	50 Bootis	5.5	15 16 12.39	59.4	2	+ 2.405	+ 33 26 10.5	53.4	3	− 13.14
6332	Weisse XV, 281 . .	8.0	16 18.82	59.9	2	3.320	− 13 48 30.2	55.8	3	13.14
6333	ε Libræ	5.0	16 36.85	54.9	4	3.247	− 9 48 59.7	60.2	4	13.12
6334	O. Arg. S. 14531 . .	7.6	16 50.06	64.5	2	3.472	− 21 32 41.3	70.5	2	13.10
6335	Anonymous. . . .	8.5	16 55.31	63.3	1	3.835	− 36 59 9.5	67.4	3	13.09
6336	Anonymous . . .	8.1	15 16 56.22	66.4	6	+ 1.580	+ 55 49 42.2	63.4	1	− 13.10
6337	Lacaille 6368 . . .	7.6	16 57.24	64.9	2	3.904	− 39 23 30.1	70.5	2	13.09
6338	Lacaille 6372 . . .	6.5	17 7.93	65.4	1	+ 3.808	− 35 58 34.0	69.0	2	13.08
6339	11 Ursæ Minoris . . .	5.5	17 14.03	66.2	2	− 0.111	+ 72 19 54.1	63.7	4	13.08
6340	O. Arg. S. 14533 . .	7.5	17 14.38	64.5	2	+ 3.602	− 27 35 52.4	68.4	2	13.08
6341	Anonymous . . .	7.0	15 17 20.84	70.8	3	+ 3.813	− 36 6 1.1	67.9	2	− 13.07
6342	O. Arg. S. 14544 . .	7.0	17 59.70	63.5	3	3.460	− 20 53 8.8	69.0	2	13.03
6343	Lacaille 6376 . . .	5.8	18 20.75	67.4	2	3.819	− 36 16 23.7	68.0	2	13.00
6344	O. Arg. S. 14548 . .	7.0	18 22.83	67.0	2	3.602	− 27 28 44.7	69.4	2	13.00
6345	Anonymous. . . .	. .	18 24.79	50.5	2	0.901	+ 64 52 8.1	50.5	2	13.00
6346	O. Arg. S. 14554 . .	7.7	15 18 35.35	64.5	5	+ 3.484	− 22 0 37.8	70.0	2	− 12.99
6347	Anonymous . . .	8.4	18 56.66	68.5	2	2.254	+ 38 42 53.0	48.5	1	12.96
6348	Rumker 5072 . . .	7.2	19 4.12	61.5	3	2.255	+ 38 41 19.5	55.4	3	12.95
6349	Anonymous. . . .	9.5	19 11.03	69.0	2	3.711	− 32 1 31.5	63.4	1	12.94
6350	μ^1 Bootis	4.5	19 12.07	66.1	17	2.278	+ 37 52 11.4	51.5	9	12.95

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			h. m. s.			″	° ′ ″			″
6351	Weisse (2) XV, 414 .	6.0	15 19 13.39	63.4	4	+ 2.279	+ 37 50 24.6	54.1	6	− 12.94
6352	τ^1 Serpentis	5.5*	19 17.91	54.3	5	2.781	+ 15 55 20.9	54.5	2	12.94
6353	Lacaille 6382 . . .	7.0	19 20.05	68.4	2	3.846	− 37 8 17.2	65.8	2	12.93
6354	Weisse (2) XV, 435 .	9.0*	20 3.	. .	.	2.280	+ 37 42 20.7	48.5	2	12.89
6355	Lacaille 6388 . . .	6.8	20 13.68	67.4	3	3.877	− 38 8 38.3	66.8	3	12.87
6356	B. A. C. 5091 . . .	6.0	15 20 18.77	60.7	6	+ 0.984	+ 63 50 31.8	54.4	3	− 12.87
6357	ζ^1 Libræ	5.3	20 21.95	62.3	16	3.371	− 16 13 30.0	69.5	4	12.87
6358	B. A. C. 5090 . . .	6.5	20 29.08	63.2	4	3.626	− 28 22 34.5	66.5	2	12.86
6359	B. A. C. 5092 . . .	7.0	20 35.71	59.8	3	+ 1.949	+ 47 33 20.1	53.4	3	12.85
6360	γ^2 Ursæ Minoris . . .	3.0*	20 58.75	67.7	4	− 0.156	+ 72 19 55.1	63.7	17	12.83
6361	Rumker 5093 . . .	7.0	15 21 11.72	62.4	2	+ 2.051	+ 44 47 37.8	69.5	2	− 12.81
6362	O. Arg. N. 15370 . .	8.0*	21 20.57	64.0	5	1.797	+ 51 5 11.6	63.4	2	12.80
6363	10 Serpentis	5.5	21 34.01	62.4	2	3.030	+ 2 19 50.4	61.8	5	12.79
6364	Anonymous . . .	7.5	21 34.57	68.4	3	3.854	− 37 12 14.6	65.8	2	12.79
6365	Radcliffe 3387 . . .	7.3	21 36.81	65.9	2	2.060	+ 44 29 47.8	68.0	2	12.79
6366	Anonymous . . .	8.5	15 21 44.59	70.2	4	+ 3.712	− 31 49 0.7	67.4	2	− 12.77
6367	ι Draconis	4.5	21 49.19	65.4	2	1.325	+ 59 27 25.2	61.3	4	12.77
6368	Anonymous . . .	7.8	21 51.48	69.4	2	3.745	− 33 5 44.6	64.0	2	12.77
6369	Weisse XV, 400 . .	8.2	22 8.52	59.8	3	3.336	− 14 19 44.1	55.8	3	12.75
6370	Lacaille 6405 . . .	6.0	22 29.62	63.9	2	3.748	− 33 10 12.1	66.5	2	12.72
6371	Lalande 28213 . . .	7.2	15 22 34.82	68.5	2	+ 3.477	− 21 23 45.3	63.0	4	− 12.72
6372	ζ^3 Libræ	6.0	22 46.95	45.5	1	3.371	− 16 7 35.2	68.5	2	12.70
6373	Anonymous . . .	7.6	22 53.67	64.8	3	3.515	− 23 10 19.3	69.0	2	12.70
6374	Lacaille 6406 . . .	7.5	23 1.55	68.5	2	3.723	− 32 8 37.4	68.5	3	12.69
6375	Lacaille 6409 . . .	6.3	23 5.82	64.2	4	3.729	− 32 23 56.9	68.0	2	12.68
6376	Weisse (2) XV, 518 .	5.8	15 23 19.08	47.5	1	+ 2.226	+ 39 12 32.7	70.0	2	− 12.67
6377	Lacaille 6410 . . .	7.7	23 26.37	66.4	2	+ 3.870	− 37 35 22.2	67.4	1	12.66
6378	B. A. C. 5140 . . .	6.0*	23 59.72	62.0	8	−23.539	+ 87 45 47.3	62.1	2	12.62
6379	B. A. C. 5105 . . .	7.1	24 0.18	64.0	4	+ 3.522	− 23 24 1.5	64.0	2	12.62
6380	O. Arg. S. 14624 . .	8.5	24 1.45	56.0	5	3.481	− 21 29 10.4	56.3	6	12.62
6381	B. A. C. 5109 . . .	6.5*	15 24 34.50	64.5	2	+ 3.434	− 19 11 25.3	57.4	3	− 12.58
6382	Weisse XV, 444 . .	8.2	24 43.10	64.9	4	3.239	− 9 6 25.3	65.5	3	12.57
6383	Anonymous . . .	7.1	24 43.47	68.4	3	3.862	− 37 9 45.3	65.8	2	12.57
6384	B. A. C. 5110 . . .	7.3	24 46.94	62.5	2	3.565	− 25 19 19.9	61.0	4	12.57
6385	Anonymous . . .	8.5	24 47.	. .	.	3.741	− 32 42 48.1	69.1	3	12.56
6386	Lacaille 6415 . . .	5.8	15 24 48.32	64.9	2	+ 3.934	− 39 35 25.2	68.5	2	− 12.57
6387	B. A. C. 5111, (1st *) .	7.0	24 52.23	63.1	3	3.536	− 24 0 38.7	69.5	2	12.56
6388	B. A. C. 5111, (2d *) .	6.8	24 52.82	63.1	3	3.536	− 24 0 43.5	69.5	2	12.56
6389	ζ^4 Libræ	5.5	25 0.92	69.4	2	3.378	− 16 22 31.1	69.5	2	12.55
6390	Radcliffe 3398 . . .	7.0	25 20.11	66.2	2	1.543	+ 55 40 33.6	70.5	2	12.53

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			h. m. s.			"	° ′ ″			"
6391	Lacaille 6421 . . .	6.8	15 25 24.04	63.7	3	+ 3.742	− 32 41 42.4	71.5	2	− 12.52
6392	Weisse (2) XIV, 571 .	7.5	25 31.42	68.5	2	2.236	+ 38 39 27.2	48.4	1	12.52
6393	B. A. C. 5117 . . .	6.6	25 36.25	64.3	7	3.553	− 24 43	. .	.	12.51
6394	O. Arg. S. 14648 . .	7.0	25 36.43	71.4	2	3.551	− 24 38 4.9	70.4	5	12.51
6395	11 Serpentis	6.0	25 45.53	45.4	2	3.085	− 0 42 31.4	70.5	2	12.50
6396	ν^1 Bootis	5.5	15 25 54.00	64.4	2	+ 2.153	+ 41 18 42.9	70.0	2	− 12.49
6397	Lalande 28347 . . .	6.8	26 2.83	69.4	2	2.281	+ 37 5 44.7	47.4	1	12.48
6398	36 Libræ	6.0	26 8.52	62.5	2	3.619	− 27 34 19.4	66.9	2	12.47
6399	Lalande 28320 . . .	8.0*	26 15.63	47.3	2	3.309	− 12 45 19.0	47.3	2	12.47
6400	Anonymous . . .	8.9	26 31.23	68.5	2	3.726	− 31 56 34.3	63.4	1	12.45
6401	37 Libræ	4.0	15 26 31.49	47.8	4	+ 3.249	− 9 34 54.5	60.3	4	− 12.45
6402	ν^2 Bootis	5.5*	26 46.36	59.5	2	2.148	+ 41 22 33.3	53.5	3	12.43
6403	O. Arg. S. 14665 . .	7.3	26 47.53	70.7	3	3.553	− 24 37 57.7	69.9	5	12.43
6404	B. A. C. 5127 . . .	7.0	26 48.66	62.8	2	3.644	− 28 34 39.2	66.5	2	12.43
6405	B. A. C. 5128 . . .	7.0	26 54.98	62.5	2	3.567	− 25 15 42.3	60.5	2	12.42
6406	O. Arg. S. 14669 . .	8.9	15 27 14.45	71.2	3	+ 3.624	− 27 44 2.2	68.0	2	− 12.40
6407	O. Arg. S. 14674 . .	8.2	27 18.27	68.5	1	3.555	− 24 40 43.1	67.5	2	12.39
6408	Lacaille 6439 . . .	5.8	27 24.84	62.9	4	3.745	− 32 37 20.6	68.5	2	12.39
6409	B. A. C. 5133 . . .	6.0	27 40.63	65.9	2	3.644	− 28 31 44.7	66.5	2	12.37
6410	γ Libræ	4.3	27 41.94	59.8	20	3.341	− 14 19 12.1	62.4	4	12.37
6411	Anonymous . . .	8.8	15 27 45.32	69.5	1	+ 3.535	− 23 43 46.3	66.5	2	− 12.36
6412	Lalande 28391, (1st *) .	8.5	27 56.03	66.4	2	2.531	+ 27 10 54.6	71.4	1	12.35
6413	Lalande 28391, (2d *) .	8.0	27 56.51	66.4	2	2.531	+ 27 10 54.6	71.4	1	12.35
6414	Anonymous . . .	7.8	27 58.46	68.9	2	3.735	+ 32 10 5.1	65.5	2	12.35
6415	Anonymous . . .	8.4	28 0.72	68.9	2	3.733	− 32 6 46.1	65.5	2	12.35
6416	Anonymous . . .	. .	15 28 28.	. .	.	+ 3.915	− 38 37 22.3	65.5	2	− 12.32
6417	39 Libræ	5.4	28 31.96	61.6	7	3.625	− 27 40 3.3	65.0	2	12.31
6418	Anonymous . . .	9.5	28 40.47	69.4	1	3.502	− 22 8 8.5	57.4	2	12.30
6419	B. A. C. 5142 . . .	6.5	28 42.78	66.4	2	3.588	− 26 1 34.1	66.6	2	12.30
6420	Anonymous . . .	8.5	28 43.17	69.4	2	3.732	− 32 1 2.4	69.0	2	12.30
6421	α Coronæ Borealis . .	2.0*	15 28 45.61	55.8	222	+ 2.529	+ 27 11 17.9	50.9	92	− 12.29
6422	Anonymous . . .	8.8	28 59.44	68.5	2	3.509	− 22 26 30.9	57.4	2	12.28
6423	B. A. C. 5145 . . .	6.3	29 4.94	64.5	2	3.584	− 25 48 47.5	64.5	2	12.27
6424	τ^3 Serpentis	6.0*	29 12.06	59.7	3	2.726	+ 18 7 26.0	53.3	4	12.26
6425	Anonymous . . .	6.6	29 20.66	64.5	2	3.492	− 21 39 30.6	69.5	2	12.25
6426	Lacaille 6447 . . .	7.5	15 29 21.03	64.4	2	+ 3.920	− 38 41 46.5	66.4	3	− 12.25
6427	Lacaille 6448 . . .	6.7	29 30.21	64.4	2	3.919	− 38 39 52.9	66.4	3	12.24
6428	Lalande 28414 . . .	6.0*	29 34.57	56.7	3	3.515	− 22 40 26.3	54.0	4	12.24
6429	B. A. C. 5149 . . .	6.9	29 45.47	63.4	4	3.629	− 27 44 31.5	64.8	3	12.23
6430	Radcliffe 3411 . . .	6.5	30 3.39	62.4	2	2.028	+ 44 31 58.8	67.9	2	12.21

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6431	40 Libræ	3.5	15 30 3.92	62.5	2	+ 3.668	− 29 18 49.6	66.5	2	− 12.21
6432	μ Coronæ Borealis	5.0*	30 6.56	60.8	3	2.198	+ 39 28 36.5	56.0	5	12.20
6433	Lalande 28446	. .	30 31.18	50.4	2	3.514	− 22 35 14.5	53.9	2	12.17
6434	Anonymous	9.0	30 41.23	65.4	1	3.843	− 35 58	. .	.	12.16
6435	Lalande 28453	7.0	30 44.17	60.9	2	3.401	− 17 12 7.4	55.7	3	12.16
6436	Anonymous	8.5	15 30 51.06	69.5	1	+ 3.844	− 35 58 35.0	70.4	2	− 12.15
6437	41 Libræ	5.5	30 51.24	65.0	2	3.434	− 18 50 17.1	68.5	2	12.15
6438	ψ^1 Lupi	4.8	30 52.91	56.9	4	3.788	− 33 57 5.5	58.9	2	12.15
6439	Radcliffe 3415	8.0	30 57.97	63.9	2	2.170	+ 40 17 38.3	68.5	2	12.14
6440	Anonymous	7.5	30 59.06	64.7	3	3.837	− 35 42 43.1	70.5	2	12.14
6441	Anonymous	9.0	15 31 0.	. .	.	+ 3.911	− 38 15 0.2	67.4	2	− 12.14
6442	Radcliffe 3416	7.5	31 3.62	63.9	2	2.170	+ 40 15 55.1	65.1	3	12.14
6443	B. A. C. 5163	7.0	31 7.52	63.4	2	3.619	− 27 11 0.2	68.0	2	12.13
6444	Lalande 28466	6.0*	31 7.58	50.4	3	3.517	− 22 41 19.9	57.4	5	12.13
6445	O. Arg. S. 14736	9.0	31 19.85	64.4	3	3.532	− 23 20 24.8	67.5	2	12.12
6446	Weisse XV, 585	8.2	15 31 27.34	62.0	3	+ 3.097	− 1 19 28.7	55.8	3	− 12.11
6447	Anonymous	8.5	31 30.85	68.5	2	3.512	− 22 25 56.7	66.1	3	12.10
6448	Lacaille 6473	6.5	31 34.85	64.5	2	3.706	− 30 45 15.2	69.8	3	12.10
6449	Lacaille 6471	6.4	31 50.28	64.6	6	3.953	− 39 31 27.6	66.0	2	12.08
6450	42 Libræ	5.4	32 0.67	63.2	9	3.533	− 23 21 35.0	61.0	6	12.07
6451	φ Bootis	5.5*	15 32 48.00	59.4	3	+ 3.148	+ 40 48 38.5	53.3	4	− 12.01
6452	Anonymous	8.8	32 55.60	68.4	2	3.370	− 15 32 21.6	70.0	2	12.00
6453	Anonymous	7.0	32 57.96	68.5	2	2.220	+ 38 29 15.5	47.8	3	12.00
6454	B. A. C. 5167	7.4	32 58.16	62.5	2	3.662	− 28 50 41.5	67.5	2	12.00
6455	Weisse XV, 620	9.0*	32 58.52	61.4	3	3.107	− 1 52 12.9	56.4	2	12.00
6456	Anonymous	9.0	15 33 7.89	71.4	1	+ 2.064	+ 43 14 30.7	70.5	1	− 11.99
6457	Anonymous	7.5	33 31.30	65.1	3	3.832	− 35 18 21.2	68.5	2	11.96
6458	B. A. C. 5171	7.4	33 32.78	64.4	2	3.880	− 36 58 18.7	65.9	2	11.96
6459	ψ^2 Lupi	5.4	33 46.24	56.9	4	3.803	− 34 15 26.0	58.4	2	11.95
6460	Weisse XV, 637	9.0	33 48.44	59.4	2	3.362	− 15 6 21.0	58.4	2	11.94
6461	κ Libræ	5.0	15 33 53.09	64.0	8	+ 3.447	− 19 13 17.5	64.4	2	− 11.94
6462	Lacaille 6491	6.5	33 54.80	64.1	3	3.736	− 31 44 1.7	68.9	2	11.94
6463	ζ Coronæ Borealis, (1st *)	6.8	34 5.99	68.9	2	2.259	+ 37 5 36.6	47.4	2	11.92
6464	ζ Coronæ Borealis, (2d *)	5.5	34 6.37	68.9	2	2.259	+ 37 5 32.3	47.3	6	11.92
6465	Weisse (2) XV, 822	8.0	34 6.69	70.5	1	2.063	+ 43 11 17.9	69.5	2	11.92
6466	Weisse XV, 644	9.0	15 34 9.98	59.5	2	+ 3.362	− 15 6 52.1	58.4	2	− 11.92
6467	O. Arg. S. 14787	9.0	34 13.02	66.3	2	+ 3.399	− 16 55 24.0	62.5	2	11.91
6468	Schwerd 919	9.0	34 20.68	67.0	2	− 3.182	+ 80 14 14.8	71.5	3	11.91
6469	τ^6 Serpentis	6.0	34 32.85	57.5	2	+ 2.754	+ 16 28 43.2	69.0	2	11.89
6470	Radcliffe 3431	7.0	34 43.33	65.1	3	2.062	+ 43 9 3.2	70.5	3	11.88

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6471	Lacaille 6495	6.8	15 34 46.66	68.5	2	+ 3.696	− 30 5 5.7	66.4	2	− 11.88
6472	B. A. C. 5184	7.5	34 54.06	61.8	3	3.372	− 15 33 42.1	60.7	5	11.87
6473	Anonymous	10.0	35 6.49	65.4	2	3.407	− 17 14 52.7	58.4	3	11.85
6474	χ Serpentis	5.5*	35 12.24	60.4	2	2.817	+ 13 17 56.1	54.4	3	11.84
6475	Weisse (2) XV, 862	6.8	35 13.56	68.5	2	2.230	+ 37 58 15.2	46.3	1	11.84
6476	Lalande 28641	7.7	15 35 15.84	69.1	3	+ 2.245	+ 37 28 14.3	47.4	2	− 11.84
6477	Lacaille 6499	6.7	35 20.39	67.4	3	3.724	− 31 9 10.1	68.5	2	11.83
6478	Anonymous	8.2	35 26.88	65.5	2	3.702	− 30 15 50.1	70.4	2	11.83
6479	Lalande 28607	6.8	35 33.90	68.9	2	3.272	− 10 28 21.9	56.8	3	11.82
6480	Lalande 28617	7.2	36 1.05	61.4	4	3.391	− 16 25 21.8	61.1	4	11.79
6481	Anonymous	. .	15 36 6.29	65.5	3	+ 3.703	− 30 14 23.3	67.7	4	− 11.78
6482	η Libræ	5.7	36 12.09	63.1	6	3.367	− 15 13 24.6	69.5	5	11.77
6483	Anonymous	8.5	36 35.17	64.5	2	3.382	− 15 57 19.0	69.9	2	11.75
6484	Lalande 28740	7.5*	37 4.79	62.0	2	0.606	+ 66 14 48.0	66.5	2	11.71
6485	B. A. C. 5195	6.0	37 8.60	62.9	2	3.689	− 29 35 52.2	67.9	2	11.71
6486	O. Arg. S. 14835	9.2	15 37 12.98	66.0	2	+ 3.534	− 23 3 50.9	60.0	2	− 11.70
6487	α Serpentis	2.3*	37 22.39	55.3	228	2.941	+ 6 52 6.9	50.2	71	11.69
6488	O. Arg. S. 14839	8.3	37 29.12	64.5	3	3.518	− 22 18 35.2	64.4	2	11.68
6489	B. A. C. 5198	7.7	37 41.70	63.5	2	3.641	− 27 37 10.1	67.9	2	11.67
6490	Lalande 28697	7.0	37 54.25	61.0	2	3.394	− 16 30 30.4	56.4	2	11.65
6491	Lacaille 6517, (1st *)	6.5	15 38 5.09	65.4	2	+ 3.836	− 35 4 9.7	68.0	2	− 11.64
6492	O. Arg. S. 14851	9.0	38 6.27	66.2	2	3.445	− 18 55 26.0	66.5	2	11.64
6493	Lacaille 6517, (2d *)	7.0	38 6.67	65.4	2	3.837	− 35 4 36.5	68.0	2	11.64
6494	O. Arg. S. 14855	8.5	38 23.66	69.9	2	3.593	− 25 31 59.4	69.8	3	11.62
6495	O. Arg. S. 14861	9.6	38 37.40	67.4	2	3.592	− 25 29 59.5	69.8	3	11.60
6496	O. Arg. S. 14864	7.4	15 38 51.60	68.4	2	+ 3.620	− 26 38 55.5	65.4	2	− 11.60
6497	Lacaille 6522	6.8	38 52.30	65.9	2	3.902	− 37 14 11.3	68.5	2	11.58
6498	O. Arg. S. 14871	7.5	38 58.98	64.5	2	3.591	− 25 25 43.0	67.5	2	11.58
6499	Weisse XV, 744	8.0	39 14.70	59.4	2	3.361	− 14 47 52.1	57.4	2	11.56
6500	Anonymous	7.5	39 18.01	68.5	3	2.219	+ 37 58 37.5	48.4	1	11.55
6501	Lalande 28726	8.0*	15 39 19.86	61.4	2	+ 3.420	− 17 39 9.5	62.0	2	− 11.55
6502	Anonymous	8.3	39 21.63	64.5	2	3.487	− 20 47 44.6	67.5	2	11.55
6503	B. A. C. 5211	7.8	39 30.93	64.0	4	3.595	− 25 32 59.9	62.5	4	11.54
6504	β Serpentis	4.5	39 43.44	47.6	1	2.761	+ 15 51 43.6	68.5	2	11.52
6505	O. Arg. S. 14882	9.0	39 45.05	66.8	3	3.454	− 19 15 55.6	66.5	2	11.52
6506	B. A. C. 5215	7.5	15 39 48.16	65.0	2	+ 3.663	− 28 21 7.9	68.0	2	− 11.52
6507	B. A. C. 5220	6.7	40 9.02	64.1	5	3.546	− 23 23 53.0	61.4	11	11.49
6508	B. A. C. 5221	6.5	40 14.88	63.4	2	3.681	− 29 2 53.9	67.5	2	11.49
6509	O. Arg. S. 14904	9.3	40 43.42	66.5	2	3.449	− 18 58 42.4	62.9	2	11.45
6510	υ Serpentis	6.5	40 47.26	59.5	2	3.787	+ 14 32 57.6	53.3	3	11.45

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6511	Lacaille 6541	7.5	15 40 53.38	63.5	3	+ 3.768	− 32 22 31.8	66.5	1	− 11.44
6512	O. Arg. S. 14909	8.9	40 55.90	66.8	3	3.458	− 19 23 4.1	66.0	2	11.44
6513	Lalande 28766	8.0	41 4.29	61.0	2	3.435	− 18 16 16.0	59.1	3	11.43
6514	Lalande 28799	8.2	41 9.15	68.4	2	2.247	+ 36 53 14.0	47.5	1	11.42
6515	Lalande 28801	6.5	41 10.79	68.4	2	2.247	+ 36 52 49.6	47.5	1	11.42
6516	Radcliffe 3448	7.0	15 41 26.99	62.4	2	+ 3.050	+ 42 54 14.3	66.4	1	− 11.40
6517	Weisse XV, 789	8.5	41 45.28	47.3	3	3.349	− 14 6 29.0	47.3	2	11.38
6518	Weisse (2) XV, 1035	7.0	41 56.12	71.5	2	2.464	+ 28 54 5.9	71.4	3	11.36
6519	Weisse XV, 792	8.8	41 56.15	63.1	1	3.355	− 14 23 36.4	60.4	3	11.36
6520	χ Lupi	5.0	42 4.51	45.8	6	3.793	− 33 11 48.4	72.4	3	11.35
6521	B. A. C. 5228	6.5	15 42 8.99	63.8	6	+ 3.606	− 25 51 33.5	63.7	4	− 11.35
6522	Lalande 28834	7.7	42 13.60	68.5	2	2.222	+ 37 37 0.7	48.4	1	11.34
6523	μ Serpentis	4.5	42 18.98	57.0	2	3.130	− 2 59 55.6	69.5	2	11.34
6524	κ Serpentis	4.0*	42 26.34	59.5	2	2.701	+ 18 34 34.8	53.4	3	11.33
6525	b Scorpii	5.3	42 33.87	65.1	3	3.594	− 25 19 21.3	70.5	4	11.32
6526	Lacaille 6555	6.8	15 42 42.39	66.4	2	+ 3.769	− 32 15 35.2	66.5	2	− 11.31
6527	Weisse XV, 825	7.7	42 48.32	60.3	2	2.470	+ 28 35 16.4	53.5	3	11.30
6528	B. A. C. 5236	6.0*	43 5.88	68.4	1	3.123	− 2 37 36.3	63.4	2	11.28
6529	Weisse XV, 828	8.0	43 18.03	60.1	3	3.278	− 10 33 49.0	55.8	3	11.26
6530	B. A. C. 5240	6.4	43 34.57	63.2	4	3.697	− 29 27 28.9	65.5	2	11.25
6531	Lalande 28838	7.5	15 43 34.84	59.4	2	+ 3.443	− 18 30 43.1	56.5	2	− 11.25
6532	Anonymous	9.0	43 44.44	68.5	2	3.355	− 14 20 48.6	62.4	2	11.23
6533	δ Coronæ Borealis	4.5*	43 43.52	47.6	1	2.520	+ 26 29 57.7	69.0	2	11.23
6534	ε Serpentis	3.0	43 50.42	65.7	37	2.977	+ 4 54 6.4	64.1	4	11.23
6535	b Serpentis	5.8	43 58.27	60.4	2	3.124	− 2 39 50.4	57.5	2	11.22
6536	Weisse XV, 845	9.0	15 44 7.62	61.0	2	+ 3.353	− 14 12 41.8	58.4	5	− 11.21
6537	Weisse XV, 848	7.5	44 17.94	62.0	2	3.220	− 7 37 6.6	65.5	2	11.19
6538	Lacaille 6566	9.0	44 30.08	63.5	2	3.721	− 30 23 20.5	66.5	2	11.18
6539	O. Arg. N. 15681	9.0	44 48.81	62.1	3	0.544	+ 66 17 36.7	69.5	2	11.16
6540	ρ Serpentis	4.5*	45 7.03	60.4	2	2.636	+ 21 24 3.7	54.4	3	11.13
6541	Anonymous	8.1	15 45 8.88	64.5	3	+ 3.511	− 21 32 57.2	64.5	2	− 11.13
6542	A Scorpii, (1st *)	8.0	45 12.57	67.0	2	3.589	− 24 54	. .	.	11.13
6543	λ Libræ	5.3	45 12.66	58.4	9	3.471	− 19 44 43.4	60.9	5	11.13
6544	A Scorpii, (2d *)	5.5	45 12.72	65.1	6	3.589	− 24 54 21.8	67.9	2	11.13
6545	O. Arg. N. 15688	9.0	45 17.04	62.4	2	0.538	+ 66 17 42.0	69.5	2	11.12
6546	Lalande 28917	8.0	15 45 25.77	68.4	2	+ 2.194	+ 38 15 35.9	48.5	1	− 11.11
6547	Weisse XV, 864	8.0*	45 26.61	61.0	2	3.356	− 14 17 34.4	56.5	2	11.11
6548	B. A. C. 5253	6.3	45 32.44	63.5	2	3.570	− 24 6 44.2	67.4	2	11.10
6549	B. A. C. 5254	6.0	45 36.30	60.4	2	3.558	− 23 33 26.8	57.5	7	11.10
6550	Lalande 28926	7.5	45 43.25	68.5	1	2.202	+ 37 58 33.9	47.8	3	11.09

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			h. m. s.			″	° ′ ″			″
6551	θ Libræ	4.0	15 45 51.48	60.6	9	+ 3.398	− 16 18 56.4	57.9	4	− 11.08
6552	Anonymous	7.4	45 52.56	69.4	2	3.446	− 18 31 54.5	65.5	3	11.08
6553	κ Coronæ Borealis	5.5	45 57.39	68.9	2	2.259	+ 36 5 42.5	47.4	4	11.07
6554	B. A. C. 5258	5.8	45 59.06	66.4	2	3.638	− 26 55 11.5	58.5	2	11.07
6555	Anonymous	7.0	46 5.46	66.4	3	3.123	− 2 36 31.0	60.5	4	11.06
6556	Radcliffe 3462	7.0	15 46 12.54	62.4	2	+ 2.032	+ 42 59 12.6	68.0	2	− 11.05
6557	3 Scorpii	6.0	46 15.62	63.5	4	3.588	− 24 49 32.9	67.9	2	11.05
6558	Anonymous	6.8	46 32.84	68.5	2	3.282	− 10 40 18.6	64.4	2	11.02
6559	Lacaille 6582	6.3	46 45.31	66.4	2	3.991	− 39 26 57.1	65.5	2	11.02
6560	47 Libræ	7.0*	46 55.17	61.8	3	3.456	− 18 57 58.1	60.7	5	11.00
6561	4 Scorpii	5.8	15 47 2.77	69.4	2	+ 3.614	− 25 50 59.3	63.1	3	− 10.99
6562	B. A. C. 5266	7.0	47 12.65	65.4	2	+ 3.626	− 26 19 47.7	69.7	4	10.98
6563	18 Ursæ Minoris	7.0	47 27.51	69.5	2	− 3.561	+ 80 25 8.4	66.7	3	10.97
6564	Anonymous	9.0	47 29.16	59.4	1	+ 3.411	− 16 50 22.8	66.5	3	10.96
6565	O. Arg. S. 15023	7.3	47 38.57	64.3	3	3.607	− 25 31 17.2	70.5	2	10.95
6566	χ Herculis	5.0	15 47 50.32	61.8	6	+ 2.033	+ 42 50 39.2	56.8	4	− 10.93
6567	ξ Lupi, (1st *).	6.5	47 56.84	66.5	2	3.816	− 33 33 10.3	65.4	2	10.93
6568	ξ Lupi, (2d *)	6.5	47 57.49	66.5	2	3.816	− 33 33 4.7	68.5	2	10.93
6569	Weisse (2) XV, 1201	8.2	47 57.90	69.5	2	2.026	+ 43 0 13.0	69.5	2	10.93
6570	Lacaille 6590	6.5	48 0.60	65.0	2	3.872	− 35 30 54.7	67.5	2	10.92
6571	ρ Scorpii	4.5	15 48 14.81	60.8	3	+ 3.689	− 28 48 6.7	66.5	2	− 10.91
6572	B. A. C. 5273	6.0*	48 24.41	59.5	2	2.647	+ 20 43 23.9	53.3	3	10.89
6573	Anonymous	8.2	48 36.60	64.5	3	3.522	− 21 48 27.2	70.5	2	10.88
6574	B. A. C. 5275	7.1	48 41.18	62.8	3	3.650	− 27 13 48.7	58.5	2	10.87
6575	B. A. C. 5278	6.2	49 0.52	62.4	3	+ 3.505	− 21 4 29.2	62.8	3	10.85
6576	ζ Ursæ Minoris	4.5*	15 49 8.32	50.8	110	− 2.323	+ 78 13 22.8	50.6	53	− 10.84
6577	B. A. C. 5281	6.4	49 29.82	64.2	6	+ 3.495	− 20 34 25.8	64.5	2	10.81
6578	O. Arg. S. 15061	8.0	49 43.57	67.0	2	3.404	− 16 24 8.4	65.5	2	10.80
6579	Weisse XV, 939	9.0	49 44.84	61.0	2	3.123	− 2 34 46.5	58.9	4	10.79
6580	2 Herculis	6.0*	49 57.81	60.4	3	2.000	+ 43 32 51.5	53.4	3	10.78
6581	γ Serpentis	4.5	15 49 59.11	45.5	1	+ 2.746	+ 16 7 4.8	68.5	2	− 10.78
6582	O. Arg. S. 15067	7.3	49 59.64	67.4	2	3.410	− 16 40 43.2	65.5	2	10.78
6583	B. A. C. 5286	6.0	50 11.48	62.5	2	3.584	− 24 25 27.7	61.2	3	10.76
6584	O. Arg. S. 15072	7.5	50 19.81	66.5	2	3.494	− 20 29 11.4	67.9	2	10.75
6585	48 Libræ	6.0	50 21.14	58.9	2	3.351	− 13 52 20.1	69.0	2	10.75
6586	π Scorpii	3.3	15 50 23.29	63.2	6	+ 3.616	− 25 42 27.5	64.8	3	− 10.75
6587	λ Coronæ Borealis	5.5	50 41.84	59.5	2	2.178	+ 38 21 11.7	51.1	5	10.72
6588	φ Serpentis	6.0	50 47.09	68.4	2	2.773	+ 14 49 7.4	62.5	2	10.72
6589	4 Herculis	6.0*	50 47.92	60.4	2	2.019	+ 42 58 30.1	63.5	3	10.72
6590	Weisse (2) XV, 1273	7.5	50 48.32	68.4	3	2.216	+ 37 7 55.5	47.5	2	10.72

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6591	B. A. C. 5294	6.6	15 50 56.45	62.5	2	+ 3.638	− 26 36 44.9	67.5	2	− 10.71
6592	B. A. C. 5296	6.5	50 57.64	64.2	4	3.716	− 29 40 44.5	69.0	2	10.71
6593	B. A. C. 5297	7.0	50 58.45	66.0	2	3.705	− 29 13 37.8	71.3	6	10.70
6594	Lalande 29043	8.5	50 59.49	60.0	2	3.473	− 19 31 47.1	55.4	2	10.70
6595	Lacaille 6624	7.0	51 0.08	63.9	2	3.806	− 32 58 54.6	68.5	2	10.70
6596	Lalande 29044	8.0	15 51 0.30	60.0	2	+ 3.473	− 19 32 0.4	55.4	2	− 10.70
6597	B. A. C. 5299	7.0	51 6.31	65.0	2	3.745	− 30 45 51.8	68.5	2	10.69
6598	ε Coronæ Borealis	4.0*	51 47.56	69.6	8	2.487	+ 27 17 7.2	69.0	2	10.64
6599	Weisse XV, 976	9.5	51 55.00	65.4	2	3.289	− 10 51 34.8	56.4	2	10.63
6600	O. Arg. S. 15101	8.0	52 0.97	68.5	2	3.631	− 26 15 3.7	67.5	3	10.63
6601	δ Scorpii	2.3*	15 52 3.64	60.9	39	+ 3.535	− 22 13 11.2	58.8	5	− 10.62
6602	49 Libræ	6.0	52 29.06	45.4	2	3.400	− 16 7 8.5	71.3	5	10.59
6603	O. Arg. S. 15108	7.0	52 33.	. .	.	3.642	− 26 38 50.0	67.5	2	10.59
6604	O. Arg. S. 15112	7.2	52 45.91	64.5	2	3.574	− 23 52 2.8	66.5	3	10.57
6605	Lacaille 6641	6.3	52 55.40	67.5	2	3.908	− 36 20 46.8	70.5	2	10.56
6606	Weisse (2) XV, 1330	8.0	15 53 1.40	62.4	2	+ 2.025	+ 42 38 29.2	68.0	2	− 10.55
6607	Weisse (2) XV, 1336	8.0	53 12.26	68.5	2	2.196	+ 37 36 55.8	46.4	1	10.54
6608	Lalande 29146	6.3	53 19.00	68.9	2	2.176	+ 38 13 48.5	48.5	1	10.53
6609	Coronæ Borealis	Var.	53 38.88	70.5	2	2.509	+ 26 19 13.9	71.4	1	10.50
6610	B. A. C. 5310	5.5*	53 47.50	47.6	1	2.212	+ 37 2 35.3	68.5	2	10.49
6611	Weisse (2) XV, 1367	6.8	15 53 51.45	68.4	2	+ 2.203	+ 37 20 34.1	46.4	1	− 10.49
6612	Weisse XV, 1011	8.5	53 52.64	68.5	2	3.291	− 10 52 51.5	56.5	5	10.49
6613	B. A. C. 5308	6.7	53 59.51	63.8	4	3.697	− 28 44 26.8	65.8	3	10.48
6614	O. Arg. S. 15134	8.1	54 0.16	65.5	3	3.622	− 25 45 9.1	65.5	2	10.48
6615	Lacaille 6648	7.4	54 6.60	63.5	2	3.745	− 30 32 50.9	67.9	2	10.47
6616	Weisse XV, 1019	8.6	15 54 18.57	68.5	2	+ 3.292	− 10 53 50.3	57.1	3	− 10.46
6617	O. Arg. S. 15147	7.2	54 35.33	67.0	2	3.575	− 23 46 47.3	68.8	3	10.44
6618	B. A. C. 5312	7.2	54 45.23	63.1	2	3.637	− 26 19 7.0	66.5	2	10.42
6619	Anonymous	8.4	54 50.26	66.5	3	3.587	− 24 15 13.1	67.5	2	10.42
6620	B. A. C. 5314	5.8	54 53.28	64.2	3	3.616	− 25 28 16.9	66.6	2	10.41
6621	r Herculis	5.5*	15 54 56.85	59.5	2	+ 2.697	+ 18 12 25.6	53.5	3	− 10.41
6622	Gr. 12-year Cat. 1315	7.0	54 59.20	60.5	3	3.476	− 19 26 52.2	55.5	2	10.40
6623	Lacaille 6657	7.0	55 22.94	64.4	4	3.949	− 37 28 9.1	65.0	2	10.38
6624	Lacaille 6658	8.0	55 27.34	63.5	1	3.948	− 37 25 34.2	65.0	2	10.37
6625	B. A. C. 5317	6.2	55 30.49	62.8	3	3.590	− 24 20 8.5	62.5	2	10.37
6626	Weisse XV, 1057	8.8	15 56 5.39	66.4	2	+ 2.842	+ 11 21 16.2	65.0	2	− 10.32
6627	O. Arg. S. 15179	9.1	56 22.49	68.4	2	3.512	− 20 57 48.0	67.9	2	10.30
6628	O. Arg. S. 15183	9.0	56 35.56	67.0	2	3.565	− 23 14 31.1	67.5	2	10.29
6629	51 Libræ, (1st *)	5.2	56 40.35	64.0	5	3.295	− 10 59 1.5	56.4	2	10.28
6630	51 Libræ, (2d *)	8.0	56 40.92	65.5	2	3.295	− 10 58 59.6	70.2	3	10.28

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6631	Lalande 29208	7.5*	15 56 41.85	62.4	2	+ 3.305	− 11 28 7.0	59.5	3	− 10.28
6632	O. Arg. S. 15191	7.4	56 58.46	63.0	4	3.566	− 23 16 55.1	66.3	4	10.26
6633	O. Arg. S. 15194	7.4	57 12.98	64.5	3	3.580	− 23 50 9.0	64.5	2	10.24
6634	Weisse XV, 1081	7.5	57 17.74	70.4	2	2.942	+ 6 26 31.7	68.5	1	10.23
6635	β^1 Scorpii	2.0*	57 18.07	55.0	162	34.77	− 19 25 8.4	53.0	64	10.23
6636	β^2 Scorpii	5.5*	15 57 18.47	64.0	9	+ 3.477	− 19 24 56.3	49.9	11	− 10.23
6637	O. Arg. N. 15839	8.7	57 27.09	69.5	3	− 0.095	+ 70 2 8.4	70.5	1	10.22
6638	Weisse XV, 1080	7.0*	57 21.75	64.4	2	+ 3.051	+ 1 3 45.8	63.4	2	10.23
6639	θ Lupi	4.5	57 24.44	69.5	4	3.921	− 36 25 1.8	67.2	3	10.22
6640	Weisse XV, 1086	6.8	57 26.85	68.1	3	2.943	+ 6 23 59.5	67.1	3	10.22
6641	O. Arg. S. 15199	7.8	15 57 28.76	70.5	2	+ 3.524	− 21 27 10.4	68.5	3	− 10.22
6642	B. A. C. 5333	6.5	57 37.01	59.4	2	3.475	− 19 17 43.4	69.7	5	10.21
6643	B. A. C. 5335	6.1	57 45.71	63.2	7	3.566	− 23 13 17.0	63.2	10	10.20
6644	Weisse XV, 1092	7.0	58 2.54	62.0	4	3.132	− 2 57 43.9	58.0	4	10.17
6645	Lacaille 6686	6.0	58 5.	. .	.	3.921	− 36 22 19.1	68.5	2	10.17
6646	B. A. C. 5336	6.0	15 58 10.48	68.5	2	+ 2.203	+ 37 1 12.9	62.5	3	− 10.16
6647	B. A. C. 5341	5.5*	58 31.42	59.5	2	1.524	+ 53 18 20.6	53.5	3	10.14
6648	O. Arg. S. 15225	8.4	58 34.03	67.5	2	3.527	− 21 32 17.9	70.4	2	10.14
6649	O. Arg. S. 15227	7.3	58 35.92	67.5	2	+ 3.526	− 21 28 55.3	68.5	3	10.13
6650	O. Arg. N. 15864	9.0*	58 39.64	64.0	4	− 0.118	+ 70 6 46.1	59.7	5	10.13
6651	Anonymous	9.0	15 58 48.93	61.4	1	+ 3.320	− 12 6 33.3	57.5	2	− 10.12
6652	Anonymous	7.2	58 51.59	68.5	2	3.307	− 11 31 24.7	63.0	2	10.12
6653	Lalande 29341	7.0	58 54.68	68.5	1	2.276	+ 34 33 49.8	47.4	1	10.11
6654	O. Arg. S. 15235	9.0	59 2.12	62.8	3	2.531	− 21 40 44.1	70.5	2	10.10
6655	Anonymous	6.8	59 11.83	67.4	4	3.999	− 38 43 33.5	69.0	4	10.09
6656	O. Arg. S. 15240	6.0	15 59 11.96	67.4	2	+ 3.504	− 20 29 13 6	67.9	2	− 10.09
6657	Lacaille 6695	6.3	59 12.22	67.4	4	3.998	− 38 42 48.5	69.0	4	10.09
6658	Lalande 29306	7.8	59 12.42	69.4	2	3.438	− 17 33 17.6	56.2	3	10.09
6659	O. Arg. S. 15242	8.5	59 13.93	67.4	2	3.506	− 20 33 40.3	67.9	2	10.09
6660	B. A. C. 5345	6.0	59 27.96	61.0	4	+ 3.589	− 24 4 57.2	58.3	9	10.07
6661	O. Arg. N. 15872	9.0	15 59 32.35	56.0	2	− 0.038	+ 69 36 10.1	54.0	2	− 10.06
6662	B. A. C. 5347	5.5	59 36.00	62.5	2	+ 3.635	− 25 56 54.5	66.5	2	10.06
6663	O. Arg. N. 15876	9.0*	59 41.51	50.5	2	− 0.129	+ 70 8 0.1	63.4	2	10.05
6664	11 Scorpii	6.0	59 50.08	57.1	3	+ 3.326	− 12 21 55.8	54.0	3	10.04
6665	O. Arg. N. 15882	8.8	59 54.01	60.5	3	− 0.043	+ 69 36 54.4	54.0	2	10.03
6666	O. Arg. S. 15271	8.4	16 0 18.49	64.5	4	+ 3.738	− 29 52 58.6	66.5	2	− 10.00
6667	B. A. C. 5354	6.0	0 22.28	63.4	2	3.571	− 23 18 28.7	61.5	2	10.00
6668	Weisse (2) XV, 1561	8.0	0 41.09	62.4	1	2.012	+ 42 24 30.1	68.0	2	9.98
6669	B. A. C. 5357	7.2	0 42.76	66.5	2	4.037	− 39 45 19.5	69.5	4	9.97
6670	45 Serpentis	5.5	0 56.60	47.6	1	2.862	+ 10 16 8.1	69.5	2	9.96

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6671	O. Arg. S. 15292	7.3	16 1 14.60	66.5	2	+ 3.640	− 26 3 57.3	68.0	2	− 9.93
6672	O. Arg. S. 15295	8.8	1 22.65	67.5	2	3.427	− 16 58 31.8	65.5	2	9.92
6673	O. Arg. S. 15300	9.1	1 24.31	67.5	2	3.425	− 16 53 15.6	72.4	2	9.92
6674	O. Arg. S. 15303	9.0	1 29.91	68.5	1	3.423	− 16 48 39.4	71.5	2	9.91
6675	Lacaille 6716	7.7	1 42.06	66.5	2	4.039	− 39 45 15.9	67.4	1	9.90
6676	B. A. C. 5364	7.3	16 1 42.98	65.4	4	+ 3.653	− 26 32 8.6	67.5	4	− 9.90
6677	B. A. C. 5365	7.3	1 45.23	64.0	2	3.595	− 24 12 35.4	67.4	2	9.89
6678	κ Herculis	5.5	1 45.54	64.4	2	2.707	+ 17 25 19.9	54.4	3	9.89
6679	B. A. C. 5368	5.8	1 45.84	63.8	3	2.707	+ 17 25 49.9	70.5	2	9.89
6680	Weisse XVI, 11	9.0	2 16.66	59.7	3	3.137	− 3 10 26.7	55.5	2	9.86
6681	B. A. C. 5374	5.5	16 2 20.55	63.5	2	+ 3.719	− 29 2 36.7	68.5	2	− 9.85
6682	Anonymous	9.2	2 24.67	62.5	2	3.526	− 21 16 36.0	71.5	2	9.84
6683	q Herculis	6.5*	2 27.91	59.9	2	2.703	+ 17 34 46.6	54.5	3	9.84
6684	Weisse XVI, 19	5.5	2 31.08	61.2	5	3.135	− 3 5 42.1	61.7	5	9.84
6685	B. A. C. 5378	6.5	2 59.51	64.1	3	3.661	− 26 46 54.6	65.5	3	9.80
6686	Anonymous	7.5	16 3 2.28	64.4	2	+ 3.659	− 26 42 38.5	71.5	1	− 9.80
6687	O. Arg. S. 15342	8.2	3 12.47	65.5	2	3.446	− 17 44 50.5	66.0	4	9.78
6688	Weisse XVI, 38	7.6	3 13.09	63.5	2	3.355	− 13 37 21.4	63.5	2	9.78
6689	Anonymous	9.5	3 14.48	68.4	2	3.525	− 21 13 5.1	62.9	2	9.78
6690	c^1 Scorpii	6.0	3 37.30	56.5	4	3.695	− 28 2 57.3	68.0	2	9.75
6691	c^2 Scorpii	5.6	16 3 41.06	63.8	4	+ 3.682	− 27 33 33.9	67.4	2	− 9.75
6692	ν^1 Scorpii	6.0*	3 50.66	65.4	3	3.476	− 19 4 56.8	71.5	2	9.74
6693	τ Coronæ Borealis	5.5*	3 51.25	47.6	1	21.96	+ 36 50 59.3	72.5	2	9.73
6694	ν^2 Scorpii	4.1	3 51.75	59.2	22	3.477	− 19 5 37.6	57.8	3	9.73
6695	O. Arg. S. 15359	8.4	3 54.09	64.5	3	3.741	− 29 47 10.0	70.7	4	9.73
6696	Anonymous	7.5	16 3 57.95	67.0	2	+ 3.453	− 17 52 14.7	69.5	2	− 9.73
6697	O. Arg. N. 15952	7.6	4 46.48	62.1	6	0.553	+ 65 3 33.6	67.5	3	9.66
6698	B. A. C. 5389	7.8	4 57.23	63.5	3	3.714	− 28 41 38.2	67.1	2	9.65
6699	O. Arg. S. 15388	8.0	5 4.93	64.5	4	3.745	− 29 50 56.2	66.0	2	9.64
6700	48 Serpentis	6.0*	5 8.58	66.0	2	2.713	+ 17 1 49.0	62.5	2	9.64
6701	Weisse (2) XVI, 154	8.8	16 5 18.92	65.5	2	+ 2.009	+ 42 11 24.6	70.5	2	− 9.62
6702	Groombridge 2319	8.0	5 20.46	64.7	2	− 0.266	+ 70 38 9.4	61.0	5	9.62
6703	B. A. C. 5394	6.8	5 20.60	64.1	5	+ 3.596	− 24 3 36.5	60.5	3	9.62
6704	O. Arg. S. 15398	7.8	5 23.04	65.5	3	3.447	− 17 44 18.9	65.5	3	9.62
6705	B. A. C. 5395	6.0*	5 26.86	60.5	2	+ 3.523	− 21 2 20.5	60.0	4	9.61
6706	Anonymous	9.0	16 5 29.90	64.9	2	− 0.267	+ 70 38	. .	.	− 9.61
6707	O. Arg. S. 15403	7.2	5 39.08	66.0	2	+ 3.580	− 23 24 48.0	64.5	2	9.60
6708	Weisse XVI, 83	7.5	5 49.33	60.5	2	3.336	− 12 40 26.2	56.4	2	9.58
6709	B. A. C. 5406	5.0	5 57.34	62.7	2	0.138	+ 68 10 44.7	62.9	7	9.57
6710	O. Arg. S. 15416	6.9	6 15.25	62.7	5	3.517	− 20 44 51.8	60.5	3	9.55

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6711	B. A. C. 5403 . . .	6.2	16 6 24.70	63.5	2	+ 3.623	− 25 7 6.3	67.0	2	− 9.54
6712	B. A. C. 5408 . . .	6.5*	6 34.80	61.0	2	3.458	− 18 10 21.3	57.0	4	9.53
6713	B. A. C. 5411 . . .	5.8	6 41.00	68.4	2	2.192	+ 36 47 20.5	47.1	1	9.52
6714	B. A. C. 5409 . . .	7.2	6 44.62	62.9	2	3.668	− 26 50 54.2	59.5	4	9.51
6715	Weisse XVI, 111 . .	7.9	6 51.90	63.5	3	3.286	− 10 18 6.6	63.4	2	9.50
6716	δ Ophiuchi	3.0*	16 7 0.71	53.7	175	+ 3.141	− 3 19 49.8	51.1	76	− 9.49
6717	Weisse XVI, 113 . .	8.5	7 5.96	63.5	2	3.372	− 14 16 51.5	65.5	2	9.48
6718	B. A. C. 5416 . . .	7.0	7 15.63	68.4	2	3.760	− 30 15 58.1	63.5	2	9.47
6719	Weisse XVI, 121 . .	9.0	7 18.97	61.5	2	3.341	− 12 52 8.6	61.2	4	9.47
6720	O. Arg. S. 15438 . .	8.0	7 19.32	57.7	4	3.616	− 24 45 43.7	59.7	5	9.47
6721	B. A. C. 5418 . . .	6.5	16 8 1.89	66.0	2	+ 3.596	− 23 55 42.8	67.0	2	− 9.41
6722	B. A. C. 5421 . . .	7.7	8 7.59	64.0	4	3.737	− 29 23 27.8	61.5	2	9.40
6723	Lalande ${}_{29}$654 . . .	7.2	8 13.95	68.9	2	+ 2.135	+ 38 25 46.5	48.5	1	9.40
6724	Lacaille 6765 . . .	7.5	8 18.05	69.4	2	− 0.301	+ 70 41 51.1	55.1	3	9.39
6725	O. Arg. N. 16014 . .	8.6	8 20.73	69.0	2	+ 3.883	− 34 28 15.0	64.9	2	9.39
6726	O. Arg. S. 15466 . .	6.9	16 8 44.05	64.4	3	+ 3.525	− 20 57 6.7	63.5	3	− 9.36
6727	Lacaille 6774 . . .	6.3	9 7.03	68.5	3	3.887	− 34 33 57.2	64.5	4	9.33
6728	16 Herculis	6.5*	9 16.43	59.5	2	2.660	+ 19 9 50.5	53.3	4	9.32
6729	σ Coronæ Borealis . .	6.0*	9 26.12	60.5	2	2.267	+ 34 12 53.9	54.4	3	9.30
6730	B. A. C. 5429 . . .	5.4	9 37.28	63.4	3	3.709	− 28 15 43.4	66.5	2	9.29
6731	B. A. C. 5430 . . .	7.0*	16 9 37.52	62.5	2	+ 3.694	− 27 41 34.5	58.5	2	− 9.29
6732	Weisse XVI, 173 . .	7.5	10 0.80	55.4	5	3.346	− 13 1 24.0	51.4	4	9.26
6733	Anonymous . . .	8.7	10 6.46	64.4	2	3.761	− 30 9 8.0	66.5	2	9.25
6734	Lacaille 6781 . . .	6.5	10 8.44	61.5	2	3.907	− 35 8 38.3	67.5	2	9.25
6735	Weisse XVI, 176 . .	8.0	10 10.20	61.0	2	3.348	− 13 5 44.2	64.2	3	9.25
6736	Anonymous . . .	8.7	16 10 16.51	64.5	3	+ 3.759	− 30 4 45.0	64.4	2	− 9.24
6737	O. Arg. S. 15490 . .	9.0	10 23.14	60.5	2	3.534	− 21 14 45.3	57.0	2	9.23
6738	B. A. C. 5433 . . .	7.3	10 28.01	62.5	3	3.702	− 27 56 20.7	67.5	2	9.22
6739	Weisse (2) XVI, 326 .	9.0	10 44.72	62.5	2	2.014	+ 41 40 29.7	68.0	2	9.20
6740	ε Ophiuchi	4.0	10 54.96	62.4	3	3.162	− 4 20 52.1	67.1	2	9.19
6741	Anonymous. . . .	9.0	16 11 20.68	69.0	2	+ 3.894	− 34 38 8.0	70.5	1	− 9.16
6742	Lalande 29696 . . .	7.0	11 28.28	59.4	2	3.470	− 18 29 5.5	56.8	4	9.15
6743	Anonymous . . .	8.5	11 30.98	68.4	2	2.168	+ 37 13 26.4	48.4	1	9.14
6744	B. A. C. 5441 . . .	7.0	11 48.92	62.0	2	3.737	− 29 10 24.1	65.5	2	9.12
6745	Weisse XVI, 221 . .	9.0	11 50.47	69.4	1	2.884	+ 8 57	. .	.	9.10
6746	19 Scorpii	5.6	16 12 12.97	67.3	6	+ 3.598	− 23 49 43.1	67.0	6	− 9.09
6747	O. Arg. N. 16057 . .	7.4	12 22.47	63.2	3	1.455	+ 53 35 11.2	65.5	2	9.08
6748	Lacaille 6796 . . .	7.2	12 26.10	63.9	3	3.845	− 32 57 42.4	69.5	4	9.07
6749	O. Arg. S. 15541 . .	8.0	12 26.12	60.5	2	3.542	− 21 30 1.8	56.9	2	9.07
6750	Anonymous . . .	8.2	12 30.77	68.4	2	2.164	+ 37 15 58.9	48.5	1	9.06

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			h. m. s.			"	° ' "			"
6751	Lacaille 6797	7.1	16 12 34.20	63.9	3	+ 3.845	− 32 53 44.4	68.3	5	− 9.06
6752	Anonymous	9.2	12 39.54	66.5	2	3.635	− 25 15 10.0	69.5	3	9.05
6753	σ Scorpii	2.7	12 41.03	60.5	27	3.635	− 25 15 10.8	62.1	3	9.05
6754	Weisse (2) XVI, 386	8.3	12 53.10	62.5	2	2.007	+ 41 44 29.1	67.5	2	9.04
6755	Anonymous	8.0	12 53.90	69.4	2	2.138	+ 38 2 31.3	46.4	2	9.04
6756	Anonymous	8.4	16 12 55.27	69.5	3	+ 2.146	+ 37 47 29.8	48.5	1	− 9.04
6757	Anonymous	7.3	12 55.51	62.5	1	3.598	− 23 48.	. .	.	9.03
6758	Lalande 29766	6.2	13 1.70	69.4	2	+ 2.133	+ 38 6 27.2	47.4	2	9.03
6759	Anonymous	9.5	13 3.71	67.0	2	− 3.424	+ 79 35 2.0	70.5	1	9.02
6760	Anonymous	9.3	13 27.44	67.0	2	− 3.444	+ 79 36 23.5	70.5	2	8.99
6761	B. A. C. 5452	6.0*	16 13 59.89	59.8	3	+ 3.543	− 21 28 24.0	54.4	4	− 8.95
6762	Lacaille 6806	6.5	14 3.97	68.5	2	3.897	− 34 35 21.6	64.1	3	8.95
6763	O. Arg. S. 15566	7.6	14 30.01	64.5	4	3.575	− 22 47 2.6	64.5	2	8.91
6764	O. Arg. S. 15571	6.7	14 51.87	62.4	3	3.431	− 16 41 9.1	65.5	2	8.88
6765	Lacaille 6815, (1st *)	7.5	14 56.56	63.5	2	3.847	− 32 52 2.7	65.5	3	8.87
6766	Lacaille 6815, (2d *)	7.7	16 14 56.84	63.6	2	+ 3.847	− 32 52 7.5	66.5	2	− 8.87
6767	B. A. C. 5460	6.0*	15 7.35	59.8	3	2.064	+ 40 2 43.3	53.9	7	8.86
6768	B. A. C. 5457	6.4	15 12.04	63.5	2	3.984	− 37 14 5.9	66.5	2	8.85
6769	Lalande 29796.	7.0*	15 15	. .	.	2.158	+ 37 18 46.7	47.5	2	8.85
6770	Lacaille 6818	7.3	15 22.27	62.3	6	3.908	− 34 50 43.8	66.0	2	8.84
6771	Weisse (2) XVI, 457	7.5	16 15 30.59	68.5	2	+ 2.043	+ 40 35 43.1	54.5	2	− 8.83
6772	Lacaille 6821	6.8	15 35.80	68.5	2	+ 3.899	− 34 33 51.9	64.5	3	8.83
6773	O. Arg. N. 16117	8.0	15 41.96	61.2	4	− 0.452	+ 71 10 48.8	53.6	5	8.82
6774	γ Herculis	5.0	15 44.93	45.4	2	+ 2.647	+ 19 29 4.7	72.4	3	8.81
6775	O. Arg. N. 16121	8.5	15 50.81	60.8	3	− 0.474	+ 71 17 6.1	53.9	5	8.80
6776	B. A. C. 5464, (1st *)	7.0	16 15 52.45	65.5	2	+ 3.748	− 29 22 16.1	65.5	2	− 8.80
6777	B. A. C. 5464, (2d *)	6.0	15 52.57	64.5	3	3.748	− 29 22 23.7	65.5	2	8.80
6778	B. A. C. 5465	6.8	15 53.94	65.9	2	3.680	− 26 49 16.5	65.0	2	8.80
6779	ψ Ophiuchi	5.1	15 54.86	59.7	15	3.502	− 19 42 21.6	57.9	51	8.80
6780	O. Arg. S. 15595	8.2	16 4.29	65.5	3	3.565	− 22 19 32.3	67.5	2	8.79
6781	ξ Coronæ Borealis	5.0*	16 16 38.52	59.8	3	+ 2.343	+ 31 13 7.4	53.9	6	− 8.74
6782	Lalande 29874	7.8	16 43.62	62.4	3	1.997	+ 41 46 5.1	67.6	2	8.73
6783	B. A. C. 5471	8.2	16 46.57	68.9	2	3.806	− 31 22 37.5	58.5	2	8.73
6784	B. A. C. 5474	8.0	16 53.78	63.7	5	3.741	− 29 4 28.5	66.5	3	8.72
6785	O. Arg. S. 15612	8.2	16 57.23	69.4	2	3.612	− 24 8 20.0	66.4	2	8.71
6786	O. Arg. S. 15615	8.0	16 17 0.75	69.5	2	+ 3.586	− 23 8	. .	.	− 8.71
6787	B. A. C. 5476	7.5	17 0.77	63.9	6	3.756	− 29 35 48.0	65.2	3	8.71
6788	ν^1 Coronæ Borealis	5.0*	17 5.18	59.5	2	2.256	+ 34 7 50.3	54.4	3	8.71
6789	ρ Ophiuchi, (1st *)	. .	17 11.63	69.5	2	3.586	− 23 7 14.9	64.5	2	8.70
6790	ρ Ophiuchi, (2d *)	. .	17 11.69	69.5	2	3.586	− 23 7 10.9	64.5	2	8.70

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			h. m. s.			"	° ′ "			"
6791	ν^2 Coronæ Borealis . .	5.0*	16 17 12.76	60.0	2	+ 2.258	+ 34 1 51.6	54.5	3	− 8.70
6792	O. Arg. S. 15632 . .	8.3	18 32.24	67.0	2	3.746	− 29 8 33.0	67.5	2	8.59
6793	O. Arg. S. 15641 . .	8.0	18 37.95	66.5	3	3.743	− 29 2 59.7	67.5	2	8.58
6794	B. A. C. 5487 . . .	7.2	18 44.50	64.0	8	3.741	− 28 58 5.6	65.0	4	8.58
6795	χ Ophiuchi	4.5	18 54.77	65.3	5	3.468	− 18 8 8.2	67.1	2	8.56
6796	Weisse(2)XVI,573,(1st*)	7.8	16 19 10.18	68.4	3	+ 2.148	+ 37 21 37.2	46.4	2	− 8.54
6797	Weisse(2)XVI,573,(2d*)	7.6	19 10.37	68.4	3	2.148	+ 37 21 37.2	46.4	2	8.54
6798	υ Ophiuchi	5.0*	20 13.98	61.0	2	3.244	− 8 3 18.8	65.3	4	8.46
6799	25 Herculis	6.2	20 24.90	68.5	2	2.134	+ 37 42 54.1	46.4	9	8.44
6800	Weisse (2) XVI, 616 .	8.0	20 28.86	69.4	2	2.116	+ 38 13 55.7	48.5	1	8.44
6801	O. Arg. S. 15659 . .	7.0	16 20 32.04	64.5	2	+ 3.618	− 24 12 57.3	66.0	2	− 8.43
6802	α Scorpii	1.0	20 49.71	54.4	194	3.667	− 26 7 3.5	52.0	84	8.41
6803	O. Arg. S. 15671 . .	7.0	21 29.15	66.4	2	3.634	− 24 50 7.8	68.5	1	8.36
6804	Weisse XVI, 393 . .	7.3	21 34.38	66.0	2	+ 3.358	− 13 15 30.1	67.6	2	8.35
6805	η Ursæ Minoris . . .	6.0	21 38.22	69.7	3	− 1.832	+ 76 4 35.0	64.9	9	8.34
6806	22 Scorpii	6.0*	16 21 42.36	64.2	4	+ 3.634	− 24 48 12.9	58.5	3	− 8.34
6807	η Draconis	3.0	22 6.07	52.5	22	0.800	+ 61 49 53.7	54.3	11	8.31
6808	B. A. C. 5513 . . .	6.6	22 47.52	62.9	3	3.672	− 26 13 44.5	62.5	2	8.25
6809	O. Arg. S. 15694 . .	9.0	22 53 84	64.5	3	3.764	− 29 34 54.1	69.2	3	8.25
6810	Anonymous . . .	8.2	23 4.57	70.5	2	3.869	− 33 10 0.8	68.6	3	8.23
6811	φ Ophiuchi	5.4	16 23 7.80	57.9	11	+ 3.429	− 16 18 14.8	66.5	3	− 8.23
6812	O. Arg. S. 15698 . .	9.0	23 15.35	65.5	3	3.577	− 22 29 41.3	67.5	2	8.22
6813	Weisse (2) XVI, 703 .	8.9	23 29.56	62.5	2	1.982	+ 41 46 13.4	68.5	2	8.20
6814	Weisse XVI, 439 . .	7.7	23 35.18	71.5	1	2.975	+ 4 32 9.2	71.4	2	8.19
6815	B. A. C. 5518 . . .	8.1	23 39.35	63.8	3	3.741	− 28 44 16.6	65.2	3	8.18
6816	ω Ophiuchi	4.5	16 23 50.55	65.4	3	+ 3.545	− 21 9 47.4	66.5	2	− 8.17
6817	Lacaille 6871 . . .	7.0	23 56.49	63.4	3	3.872	− 33 13 42.1	69.0	2	8.16
6818	g Herculis.	5.0*	24 2.72	60.3	2	1.965	+ 42 11 29.0	54.4	3	8.15
6819	B. A. C. 5522 . . .	7.0	24 6.38	63.9	2	3.814	− 31 15 1.5	61.5	4	8.15
6820	O. Arg. S. 15712 . .	9.0	24 6.39	64.5	2	3.528	− 20 28 44.4	70.5	1	8.15
6821	O. Arg. S. 15713 . .	8.7	16 24 10.89	64.5	3	+ 3.528	− 20 26 55.5	67.5	2	− 8.14
6822	β Herculis	5.0	24 12.24	46.4	2	2.584	+ 21 47 49.3	69.8	3	8.14
6823	B. A. C. 5527 . . .	5.5*	24 28.82	59.5	3	2.608	+ 20 47 15.9	53.3	3	8.12
6824	B. A. C. 5529 . . .	8.0	25 12.30	61.0	2	2.818	+ 11 43 38.9	54.5	2	8.06
6825	Weisse XVI, 462 . .	7.5	25 13.64	67.3	2	3.294	− 10 15 41.9	68.0	2	8.06
6826	O. Arg. S. 15725 . .	8.8	16 25 23.86	68.4	3	+ 3.617	− 23 59 24.2	67.4	2	− 8.05
6827	O. Arg. S. 15726 . .	8.4	25 27.16	65.5	4	3.580	− 22 31 35.0	67.5	2	8.04
6828	Anonymous . . .	8.0	25 53.68	65.5	2	3.896	− 33 55 26.2	69.0	2	8.01
6829	. . . .	. .	. . .	. .	.	. .	. . . . .	. .	.	. .
6830	Weisse (2) XVI, 787 .	7.5	26 1.15	69.4	2	2.101	+ 38 21 58.5	48.5	1	8.00

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			h. m. s.			"	° ' "			"
6831	Lalande 30099	8.0	16 26 1.31	60.8	3	+ 3.157	− 3 57 39.0	56.0	4	− 8.01
6832	*h* Herculis.	4.5*	26 3.30	59.8	5	2.816	+ 11 48 29.6	54.5	4	7.99
6833	O. Arg. S. 15734	9.0	26 5.	. .	.	3.406	− 15 13 44.3	71.4	2	7.99
6834	Weisse (2) XVI, 788	6.2	26 15.34	68.5	2	2.250	+ 33 48 55.8	68.7	4	7.98
6835	Lacaille 6888	6.0	26 52.30	62.8	3	+ 4.103	− 40 0 33.0	67.0	2	7.93
6836	Groombridge 2356	7.0	16 26 52.65	60.4	3	− 0.642	+ 71 41 45.8	55.3	6	− 7.93
6837	Lacaille 6891	7.0	27 8.13	62.9	5	+ 3.898	− 33 54 22.9	68.5	2	7.91
6838	B. A. C. 5538	4.3	27 10.04	63.8	3	3.931	− 34 57 48.9	67.5	2	7.90
6839	τ Scorpii	3.5*	27 10.32	59.3	22	3.723	− 27 55 18.5	62.8	4	7.90
6840	Lacaille 6894	6.8	27 25.58	65.9	2	3.953	− 35 37 28.7	69.0	2	7.88
6841	(* 67) Washington	9.4	16 27 45.20	62.8	6	+ 3.161	− 4 7 23.5	59.5	5	− 7.86
6842	32 Herculis.	6.0*	28 1.75	59.8	3	+ 2.338	+ 30 47 41.5	53.4	3	7.83
6843	A Draconis	5.0	28 16.29	63.1	8	− 0.148	+ 69 4 14.7	63.0	4	7.81
6844	B. A. C. 5546	6.0*	28 48.34	56.9	3	+ 2.096	+ 38 22 53.8	53.5	3	7.77
6845	Weisse XVI, 539	7.1	28 54.93	66.3	4	3.258	− 8 33 49.1	65.5	3	7.76
6846	Weisse (2) XVI, 889	7.5	16 29 2.58	69.1	3	+ 2.183	+ 35 47 34.4	49.3	1	− 7.75
6847	B. A. C. 5549	6.0*	29 15.54	59.7	3	1.579	+ 50 26 15.1	53.5	3	7.74
6848	Weisse XVI, 544	8.0	29 19.03	65.5	1	3.259	− 8 35 50.7	68.5	2	7.73
6849	ζ Ophiuchi	2.8	29 27.13	65.7	46	3.296	− 10 16 47.7	65.5	3	7.72
6850	σ Herculis	4.0*	29 35.46	55.0	4	1.932	+ 42 43 39.5	58.5	2	7.71
6851	Lacaille 6910	6.6	16 29 43.33	68.8	3	+ 4.000	− 36 55 53.5	65.0	4	− 7.69
6852	O. Arg. S. 15782	9.0	29 55.62	69.5	2	3.774	− 29 36 17.4	70.4	44	7.68
6853	Lalande 30207	7.8	29 56.29	62.8	6	3.586	− 22 36 19.5	59.2	5	7.68
6854	33 Herculis.	7.5	30 3.64	48.5	1	2.912	+ 7 23 39.8	68.5	2	7.67
6855	Weisse XVI, 562	8.8	30 3.91	65.2	3	3.067	+ 0 14 33.3	63.1	3	7.67
6856	O. Arg. S. 15788	8.5	16 30 5.95	69.5	1	+ 3.618	− 23 50 45.5	67.4	2	− 7.67
6857	O. Arg. S. 15790	7.7	30 20.92	69.5	1	3.746	− 28 37 11.2	66.8	3	7.65
6858	B. A. C. 5556	7.0	30 26.30	62.4	2	3.775	− 29 38 29.7	63.8	5	7.64
6859	B. A. C. 5557	7.0	30 28.59	62.5	2	3.791	− 30 10 57.0	61.2	3	7.64
6860	Weisse XVI, 575	8.0	30 37.94	64.9	2	3.065	+ 0 19 59.9	68.5	2	7.63
6861	Anonymous	9.0	16 30 41.57	70.9	2	+ 3.680	− 26 10 44.9	57.0	6	− 7.62
6862	Lacaille 6922	7.0	31 6.47	65.5	2	3.891	− 33 27 45.3	66.5	2	7.59
6863	Lacaille 6924	7.0	31 22.70	65.9	2	3.952	− 35 24 27.3	68.0	2	7.56
6864	Lacaille 6923	8.0	31 24.58	65.5	2	4.001	− 36 52 27.6	65.5	3	7.56
6865	B. A. C. 5562	7.0	31 24.86	64.5	2	3.749	− 28 39 32.0	64.2	3	7.56
6866	B. A. C. 5564	7.6	16 31 30.82	63.5	2	+ 3.670	− 25 46 48.9	68.5	2	− 7.55
6867	O. Arg. S. 15811	8.2	31 35.08	68.4	2	3.681	− 26 10 23.1	57.0	6	7.55
6868	O. Arg. S. 15812	8.0	31 36.87	65.4	2	3.677	− 26 2 32.7	68.5	2	7.54
6869	B. A. C. 5567	6.0	32 19.34	47.4	1	3.527	− 20 7 55.8	69.0	2	7.49
6870	Lalande 30327	6.8	32 30.51	68.5	2	2.110	+ 37 46 25.6	48.5	1	7.47

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			h. m. s.			″	° ′ ″			″
6871	Weisse XVI, 619 . .	7.0	16 32 33.50	65.4	4	+ 3.198	− 5 47 56.3	68.5	2	− 7.47
6872	Lacaille 6931 . . .	7.0	32 40.80	65.5	2	3.864	− 32 32 44.3	68.5	2	7.46
6873	Lacaille 6930 . . .	6.0	32 42.11	63.6	2	3.875	− 32 52 4.3	66.5	2	7.46
6874	Anonymous . . .	. .	32 48.46	69.5	1	3.864	− 32 32 4.5	68.5	2	7.45
6875	B. A. C. 5569 . . .	7.4	32 55.32	62.5	2	3.719	− 27 31 59.0	69.0	2	7.44
6876	O. Arg. S. 15834 . .	8.0	16 32 57.70	67.0	2	+ 3.628	− 24 7 32.6	68.5	2	− 7.44
6877	B. A. C. 5571 . . .	6.8	33 7.25	63.8	7	3.630	− 24 11 31.7	64.9	5	7.42
6878	Lacaille 6933 . . .	7.0*	33 10.	. .	.	4.001	− 36 48 9.4	63.5	2	7.42
6879	B. A. C. 5572 . . .	7.0	33 12.41	64.2	5	3.797	− 30 15 16.3	64.2	3	7.41
6880	Weisse (2) XVI, 1075 .	7.5	34 17.76	69.5	2	2.078	+ 38 37 20.4	47.5	2	7.41
6881	B. A. C. 5576 . . .	7.6	16 33 19.60	62.6	2	+ 3.756	− 28 50 50.8	69.5	2	− 7.41
6882	Anonymous . . .	8.5	33 28.29	69.5	1	4.087	− 39 14 15.9	68.0	2	7.39
6883	24 Scorpii	5.0*	33 28.77	61.1	9	3.463	− 17 28 4.0	69.1	2	7.39
6884	Weisse XVI, 637 . .	9.2	33 32.40	64.5	5	+ 3.069	+ 0 7 24.5	63.1	3	7.39
6885	Radcliffe 3589 . . .	6.0	33 36.74	63.5	2	− 3.484	+ 79 15 32.3	69.5	2	7.38
6886	B. A. C. 5580 . . .	6.5	16 33 40.10	60.2	3	+ 3.516	− 19 39 9.1	56.3	5	− 7.38
6887	O. Arg. S. 15850 . .	8.0	33 48.25	69.4	2	3.431	− 16 5 22.8	66.0	2	7.37
6888	B. A. C. 5583 . . .	8.0	34 3.28	62.5	2	4.148	− 40 50 54.6	69.5	3	7.35
6889	Anonymous . . .	8.0	34 8.17	62.5	1	3.796	− 30 11	. . .	.	7.34
6890	B. A. C. 5584 . . .	6.5	34 11.41	62.5	2	4.148	− 40 50 34.6	69.5	3	7.34
6891	Anonymous . . .	8.0	16 34 28.33	68.5	2	+ 3.684	− 26 11 13.0	57.0	6	− 7.31
6892	B. A. C. 5589 . . .	7.0*	34 37.61	69.4	2	3.819	− 30 57 25.9	62.5	2	7.30
6893	B. A. C. 5588 . . .	6.5*	34 38.88	59.5	3	3.845	− 31 50 8.7	57.2	3	7.30
6894	O. Arg. S. 15868 . .	8.5	34 43.27	65.5	3	3.552	− 21 4 17.7	69.5	2	7.29
6895	Radcliffe 3588 . . .	6.0	34 43.41	61.5	2	1.632	+ 49 8 22.9	70.5	2	7.29
6896	Anonymous	7.8	16 34 53.71	69.1	3	+ 2.082	+ 38 28 30.0	46.5	1	− 7.29
6897	42 Herculis	5.0*	34 56.96	60.7	4	1.628	+ 49 12 12.9	55.8	6	7.27
6898	Anonymous . . .	7.0	35 8.55	69.0	2	4.086	− 39 7 28.7	67.2	3	7.25
6899	B. A. C. 5597 . . .	6.0*	35 12.28	59.5	3	2.487	+ 25 7 51.8	53.4	3	7.25
6900	B. A. C. 5595 . . .	7.5	35 13.18	66.5	2	3.695	− 26 32 14.7	65.5	2	7.25
6901	Lalande 30419 . . .	7.3	16 35 19.46	68.5	1	+ 2.111	+ 37 37 48.2	48.5	1	− 7.24
6902	O. Arg. S. 15881 . .	7.6	35 21.54	64.5	4	3.536	− 20 25 39.8	64.5	3	7.24
6903	B. A. C. 5598 . . .	7.0	35 24.91	60.5	2	3.598	− 22 51 41.0	55.5	3	7.24
6904	B. A. C. 5600 . . .	7.7	35 36.45	62.8	3	3.713	− 27 11 21.0	64.5	2	7.22
6905	39 Herculis	5.8	35 56.06	62.5	3	2.431	+ 27 11 18.5	68.0	2	7.19
6906	ζ Herculis	3.0*	16 36 0.54	59.5	34	+ 2.296	+ 31 51 29.4	57.8	3	− 7.19
6907	O. Arg. S. 15896 . .	7.3	36 6.	. .	.	3.713	− 27 11 23.9	71.5	2	7.18
6908	B. A. C. 5603 . . .	6.4	36 15.08	62.6	2	3.743	− 28 14 41.8	65.0	2	7.17
6909	B. A. C. 5605 . . .	6.6	36 24.39	61.6	4	3.809	− 30 32 37.3	57.5	4	7.15
6910	Lacaille 6965 . . .	6.5	36 27.37	65.5	2	3.901	− 33 35 3.3	66.5	2	7.15

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			h. m. s.			"	° ' "			"
6911	15 Ophiuchi	7.0*	16 36 43.55	60.5	2	+ 3.600	− 22 55 10.3	58.9	5	− 7.13
6912	B. A. C. 5607	7.8	36 47.62	62.6	2	3.753	− 28 34 39.3	67.2	3	7.12
6913	B. A. C. 5608	7.3	37 10.45	62.8	3	3.691	− 26 23 10.8	65.5	2	7.09
6914	Lacaille 6970	5.5	37 13.58	68.5	2	4.089	− 39 6 57.9	68.8	3	7.09
6915	Lacaille 6976	7.5	37 37.36	65.5	2	3.875	− 32 41 16.7	68.8	3	7.06
6916	O. Arg. S. 15923	7.6	16 37 54.69	68.4	2	+ 3.716	− 27 13 19.7	64.5	2	− 7.03
6917	B. A. C. 5612	7.3	37 55.19	64.2	3	3.830	− 31 11 37.9	61.2	3	7.03
6918	Lalande 30545	7.8	38 3.30	62.0	3	0.657	+ 62 35 29.2	69.5	2	7.02
6919	B. A. C. 5615	6.0*	38 4.73	59.8	3	2.136	+ 36 46 25.7	53.5	3	7.02
6920	η Herculis	4.5	38 5.83	51.0	12	2.051	+ 39 11 23.1	69.8	3	7.02
6921	25 Scorpii	7.2	16 38 17.29	61.9	7	+ 3.663	− 25 16 11.4	65.6	2	− 7.00
6922	B. A. C. 5619	6.0*	38 41.66	59.5	2	2.217	+ 34 17 54.3	53.5	4	6.97
6923	Lalande 30479	8.0	38 42.38	61.0	2	3.524	− 19 50 24.9	56.5	5	6.97
6924	O. Arg. S, 15950	7.4	39 8.37	64.5	4	3.759	− 28 42 5.5	67.5	2	6.93
6925	B. A. C. 5622	7.0	39 27.78	65.4	2	3.825	− 30 56 56.7	60.5	4	6.90
6926	O. Arg. N. 16481	6.8	16 39 33.35	61.5	4	+ 0.653	+ 62 34 25.8	69.5	2	− 6.90
6927	Lalande 30506	8.2	39 33.68	68.5	2	3.520	− 19 37 10.6	56.5	2	6.90
6928	B. A. C. 5623	6.7	39 43.39	63.0	4	3.638	− 24 16 19.9	64.5	2	6.88
6929	B. A. C. 5625	7.5*	39 50.46	59.8	4	3.017	+ 2 29 28.5	54.4	3	6.87
6930	Weisse XVI, 758	9.0	39 54.98	65.5	2	3.203	− 5 58 9.7	68.5	2	6.87
6931	Weisse XVI, 760	7.7	16 39 56.86	65.5	2	+ 3.206	− 6 4 58.0	69.0	2	− 6.86
6932	g Draconis	5.0*	39 57.37	61.5	2	0.396	+ 64 51 16.4	58.5	2	6.86
6933	19 Ophiuchi	6.0*	40 6.35	47.5	1	3.021	+ 2 19 12.7	69.6	2	6.85
6934	Lacaille 6987	6.5*	40 10.02	65.5	2	3.912	− 33 45 48.9	65.0	2	6.85
6935	O. Arg. S. 15977	7.4	40 27.60	63.5	2	3.434	− 16 4 18.9	65.5	2	6.82
6936	B. A. C. 5630	7.5	16 40 34.46	65.3	5	+ 3.840	− 31 24 4.7	69.0	2	− 6.81
6937	Anonymous	8.5	41 3.50	62.6	1	3.643	− 24 24 34.0	67.2	3	6.77
6938	ε Scorpii	4.8	41 6.43	50.5	7	3.922	− 34 2 8.2	69.0	2	6.77
6939	Weisse XVI, 780	8.0*	41 7.48	47.4	1	3.042	+ 1 20 34.6	70.5	2	6.77
6940	18 Ophiuchi	7.0	41 13.35	60.0	12	3.643	− 24 23 29.3	66.0	4	6.76
6941	Lalande 30556	7.5	16 41 31.63	61.2	3	+ 3.700	− 26 29 37.5	56.6	8	− 6.73
6942	Anonymous	10.0	41 32.62	67.0	2	3.162	− 4 5	. .	.	6.73
6943	Lacaille 6999, (1st *)	6.6	41 34.18	63.5	2	4.030	− 37 16 2.6	67.0	2	6.73
6944	Lacaille 6999, (2d *)	9.1	41 34.26	63.5	2	4.030	− 37 16	. .	.	6.73
6945	Anonymous	8.5	41 37.33	68.5	2	3.799	− 30 0 26.9	66.0	2	6.73
6946	Weisse XVI, 792, (1st *)	8.5	16 41 41.31	63.1	5	+ 3.180	− 4 53 35.7	56.2	3	− 6.72
6947	Weisse XVI, 794	7.0	41 41.74	70.0	2	2.762	+ 13 50 27.4	69.6	2	6.72
6948	Weisse XVI, 792, (2d *)	8.5	41 44.96	63.3	6	3.180	− 4 53 53.5	56.2	3	6.71
6949	Anonymous	8.5	41 47.	. .	.	3.841	− 31 23 21.8	69.0	2	6.71
6950	20 Ophiuchi	5.0*	42 5.52	60.7	7	3.306	− 10 31 56.3	65.5	2	6.69

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			h. m. s.			"	° ' "			"
6951	Anonymous . . .	7.5	16 42 23.43	63.2	2	+ 4.147	− 40 25 55.2	66.5	1	− 6.66
6952	μ¹ Scorpii	3.3	42 23.49	66.5	2	4.050	− 37 48 11.1	65.5	2	6.66
6953	Lalande 30600 . . .	9.0	42 41.80	60.5	2	3.521	− 19 35 33.6	55.5	3	6.64
6954	Weisse (2) XVI, 1341 .	6.5	42 44.40	68.5	2	2.093	+ 37 48 37.3	46.5	2	6.63
6955	B. A. C. 5639 . . .	6.6	42 44.62	66.3	2	4.149	− 40 28 47.9	67.0	2	6.63
6956	B. A. C. 5641 . . .	7.6	16 42 49.18	62.9	4	+ 3.650	− 24 35 24.9	66.5	2	− 6.63
6957	μ² Scorpii	4.5	42 51.45	60.5	3	4.050	− 37 46 28.8	65.5	2	6.62
6958	Anonymous . . .	8.8	42 54.08	68.5	2	3.804	− 30 7 49.4	68.5	1	6.62
6959	Anonymous . . .	. .	43 5.	. .	.	4.148	− 40 25 55.1	67.5	1	6.61
6960	Lacaille 7011 . . .	6.4	43 9.47	63.5	2	4.036	− 37 21 24.6	71.9	4	6.60
6961	O. Arg. S. 16031 . .	7.7	16 43 10.21	69.5	1	+ 3.567	− 21 24 40.4	69.0	2	− 6.60
6962	Anonymous . . .	7.0	43 11.34	66.5	3	3.705	− 26 37 49.2	56.4	5	6.60
6963	Anonymous . . .	7.0	43 25.24	69.5	2	4.016	− 36 46 8.2	67.0	2	6.57
6964	Anonymous . . .	7.2	43 33.22	68.5	2	3.707	− 26 40 39.3	56.4	4	6.57
6965	B. A. C. 5650 . . .	7.6	43 40.86	62.5	3	3.671	− 25 21 33.7	67.1	2	6.56
6966	48 Herculis	6.5*	16 43 48.54	54.7	5	+ 2.336	+ 30 12 24.9	53.4	3	− 6.55
6967	Anonymous . . .	8.2	43 54.47	47.6	1	3.203	− 5 55 58.6	71.0	2	6.54
6968	Lacaille 7023 . . .	6.5	44 1.33	61.5	2	3.894	− 33 2 32.0	72.5	2	6.53
6969	B. A. C. 5653 . . .	7.2	44 6.08	63.6	2	3.851	− 31 38 26.3	70.5	3	6.52
6970	O. Arg. S. 16045 . .	8.5	44 8.95	62.9	5	3.510	− 19 6 54.1	62.1	5	6.52
6971	Anonymous . . .	. .	16 44 10.	. .	.	+ 3.560	− 21 7 1.5	57.6	2	− 6.52
6972	O. Arg. S. 16046 . .	7.0	44 12.68	68.5	3	3.808	− 30 11 27.1	66.1	3	6.51
6973	O. Arg. S. 16050 . .	7.5	44 16.26	69.0	2	3.703	− 26 30 41.1	56.5	4	6.51
6974	Weisse XVI, 845 . .	7.8	44 21.44	64.5	3	3.264	− 8 37 23.5	65.0	2	6.50
6975	Weisse XVI, 854 . .	7.2	44 46.72	64.9	5	3.195	− 5 32 56.2	68.0	2	6.47
6976	O. Arg. S. 16060 . .	8.1	16 44 48.53	68.5	3	+ 3.808	− 30 10 8.5	67.0	2	− 6.46
6977	Weisse XVI, 859 . .	7.7	45 4.55	63.8	10	3.181	− 4 54 41.8	59.2	3	6.44
6978	B. A. C. 5663 . . .	6.5*	45 9.42	60.0	2	3.537	− 20 10 38.7	58.3	6	6.43
6979	B. A. C. 5665 . . .	7.5	45 10.58	62.5	2	3.818	− 30 31 2.0	70.0	2	6.43
6980	50 Herculis	5.0	45 11.17	48.1	2	2.339	+ 30 2 52.0	70.9	5	6.43
6981	Anonymous. . . .	7.7	16 45 31.26	62.6	4	+ 3.818	− 30 29 5.7	68.5	2	− 6.40
6982	Anonymous. . . .	9.0	45 31.66	65.5	1	3.586	− 22 5 35.8	70.5	2	6.40
6983	Anonymous. . . .	8.8	45 33.85	68.8	2	3.704	− 26 30 20.7	56.5	4	6.40
6984	B. A. C. 5671 . . .	6.4	45 40.33	62.9	5	3.814	− 30 21 11.9	66.0	2	6.39
6985	O. Arg. S. 16076 . .	8.0	45 42.36	64.5	2	3.510	− 19 4 38.4	69.0	2	6.39
6986	B. A. C. 5673 . . .	7.1	16 45 45.12	64.2	4	+ 3.679	− 25 35 38.7	63.5	2	− 6.38
6987	B. A. C. 5672 . . .	7.2	45 49.49	67.4	3	3.826	− 30 44 41.1	65.7	4	6.38
6988	Weisse XVI, 873 . .	7.5	45 55.12	71.5	1	3.066	+ 0 15 46.6	71.4	2	6.37
6989	O. Arg. S. 16082 . .	7.8	45 56.15	66.0	2	3.679	− 25 34 43.8	63.5	2	6.37
6990	51 Herculis.	5.5*	45 57.10	59.8	3	2.484	+ 24 53 38.8	53.5	3	6.37

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			h. m. s.			"	° ' "			"
6991	B. A. C. 5678 . . .	6.8	16 46 9.93	64.3	11	+ 3.839	— 31 10 6.3	62.5	6	— 6.35
6992	22 Ophiuchi	6.7	46 23.33	61.6	5	3.618	— 23 16 3.0	58.5	3	6.33
6993	Lalande 30745 . . .	7.0	46 31.19	68.5	2	2.074	+ 38 11 23.0	48.5	1	6.32
6994	Anonymous . . .	7.5	46 34.72	63.5	1	3.838	— 31 6 0.9	64.5	2	6.31
6995	O. Arg. S. 16100 . .	7.6	46 42.35	64.5	1	3.777	— 29 2 44.7	66.6	2	6.30
6996	Anonymous . . .	8.5	16 46 43.99	71.5	1	+ 4.030	— 37 1 41.6	69.6	1	— 6.30
6997	Anonymous . . .	7.5	46 44.07	69.5	2	4.027	— 36 57 24.8	68.2	3	6.30
6998	B. A. C. 5684 . . .	7.2	46 52.98	63.8	8	3.842	— 31 14 21.9	62.5	4	6.29
6999	B. A. C. 5686 . . .	8.0*	47 0.40	59.5	5	3.716	+ 15 38 29.1	54.5	4	6.28
7000	23 Ophiuchi	6.0	47 6.82	61.0	4	3.204	— 5 55 18.3	68.0	2	6.27
7001	B. A. C. 5687 . . .	7.2	16 47 9.14	62.2	4	+ 3.672	— 25 18 14.0	65.5	2	— 6.27
7002	Anonymous . . .	8.5	47 13.73	69.5	2	3.808	— 30 5 20.4	63.4	1	6.26
7003	Anonymous . . .	7.4	47 14.35	64.8	4	3.844	— 31 17 26.2	66.6	1	6.26
7004	B. A. C. 5690 . . .	7.0	47 18.77	63.6	3	3.838	— 31 4 39.7	63.4	4	6.25
7005	ι Ophiuchi	4.0*	47 23.09	55.8	3	2.839	+ 10 23 54.8	54.5	3	6.25
7006	53 Herculis	5.0*	16 47 39.53	55.2	4	+ 2.280	+ 31 56 7.6	53.5	4	— 6.23
7007	O. Arg. S. 16121 . .	7.0	47 42.23	68.8	3	3.816	— 30 21 9.3	67.0	2	6.23
7008	B. A. C. 5695 . . .	6.6	47 57.13	62.8	3	3.450	— 16 34 46.9	67.5	2	6.20
7009	Weisse XVI, 912 . .	9.0	48 12.94	61.7	5	3.182	— 4 56 20.6	56.0	4	6.18
7010	Anonymous . . .	9.5	48 14.19	71.4	2	3.810	— 30 7 43.8	68.5	1	6.17
7011	Weisse XVI, 913 . .	7.0	16 48 19.65	65.4	3	+ 3.203	— 5 53 37.2	68.0	2	— 6.17
7012	24 Ophiuchi	6.0	48 21.50	67.5	2	3.610	— 22 55 26.9	66.0	2	6.17
7013	Anonymous . . .	8.8	48 47.51	68.5	2	3.706	— 26 27 34.4	65.8	3	6.13
7014	B. A. C. 5700, (1st *) .	7.5	48 50.29	70.5	1	3.518	— 19 18 57.3	68.5	1	6.13
7015	B. A. C. 5700, (2d *) .	5.5	48 50.69	52.2	4	3.518	— 19 18 55.3	68.5	2	6.13
7016	Anonymous . . .	. .	16 49 12.58	69.5	5	+ 3.807	— 29 58 59.9	63.4	1	— 6.09
7017	54 Herculis.	5.5*	49 13.04	60.2	2	2.642	+ 18 39 33.8	54.4	3	6.10
7018	Lalande 30788 . . .	8.5	49 20.58	60.0	2	+ 3.575	— 21 33 3.3	56.6	4	6.09
7019	B. A. C. 5705 . . .	6.0*	49 22.80	69.0	2	— 2.798	+ 77 45 10.7	62.5	3	6.09
7020	Lacaille 7065 . . .	6.1	49 24.09	63.5	2	+ 4.046	— 37 23 52.7	68.1	2	6.08
7021	B. A. C. 5704 . . .	6.7	16 49 39.00	65.0	5	+ 3.689	— 25 50 15.5	67.1	2	— 6.06
7022	Anonymous . . .	. .	49 41.90	69.5	1	3.808	— 29 59 5.7	63.4	1	6.05
7023	O. Arg. S. 16158 . .	8.5*	49 49.10	60.6	2	3.718	— 26 53 24.9	56.7	5	6.04
7024	Weisse (2) XVI, 1533 .	7.0	49 49.16	59.6	2	2.716	+ 15 36 28.8	54.5	3	6.05
7025	O. Arg. S. 16163 . .	8.6	49 59.02	69.4	2	3.716	— 26 47 45.2	58.0	2	6.03
7026	Lalande 30851 . . .	7.8	16 50 7.66	69.5	2	+ 2.092	+ 37 32 50.5	48.5	1	— 6.02
7027	Anonymous	. .	50 9.	. . .	.	3.690	— 25 50 13.8	62.5	2	6.02
7028	B. A. C. 5706 . . .	6.0*	50 17.98	60.5	2	1.715	+ 46 46 0.5	53.5	3	6.01
7029	O. Arg. S. 16168 . .	8.2	50 42.03	60.8	3	3.721	— 26 57 37.4	59.8	6	5.97
7030	Weisse XVI, 958 . .	8.0	50 55.71	64.9	6	3.164	— 4 7 22.0	64.9	3	5.95

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			h. m. s.			″	° ′ ″			″
7031	κ Ophiuchi	3.4*	16 51 2.51	63.2	87	+ 2.856	+ 9 35 43.9	60.7	8	− 5.94
7032	B. A. C. 5709	6.2	51 23.58	62.5	3	3.664	− 24 52 32.5	65.9	2	5.92
7033	O. Arg. S. 16184	8.3	51 28.63	69.0	2	3.810	− 30 1 23.4	65.9	2	5.91
7034	26 Ophiuchi	6.0	51 35.21	62.5	3	3.662	− 24 46 16.8	66.0	2	5.90
7035	Anonymous	9.5	51 44.28	69.5	1	4.039	− 37 7 3.4	63.2	2	5.88
7036	B. A. C. 5716	7.0	16 52 17.86	59.6	3	+ 3.713	+ 15 39 54.5	54.5	4	− 5.85
7037	Weisse XVI, 981	7.2	52 26.08	64.6	3	3.162	− 4 0 25.9	67.5	2	5.83
7038	Anonymous.	8.2	52 28.31	69.3	4	4.039	− 37 5 25.0	66.1	4	5.82
7039	Anonymous.	7.7	52 30.09	69.0	2	2.058	+ 38 24 39.3	48.5	1	5.82
7040	Lacaille 7087	6.8	52 34.88	69.0	2	3.908	− 33 9 19.4	68.5	4	5.79
7041	O. Arg. S. 16206	7.8	16 52 36.40	63.0	6	+ 3.725	− 27 2 19.9	68.9	6	− 5.81
7042	O. Arg. S. 16208	9.0	52 45.19	66.0	2	3.726	− 27 3 43.3	61.4	4	5.80
7043	B. A. C. 5718	5.5	52 49.64	67.0	2	3.870	− 31 55 56.2	65.6	2	5.79
7044	O. Arg. S. 16213	7.0	52 57.76	69.5	2	3.545	− 20 13 30.2	69.5	4	5.78
7045	O. Arg. S. 16223	7.0	53 13.22	65.4	2	3.506	− 18 43 28.7	67.5	2	5.76
7046	B. A. C. 5721	7.2	16 53 23.93	64.5	1	+ 3.874	− 32 2 58.7	70.5	2	− 5.75
7047	29 Ophiuchi	6.0	53 40.07	65.4	3	3.505	− 18 40 31.3	67.5	2	5.72
7048	Lacaille 7091	7.0	53 40.69	71.5	3	4.143	− 39 52 48.3	71.5	4	5.72
7049	30 Ophiuchi	5.8	53 40.70	64.5	2	3.162	− 4 0 33.6	67.7	3	5.72
7050	O. Arg. S. 16233	7.0	53 44.66	67.0	2	3.548	− 20 23 9.7	67.0	2	5.72
7051	Weisse XVI, 1011	8.6	16 53 55.21	64.5	2	+ 3.162	− 4 0 29.9	68.6	3	− 5.70
7052	Anonymous.	8.5	54 11.46	68.5	1	4.037	− 36 57 20.6	65.4	2	5.69
7053	O. Arg. S. 16240	7.5	54 22.09	68.5	2	3.722	− 26 53 30.3	63.0	2	5.67
7054	Anonymous.	8.5	54 34.45	69.5	2	3.811	− 29 55 53.7	67.0	2	5.65
7055	Weisse XVI, 1033	9.0*	54 51.36	59.6	2	3.277	− 9 4 36.1	47.6	1	5.62
7056	ε Herculis.	5.5	16 54 56.06	48.2	5	+ 2.297	+ 31 8 6.9	72.5	2	− 5.61
7057	B. A. C. 5730	7.3	54 58.83	62.6	7	3.644	− 24 2 12.1	59.2	12	5.61
7058	O. Arg. S. 16256	7.5	55 5.84	64.5	2	3.521	− 19 17 12.2	67.0	2	5.60
7059	Anonymous.	9.0	55 9.70	69.5	1	3.646	− 24 4 38.6	70.5	2	5.60
7060	B. A. C. 5732	6.0*	55 11.19	59.5	3	2.724	+ 15 9 24.0	53.4	3	5.60
7061	O. Arg. S. 16262	7.5	16 55 19.14	63.5	2	+ 3.727	− 27 0 40.1	56.8	5	− 5.59
7062	O. Arg. N. 16707	8.7	55 22.03	62.2	3	0.847	+ 60 0 30.1	67.6	2	5.58
7063	28 Ophiuchi	6.7	55 24.07	63.5	3	3.684	− 25 29 40.6	65.0	2	5.58
7064	Anonymous.	8.3	55 25.48	67.5	2	3.646	− 24 5 25.3	70.0	3	5.58
7065	Weisse XVI, 1046	9.0	55 35.	. .	.	3.277	− 9 3 45.3	71.5	1	5.56
7066	Weisse XVI, 1048	9.5	16 55 36.45	71.5	1	+ 3.277	− 9 3 58.0	70.8	4	− 5.56
7067	B. A. C. 5737	6.0	55 38.63	84.2	4	3.766	− 28 22 17.1	67.6	2	5.56
7068	B. A. C. 5739	7.2	55 46.24	63.0	4	3.849	− 31 9 43.4	61.7	5	5.55
7069	B. A. C. 5741	7.0*	55 50.	. . .	.	3.674	− 25 7 2.7	62.5	1	5.54
7070	B. A. C. 5742	7.2	55 56.04	62.4	7	3.645	− 24 2 20.4	58.7	8	5.53

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7071	Anonymous. . . .	7.9	16 55 56.48	63.0	2	+ 3.850	− 31 10 17.1	69.0	2	− 5.53
7072	Anonymous. . . .	8.8	55 57.53	68.6	3	3.776	− 28 42 48.4	64.5	2	5.53
7073	B. A. C. 5743 . . .	7.0	55 59.75	63.9	5	3.623	− 23 11 19.9	64.5	3	5.53
7074	31 Ophiuchi	6.4	56 6.96	63.5	4	+ 3.683	− 25 26 29.2	68.0	2	5.52
7075	Groombridge 2404 . .	8.2	56 25.17	57.8	3	− 1.170	+ 73 8 10.7	55.5	3	5.49
7076	d Herculis.	6.0	16 56 26.25	68.8	9	+ 2.212	+ 33 46 22.9	68.0	2	− 5.49
7077	B. A. C. 5746 . . .	7.5*	56 27.81	60.2	3	3.548	− 20 17 37.6	69.2	4	5.49
7078	Weisse (2) XVI, 1735 .	6.0	56 34.33	67.1	2	2.453	+ 25 42 21.1	69.5	2	5.48
7079	O. Arg. N. 16722 . .	9.0	56 39.50	62.6	2	0,843	+ 60 0 27.3	67.6	2	5.47
7080	O. Arg. S. 16298 . .	7.5	56 46.54	63.0	2	3.680	− 25 16 45.0	66.5	2	5.46
7081	B. A. C. 5748 . . .	6.0	16 56 48.24	57.5	2	+ 3.320	− 10 53 18.6	69.1	2	− 5.46
7082	Lacaille 7123 . . .	6.2	56 52.70	68.6	3	4.043	− 37 1 48.8	67.1	3	5.45
7083	Anonymous. . . .	8.0	56 55.84	68.5	2	4.038	− 36 54 7.6	66.9	2	5.44
7084	B. A. C. 5750 . . .	7.0	57 6.93	64.5	4	3.776	− 28 40 34.9	66.5	2	5.43
7085	B. A. C, 5756 . . .	7.0	57 34.79	61.9	2	3.814	− 29 57 15.4	65.5	4	5.40
7086	Lalande 31055 . . .	6.7	16 57 45.80	65.5	2	+ 3.181	− 4 49 38.4	67.6	1	− 5.38
7087	Anonymous. . . .	7.5	58 0.83	68.5	2	4.047	− 37 6 53.6	68.0	2	5.36
7088	B. A. C. 5759 . . .	6.4	58 12.92	62.5	3	3.710	− 26 19 8.7	62.9	2	5.34
7089	Lacaille 7133 . . .	6.0	58 29.55	66.4	2	4.186	− 40 50 1.8	70.2	3	5.32
7090	Dorpat 2119 (1st *) .	. .	58 34.47	64.5	2	3.387	− 13 44 23.5	68.5	2	5.31
7091	Dorpat 2119, (2d *) .	. .	16 58 34.50	64.5	2	+ 3.387	− 13 44 23.5	68.5	2	− 5.31
7092	B. A. C. 5762 . . .	6.8	58 44.67	66.0	2	3.843	− 30 53 6.8	67.5	2	5.30
7093	60 Herculis.	6.0	58 53.03	48.5	1	+ 2.776	+ 12 56 8.9	69.1	2	5.29
7094	B. A. C. 5769 . . .	7.0	59 4.75	58.9	5	− 1.238	+ 73 20 17.4	56.6	9	5.27
7095	B. A. C. 5767 . . .	6.7	59 21.64	60.7	5	+ 3.669	− 24 48 31.3	54.5	3	5.24
7096	B. A. C. 5768 . . .	5.8	16 59 51.16	63.6	4	+ 3.824	− 30 12 49.4	67.8	3	− 5.20
7097	O. Arg. S. 16352 . .	9.0	59 54.88	55.5	2	3.720	− 26 38 55.3	63.4	2	5.20
7098	B. A. C. 5771 . . .	6.0	17 0 7.26	61.2	3	3.477	− 17 25 10.6	54.5	3	5.18
7099	O. Arg. S. 16360 . .	9.2	0 7.98	66.0	2	3.654	− 24 14 10.7	68.1	2	5.18
7100	O. Arg. S. 16366 . .	8.5	0 21.49	69.5	2	+ 3.736	− 27 12 41.0	56.4	4	5.17
7101	ε Ursæ Minoris . . .	4.2	17 0 26.78	57.7	114	− 6.437	+ 82 15 40.0	53.7	71	− 5.16
7102	Anonymous. . . .	9.6	0 43.20	66.0	2	+ 3.652	− 24 10 26.1	63.1	2	5.13
7103	B. A. C. 5775 . . .	6.0	0 49.16	59.5	2	1.824	+ 44 0 14.0	53.4	3	5.12
7104	B. A. C. 5774 . . .	5.8	1 0.54	45.5	2	3.092	− 0 53 30.6	68.5	2	5.11
7105	Lalande 31166 . . .	7.0	1 38.69	65.5	2	3.556	− 20 29 50.7	68.0	2	5.05
7106	μ Ophiuchi	3.4	17 2 21.04	53.5	38	+ 3.432	− 15 32 53.0	57.5	6	− 4.99
7107	B. A. C. 5782 . . .	5.5	2 36.15	70.6	2	4.133	− 39 19 37.9	69.9	3	4.97
7108	Lacaille 7160 . . .	6.0	2 39.92	67.5	2	4.108	− 38 38 37.2	70.0	4	4.97
7109	Lalande 31199 . . .	6.8	2 45.82	65.5	4	3.556	− 20 28 14.7	68.0	2	4.96
7110	O. Arg. S. 16420 . .	7.5	2 55.26	64.5	3	3.719	− 26 31 26.5	68.0	2	4.94

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			h. m. s.			″	° ′ ″			″
7111	B. A. C. 5788 . . .	5.0*	17 3 4.28	59.8	5	+ 2.126	+ 36 7 9.0	51.4	9	− 4.93
7112	B. A. C. 5790 . . .	5.5*	3 12.78	59.6	2	+ 1.957	+ 40 42 3.2	53.6	3	4.92
7113	Groombridge 2418. .	7.5	3 21.10	62.0	6	− 1.274	+ 73 23 22.0	53.8	8	4.91
7114	B. A. C. 5789 . . .	7.1	3 28.52	62.5	2	+ 3.729	− 26 51 48.0	65.6	2	4.90
7115	Lacaille 7163 . . .	6.6	3 37.30	64.5	4	4.077	− 37 46 42.3	66.5	2	4.88
7116	B. A. C. 5791 . . .	6.2	17 3 37.68	62.2	4	+ 3.679	− 25 4 41.3	62.2	4	− 4.88
7117	B. A. C. 5792 . . .	6.2	3 39.25	63.3	5	3.750	− 27 35 6.8	65.0	2	4.88
7118	B. A. C. 5793 . . .	5.8	3 52.68	63.5	2	3.891	− 32 15 52.5	61.2	3	4.86
7119	O. Arg. S. 16450 . .	7.5	3 55.34	65.5	2	+ 3.678	− 25 3 2.7	62.2	4	4.86
7120	Groombridge 2420. .	8.0	4 16.52	60.5	3	− 1.310	+ 73 30 15.5	53.0	4	4.83
7121	Weisse XVII, 46 . .	7.2	17 4 18.60	64.8	6	+ 3.173	− 4 27 55.3	64.6	2	− 4.83
7122	Lacaille 7168 . . .	6.0	4 19.44	68.5	2	4.090	− 38 7 21.5	65.6	2	4.82
7123	Anonymous. . . .	8.5	4 30.19	69.5	2	3.986	− 35 8 8.4	70.5	1	4.81
7124	Lacaille 7171 . . .	7.0	4 45.82	69.5	2	4.146	− 39 35 49.2	68.2	3	4.78
7125	Weisse (2) XVII, 107 .	6.6	4 49.74	68.5	2	2.040	+ 38 28 12.5	47.5	2	4.78
7126	Anonymous . . .	. .	17 4 51.	. . .	.	+ 3.986	− 35 7 59.5	63.5	1	− 4.78
7127	B. A. C. 5795 . . .	6.7	4 51.15	62.4	6	1.467	+ 51 1 15.0	55.3	5	4.78
7128	O. Arg. S. 16477 . .	9.0	5 14.51	65.5	3	3.647	− 23 52 46.7	67.5	2	4.75
7129	B. A. C. 5796 . . .	6.9	5 15.85	66.4	2	3.752	− 27 37 35.9	62.4	4	4.74
7130	B. A. C. 5800 . . .	7.2	5 31.30	62.6	3	3.729	− 26 48 45.2	65.5	2	4.72
7131	Anonymous . . .	7.2	17 5 47.41	66.5	3	+ 3.935	− 33 34 43.4	68.5	2	− 4.70
7132	Lacaille 7174 . . .	6.0	5 48.40	68.6	2	4.089	− 38 2 45.9	67.2	3	4.70
7133	Weisse XVII, 83 . .	8.0*	5 57.52	47.6	2	3.281	− 9 6 48.5	47.6	2	4.68
7134	O. Arg. S. 16497 . .	8.1	6 15.89	65.5	4	3.648	− 23 53 35.9	67.5	2	4.66
7135	O. Arg. S. 16505 . .	7.9	6 31.87	63.6	3	3.717	− 26 21 56.4	64.1	3	4.64
7136	O. Arg. S. 16503 . .	8.0	17 6 32.31	68.6	1	+ 3.826	− 30 6 0.8	67.0	2	− 4.64
7137	O. Arg. S. 16511 . .	6.5	6 33.18	66.6	2	3.566	− 20 48 10.0	67.6	2	4.63
7138	B. A. C. 5807 . . .	6.5	6 38.63	67.0	2	3.935	− 33 34 20.5	68.1	2	4.63
7139	A Ophiuchi, (1st *) . .	5.7	6 44.30	63.4	14	3.718	− 26 23 39.2	63.1	5	4.62
7140	A Ophiuchi, (2d *) . .	6.0	6 44.50	63.4	14	3.718	− 26 23 35.0	62.9	3	4.62
7141	B. A. C. 5809 . . .	6.2	17 6 54.97	65.7	7	+ 3.825	− 30 2 42.4	61.7	4	− 4.60
7142	Groombridge 2418. .	8.0	7 21.62	60.5	2	− 1.292	+ 73 23 22.1	55.9	5	4.57
7143	Schwerd 1014 . . .	7.0	7 23.33	64.4	2	− 3.208	+ 78 17 16.1	66.1	2	4.56
7144	Weisse XVII, 107 . .	7.7	7 25.43	70.5	4	+ 2.729	+ 14 44 32.5	68.5	2	4.56
7145	O. Arg. N. 16908 . .	9.0	7 31.43	66.0	2	0.875	+ 59 20 47.8	68.1	2	4.55
7146	Anonymous . . .	9.2	17 7 32.22	69.5	1	+ 3.995	− 35 19 4.5	70.2	3	− 4.55
7147	B. A. C. 5813 . . .	6.9	7 37.07	60.4	8	3.717	− 26 20 25.0	60.4	5	4.54
7148	O. Arg. S. 16533 . .	8.4	7 45.02	69.5	2	3.747	− 27 23 55.9	56.4	4	4.53
7149	B. A. C. 5815 . . .	7.1	7 50.95	62.5	5	3.684	− 25 8 37.4	62.6	4	4.52
7150	Weisse XVII, 115 . .	8.3	7 52.33	67.6	2	2.736	+ 14 27 55.5	68.5	2	4.52

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			h. m. s.			"	° ' "			"
7151	B. A. C. 5818	7.0	17 7 57.28	69.6	1	+ 3.830	— 30 11 26.1	63.6	2	— 4.52
7152	Weisse XVII, 117	7.5	7 57.60	67.6	2	2.730	+ 14 43 2.0	68.5	2	4.52
7153	Anonymous	8.5	7 59.97	71.5	2	3.997	— 35 23 19.7	71.5	3	4.51
7154	Anonymous	8.8	8 5.93	71.5	2	3.997	— 35 22 37.2	71.5	3	4.50
7155	α Herculis, (1st *)	Var.*	8 15.88	57.4	207	2.734	+ 14 33 9.7	54.3	55	4.49
7156	α Herculis, (2d *)	8.0	17 8 16.13	64.3	11	+ 2.734	+ 14 33 8.1	68.0	2	— 4.49
7157	B. A. C. 5820	6.5	8 24.32	66.1	2	3.825	— 30 0 18.2	66.0	2	4.48
7158	Anonymous	8.5	8 26.19	69.5	2	3.987	— 35 3 56.6	67.0	2	4.47
7159	Lacaille 7207	6.5	8 31.54	68.5	2	4.091	— 38 0 20.6	66.5	2	4.46
7160	38 Ophiuchi, (1st *)	. .	8 57.54	64.5	1	3.721	— 26 28 14.3	69.2	3	4.43
7161	38 Ophiuchi, (2d *)	7.3	17 8 57.69	64.0	4	+ 3.721	— 26 28 14.3	69.2	3	— 4.43
7162	B. A. C. 5824	6.0	9 13.51	65.5	2	3.900	— 32 23 49.5	65.5	2	4.41
7163	δ Herculis.	4.0*	9 16.89	59.5	2	2.463	+ 25 0 24.4	53.5	4	4.40
7164	Anonymous	7.0	9 26.22	65.5	2	3.980	— 34 49 43.4	69.6	2	4.39
7165	39 Ophiuchi, (1st *)	7.5	9 28.50	61.6	5	3.656	— 24 7 49.0	57.3	6	4.39
7166	39 Ophiuchi, (2d *)	6.5	17 9 28.50	61.5	5	+ 3.856	— 24 7 39.5	55.9	3	— 4.39
7167	O. Arg. S. 16574	9.0*	9 32.29	69.5	2	3.820	— 29 48 36.6	71.5	3	4.37
7168	B. A. C. 5831	6.1	9 34.27	64.0	2	+ 3.651	— 23 54 52.0	67.1	2	4.38
7169	Anonymous	. .	10 6.07	50.4	2	— 1.357	+ 73 34 33.1	70.6	1	4.33
7170	π Herculis	3.5*	10 10.39	50.3	6	+ 2.089	+ 36 58 8.6	48.2	15	4.33
7171	B. A. C. 5833	6.8	17 10 14.92	63.4	5	+ 3.863	— 31 12 26.5	65.5	2	— 4.32
7172	O. Arg. S. 16586	8.2	10 27.91	69.0	2	3.614	— 22 33 14.4	66.5	2	4.40
7173	O. Arg. S. 16600	9.0	11 3.03	67.5	2	3.622	— 22 50 19.6	68.1	2	4.25
7174	Lacaille 7230	8.0	11 9.33	65.5	2	4.088	— 37 52 18.6	69.6	2	4.24
7175	O. Arg. S. 16607	7.8	11 18.94	68.5	2	3.722	— 26 27 32.7	66.1	2	4.23
7176	Anonymous.	8.5	17 11 20.73	68.5	2	+ 3.756	— 27 37 21.9	56.4	5	— 4.23
7177	Weisse XVII, 186	7.6	11 33.48	65.3	5	3.167	— 4 9 21.6	66.5	2	4.21
7178	B. A. C. 5839	5.5	11 44.47	69.0	2	3.487	— 17 36 22.3	56.5	4	4.19
7179	O. Arg. S. 16623	7.2	11 49.14	65.3	3	3.721	— 26 24 4.3	63.6	2	4.19
7180	B. A. C. 5841	6.0*	12 2.01	59.5	2	2.817	+ 11 1 9.0	53.4	4	4.17
7181	υ Herculis	5.5	17 12 9.50	47.5	1	+ 2.214	+ 33 15 9.8	69.6	2	— 4.16
7182	Anonymous	8.3	12 26.51	68.6	1	3.995	— 35 12 7.8	66.5	2	4.13
7183	Dorpat 2147	9.5	12 27.78	64.5	2	3.216	— 6 16 48.0	71.0	2	4.13
7184	Weisse XVII, 202	7.0	12 30.10	60.0	2	3.204	— 5 45 42.8	57.0	2	4.13
7185	ξ Ophiuchi	6.0	12 36.86	56.2	16	3.573	— 20 57 32.8	64.2	3	4.12
7186	O. Arg. S. 16644	7.7	17 12 44.26	67.5	2	+ 3.720	— 26 21 18.5	63.6	2	— 4.11
7187	e Herculis.	4.5*	12 50.67	45.5	4	2.070	+ 37 26 24.5	45.5	9	4.10
7188	Lalande 31492	7.6	12 50.90	69.0	2	3.195	— 5 21 42.9	62.0	2	4.10
7189	ν Serpentis	5.0	12 57.27	63.4	5	3.367	— 12 42 3.5	60.6	2	4.09
7190	B. A. C. 5846	7.3	13 6.49	61.8	3	3.676	— 24 45 37.1	62.5	2	4.07

Number.	Name of Star.	Magnitude.	Mean Right Ascension, 1860.0.	Mean year.	No. of obs.	Annual Precession. 1860.	Mean Declination, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.
			h. m. s.			″	° ″ ′			″
7191	Lacaille 7241 . . .	6.5	17 13 6.55	65.0	4	+ 4.082	− 37 39 42.2	68.5	2	− 4.07
7192	B. A. C. 5848 . . .	7.4	13 10.88	63.5	2	3.839	− 30 21 27.9	58.5	2	4.07
7193	Anonymous . . .	8.0	13 13.24	69.8	3	3.997	− 35 14 14.2	68.9	5	4.07
7194	Lacaille 7244 . . .	6.0	13 13.86	68.5	2	4.015	− 35 46 18.7	66.5	2	3.98
7195	O. Arg. S. 16659 . .	8.5	13 21.88	62.5	2	3.617	− 22 36 19.2	66.5	2	4.05
7196	Lacaille 7245 . . .	5.5	17 13 24.72	69.5	2	+ 4.062	− 37 4 40.5	67.5	2	− 4.05
7197	θ Ophiuchi	3.8	13 24.84	58.5	66	3.679	− 24 51 20.5	60.2	13	4.05
7198	Anonymous . . .	8.1	13 28.93	69.5	2	3.764	− 27 51 35.9	56.5	5	4.04
7199	Anonymous . . .	8.3	13 42.24	65.3	1	3.678	− 24 48 46.4	63.0	2	4.02
7200	O. Arg. S. 16676 . .	9.0	13 59.59	68.4	1	3.755	− 27 32 7.3	56.5	4	3.99
7201	O. Arg. S. 16680 . .	9.0	17 14 10.70	65.5	2	+ 3.616	− 22 33 37.5	68.6	1	− 3.98
7202	Lalande 31543 . . .	8.0	14 26.58	70.3	3	3.487	− 17 33 46.9	56.4	4	3.96
7203	Anonymous . . .	. .	14 28.74	64.6	2	3.877	− 31 33 37.2	65.6	2	3.96
7204	Anonymous . . .	8.5	14 29.28	69.5	1	3.764	− 27 49 43.6	56.5	3	3.96
7205	43 Ophiuchi	6.5	14 33.12	62.5	3	3.769	− 28 0 10.7	66.5	2	3.95
7206	B. A. C. 5858 . . .	7.5	17 14 33.50	62.3	5	+ 3.682	− 24 57 26.6	63.0	2	− 3.95
7207	Lalande 31556 . . .	7.5	14 45.00	64.5	2	3.625	− 22 52 11.7	64.5	2	3.93
7208	Lacaille 7259 . . .	6.0	14 50.71	69.5	1	3.978	− 34 39 16.6	71.5	3	3.93
7209	Anonymous . . .	9.0	14 51.10	69.6	2	2.229	+ 32 44 43.8	48.5	2	3.93
7210	Weisse XVII, 249 . .	8.3	15 1.83	65.5	3	3.177	− 4 35 54.4	67.6	2	3.91
7211	70 Herculis	5.5	17 15 8.25	57.0	4	+ 2.470	+ 24 38 27.5	53.5	3	− 3.90
7212	Weisse XVII, 254 . .	8.3	15 11.93	62.2	6	3.214	− 6 11 10.8	55.8	3	3.90
7213	Anonymous . . .	9.0	15 14.	. .	.	3.998	− 35 13 21.8	70.5	1	3.89
7214	Anonymous . . .	. .	15 18.	. .	.	3.999	− 35 14 59.1	63.5	1	3.89
7215	w Herculis.	5.5	15 25.26	47.5	1	2.232	+ 32 38 49.4	70.6	4	3.88
7216	O. Arg. S. 16710 . .	8.3	17 15 29.14	69.0	2	+ 3.841	− 30 23 33.8	64.2	3	− 3.87
7217	B. A. C. 5862 . . .	6.8	15 31.96	64.7	4	3.648	− 23 42 27.9	66.5	2	3.87
7218	B. A. C. 5861 . . .	7.6	15 32.60	63.2	3	3.785	− 28 31 3.9	61.8	4	3.87
7219	Lacaille 7268 . . .	5.0	15 44.91	69.5	2	3.974	− 34 33 42.1	64.5	2	3.85
7220	Lacaille 7269 . . .	7.3	15 51.70	69.5	2	3.972	− 34 25 41.8	67.9	3	3.83
7221	Weisse (2) XVII, 454 .	8.0*	17 15 53.76	69.6	2	+ 2.089	+ 36 49 58.7	48.5	1	− 3.84
7222	B. A. C. 5868 . . .	6.5	16 32.97	64.3	11	3.660	− 24 6 39.8	62.5	2	3.78
7223	B. A. C. 5869 . . .	6.5	16 34.37	68.6	2	3.816	− 29 32 17.7	58.5	2	3.78
7224	O. Arg. S. 16749 . .	8.8	17 0.37	69.0	2	3.786	− 28 31 15.1	68.2	3	3.76
7225	Anonymous . . .	. .	17 9.	. .	.	3.877	− 31 30 38.7	68.1	2	3.73
7226	Weisse (2) XVII, 486 .	9.0	17 17 10.77	70.0	2	+ 2.670	+ 17 0 39.4	69.1	2	− 3.73
7227	Weisse (2) XVII, 487 .	7.0	17 16.11	66.5	3	2.670	+ 17 2 13.9	69.1	2	3.72
7228	B. A. C. 5875 . . .	7.2	17 25.98	62.5	1	3.779	− 28 17 9.1	66.5	2	3.70
7229	Lacaille 7282 . . .	7.0	17 26.10	66.6	2	+ 3.957	− 33 57 46.7	67.1	2	3.70
7230	Anonymous . . .	. .	17 28.78	50.4	2	− 1.389	+ 73 35 16.2	50.4	2	3.69

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			h. m. s.			″	° ′ ″			″
7231	Anonymous	8.8	17 17 31.41	68.5	2	+ 3.567	− 20 38 59.3	65.5	2	− 3.69
7232	Anonymous	7.7	17 33.52	66.8	4	3.877	− 31 28 50.6	70.5	2	3.69
7233	*b* Ophiuchi	4.3	17 49.35	64.5	52	3.658	− 24 2 32.6	67.6	4	3.67
7234	73 Herculis	6.0*	18 15.12	59.9	3	2.512	+ 23 5 34.4	53.4	3	3.63
7235	B. A. C. 5878	6.4	18 15.56	62.9	2	3.708	− 25 48 57.1	64.8	3	3.63
7236	*d* Ophiuchi	4.0*	17 18 25.01	60.5	7	+ 3.823	− 29 44 11.2	66.5	2	− 3.62
7237	B. A. C. 5884	6.0	18 42.08	60.5	2	3.819	− 29 35 56.0	68.6	2	3.59
7238	Weisse (2) XVII, 523	8.0	18 43.62	59.5	2	2.668	+ 17 3 52.3	69.1	2	3.59
7239	Weisse XVII, 322	7.5	18 47.08	71.5	1	3.020	+ 2 12 36.3	71.4	2	3.59
7240	ρ Herculis, (1st *)	..	18 50.90	59.5	2	2.070	+ 37 16 40.0	69.2	3	3.58
7241	ρ Herculis, (2d *)	..	17 18 51.10	59.5	2	+ 2.070	+ 37 16 35.7	57.5	11	− 3.58
7242	O. Arg. S. 16802	7.6	19 9.82	69.0	2	3.865	− 31 5 1.4	62.5	2	3.55
7243	B. A. C. 5888	6.0*	19 10.74	45.4	1	3.361	− 12 23 7.1	69.6	2	3.55
7244	B. A. C. 5890	5.5	19 12.30	45.5	2	3.186	− 4 57 34.9	69.6	2	3.55
7245	Weisse (2) XVII, 554	6.0	19 19.63	69.0	2	2.017	+ 38 42 39.5	47.5	2	3.54
7246	Lalande 31762	7.0*	17 19 19.86	59.6	2	+ 2.078	+ 37 3 5.1	54.5	2	− 3.54
7247	B. A. C. 5894	6.0*	19 33.56	59.6	2	2.893	+ 7 43 16.6	54.6	2	3.52
7248	σ Ophiuchi	4.5	19 34.19	61.5	5	2.974	+ 4 15 54.6	61.2	3	3.52
7249	B. A. C. 5895	6.5*	19 36.20	59.6	2	2.077	+ 37 4 42.0	52.5	4	3.52
7250	B. A. C. 5892	7.2	19 38.34	63.4	7	3.871	− 31 15 43.6	62.1	5	3.51
7251	Weisse (2) XVII, 552	7.0	17 19 40.54	59.5	2	+ 2.669	+ 17 2 36.1	69.1	2	− 3.51
7252	O. Arg. S. 16816	8.2	19 55.25	64.5	3	2.571	− 20 50 33.0	68.6	2	3.49
7253	B. A. C. 5896	7.0	20 0.43	62.8	4	3.697	− 25 23 20.1	68.1	2	3.48
7254	B. A. C. 5897	6.8	20 9.49	67.5	3	3.876	− 31 24 51.8	68.8	3	3.47
7255	Lalande 31790	7.5	20 19.99	69.0	2	2.069	+ 37 18 13.5	48.4	1	3.45
7256	Anonymous	7.3	17 20 42.49	69.0	2	+ 2.069	+ 37 50 42.5	48.5	1	− 3.42
7257	Weisse (2) XVII, 596	7.7	20 46.04	64.5	2	2.667	+ 17 5 33.5	69.1	2	3.42
7258	B. A. C. 5900	6.0*	20 46.60	55.8	3	2.587	+ 20 12 9.2	53.6	3	3.42
7259	Lacaille 7312	7.3	20 52.20	63.0	4	3.947	− 33 35 58.5	69.0	2	3.41
7260	O. Arg. S. 16832	9.0	20 52.53	69.5	1	3.447	− 15 53 59.8	70.5	1	3.41
7261	O. Arg. S. 16833	8.6	17 20 59.81	69.9	3	+ 3.448	− 15 55 27.8	69.5	3	− 3.40
7262	O. Arg. N. 17136	7.6	20 59.82	64.9	3	− 2.869	+ 77 29 40.0	69.0	2	3.40
7263	υ Scorpii	2.5	21 14.87	56.5	7	+ 4.072	− 37 10 47.5	53.0	5	3.38
7264	O. Arg. S. 16842	7.5	21 26.32	66.4	6	3.448	− 15 55 4.3	69.2	4	3.36
7265	O. Arg. S. 16844	8.0*	21 28.15	64.5	3	3.535	− 19 21 22.5	65.5	2	3.36
7266	O. Arg. S. 16847	9.0	17 21 31.86	65.6	2	+ 3.492	− 17 41 22.3	58.2	7	− 3.35
7267	O. Arg. S. 16854	8.0	21 49.15	64.5	3	3.493	− 17 41 45.3	57.8	9	3.33
7268	O. Arg. S. 16856	8.3	21 50.37	69.5	3	3.448	− 15 54 0.8	69.7	6	3.32
7269	Anonymous	6.8	21 51.38	68.5	2	4.215	− 40 55 38.5	64.0	2	3.34
7270	Weisse XVII, 387	6.5	22 18.30	61.5	2	3.206	− 5 48 7.5	69.6	2	3.28

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			h. m. s.			″	° ′ ″			″
7271	Anonymous.	8.8	17 22 31.75	69.0	2	+ 3.889	− 31 45 40.8	58.5	1	− 3.26
7272	Lacaille 7324	6.8	22 33.95	63.3	5	3.949	− 33 36 27.0	67.6	1	3.26
7273	O. Arg. S. 16875	8.3	22 46.24	67.5	2	3.447	− 15 52 27.1	70.5	2	3.24
7274	c^2 Ophiuchi	5.0	22 52.55	62.5	25	3.655	− 23 51 2.1	68.3	3	3.23
7275	B. A. C. 5908	8.2	22 56.45	65.9	3	3.888	− 31 43 0.7	60.5	4	3.23
7276	B. A. C. 5909	6.1	17 23 2.92	62.9	3	+ 3.735	− 26 9 30.9	66.5	2	− 3.22
7277	Weisse XVII, 409.	9.0	23 3.24	60.4	2	3.210	− 5 58 17.9	56.0	4	3.22
7278	Lacaille 7330	5.9	23 8.42	64.0	2	3.968	− 34 10 9.2	68.0	2	3.21
7279	Lacaille 7325	6.0	23 15.10	59.6	2	4.222	− 41 3 54.1	58.1	8	3.20
7280	O. Arg. S. 16897	9.0	23 27.97	62.5	3	3.604	− 22 53 20.5	67.5	3	3.18
7281	B. A. C. 5914	6.5	17 23 55.19	63.6	2	+ 3.928	− 32 57 3.0	69.0	2	− 3.14
7282	λ Scorpii	3.0*	24 6.29	54.9	5	4.067	− 36 59 48.5	55.6	4	3.13
7283	B. A. C. 5916	6.9	24 7.64	64.9	5	3.821	− 29 32 40.4	65.5	4	3.13
7284	O. Arg. S. 16908	8.5	24 16.96	70.0	2	3.450	− 15 59 10.9	69.1	2	3.11
7285	B. A. C. 5919	5.5	24 20.46	70.6	2	3.007	+ 2 49 59.8	72.0	4	3.11
7286	λ Herculis.	4.5*	17 25 4.93	48.1	14	+ 2.421	+ 26 13 8.2	69.1	2	− 3.05
7287	Anonymous	9.0	25 8.37	69.5	1	3.914	− 32 30 22.9	69.1	2	3.04
7288	Anonymous	9.0	25 13.41	69.7	4	3.913	− 32 27 31.0	69.8	4	3.03
7289	Anonymous	8.3	25 16.19	68.3	4	3.911	− 32 24 6.4	69.6	1	3.03
7290	Anonymous	9.0	25 27.07	69.5	1	4.124	− 38 30 58.2	70.5	2	3.01
7291	B. A. C. 5924	6.5	17 25 33.47	63.3	4	+ 3.891	− 31 46 14.9	61.2	3	− 3.00
7292	B. A. C. 5925	6.4	25 33.80	65.1	6	3.914	− 32 28 49.6	65.9	3	3.00
7293	Anonymous	8.8	25 37.24	65.5	3	3.873	− 31 12 33.4	69.0	2	3.00
7294	B. A. C. 5927	5.6	25 37.32	68.6	2	2.269	+ 31 15 53.8	53.4	3	3.00
7295	Lalande 31931	8.0	25 49.47	66.0	2	3.495	− 17 44 1.0	56.6	6	2.98
7296	Anonymous.	9.0	17 25 55.58	67.5	2	+ 4.125	− 38 32	. .	.	− 2.97
7297	Anonymous.	8.3	26 2.94	68.0	2	4.124	− 38 29 49.2	70.5	3	2.96
7298	Lacaille 7349	6.6	26 11.06	63.5	2	4.081	− 37 20 23.4	66.6	2	2.95
7299	O. Arg. S. 16952	7.7	26 22.20	68.2	3	3.505	− 18 7	. .	.	2.93
7300	52 Ophiuchi	7.0*	26 53.44	45.4	1	3.605	− 21 56 43.3	69.6	2	2.89
7301	B. A. C. 5932	5.0	17 26 54.45	64.9	3	+ 4.126	− 38 31 54.0	68.9	3	− 2.89
7302	Madras 1165	8.0	26 59.57	60.4	2	3.676	− 24 31 40.5	55.5	4	2.88
7303	B. A. C. 5929	6.0*	26 59.60	59.5	2	2.001	+ 38 59 19.3	54.0	6	2.88
7304	O. Arg. S. 16966	8.0	27 8.64	67.5	2	3.506	− 18 8 48.0	68.6	2	2.87
7305	β Draconis	3.2*	27 16.24	49.6	26	1.353	+ 52 24 22.7	50.6	39	2.85
7306	Anonymous	8.5	17 27 18.82	68.5	2	+ 4.082	− 37 20 40.9	71.5	3	− 2.85
7307	Weisse (2) XVII, 831	7.2	27 30.48	68.6	2	2.115	+ 35 52 29.9	46.5	1	2.83
7308	Weisse XVII, 508	8.0	27 32.38	65.5	3	2.776	+ 12 36 47.2	69.5	2	2.83
7309	B. A. C. 5938	7.0	27 51.80	64.6	2	3.900	− 32 2 0.8	67.6	2	2.80
7310	O. Arg. S. 16978	6.8	28 3.55	68.6	2	3.496	− 17 45 57.5	63.0	2	2.79

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			h. m. s.			s.	° ′ ″			″
7311	Anonymous. . . .	8.0	17 28 9.05	68.4	1	+ 4.008	− 35 14 27.7	63.5	1	− 2.78
7312	Lacaille 7357 . . .	6.8	28 16.90	63.5	2	4.098	− 37 45 56.1	67.6	2	2.77
7313	Lacaille 7362 . . .	7.5	28 20.02	63.5	2	3.975	− 34 15 33.6	67.5	2	2.76
7314	Anonymous . . .	8.5	28 24.80	70.0	2	4.081	− 37 18 56.7	69.9	3	2.75
7315	α Ophiuchi	2.0*	28 26.16	57.4	241	2.774	+ 12 39 55.6	51.7	84	2.75
7316	B. A. C. 5943 . . .	7.7	17 28 53.79	62.4	8	+ 3.787	− 28 20 48.2	61.3	9	− 2.71
7317	Anonymous . . .	8.5	29 10.46	69.5	2	3.570	− 20 35 56.1	68.6	3	2.69
7318	Lalande 32045 . . .	8.5	29 18.20	60.5	2	3.687	− 24 52 34.6	59.2	3	2.68
7319	B. A. C. 5946 . . .	7.3	29 22.90	63.2	8	3.775	− 27 57 26.2	60.5	11	2.67
7320	ν^1 Draconis	4.5	29 25.28	62.5	2	1.160	+ 55 16 52.1	61.2	3	2.67
7321	ν^2 Draconis	4.7	17 29 30.65	62.5	2	+ 1.160	+ 55 16 10.5	61.2	3	− 2.66
7322	Anonymous . . .	. .	29 33.	. . .	.	3.570	− 20 34 41.3	70.6	1	2.66
7323	ξ Serpentis	4.0	29 34.30	67.5	3	3.435	− 15 18 24.2	67.6	2	2.66
7324	Anonymous. . . .	9.0	30 8.27	69.5	1	4.005	− 35 7 46.6	70.6	1	2.60
7325	B. A. C. 5952 . . .	7.0	30 10.73	61.7	4	3.787	− 28 19 25.3	61.3	4	2.60
7326	O. Arg. S. 17016 . .	7.3	17 30 21.39	69.0	2	+ 3.743	− 26 50 56.0	66.5	3	− 2.58
7327	B. A. C. 5955 . . .	6.5	30 24.97	66.0	2	3.820	− 29 26 41.7	62.5	2	2.58
7328	B. A. C. 5956 . . .	7.0	30 29.50	59.6	2	3.834	− 29 52 29.5	56.8	4	2.57
7329	Anonymous. . . .	8.0	30 36.14	70.6	1	3.904	− 32 5 23.8	70.5	1	2.57
7330	Anonymous. . . .	. .	30 43.48	69.5	1	4.005	− 35 8 5.0	63.5	1	2.55
7331	Anonymous . . .	7.0	17 30 53.70	66.3	8	+ 3.905	− 32 9	. .	.	− 2.54
7332	Lalande 32165 . . .	6.0	30 53.74	68.6	2	2.058	+ 37 23 32.2	48.0	2	2.54
7333	B. A. C. 5960 . . .	6.8	30 55.05	65.6	3	3.905	− 32 7 3.0	69.4	1	2.54
7334	Anonymous . . .	8.5	30 55.08	70.6	1	3.903	− 32 4 37.0	69.6	2	2.54
7335	Anonymous . . .	7.0	31 3.46	67.1	4	3.906	− 32 10 25.9	68.5	8	2.53
7336	Anonymous . . .	8.0	17 31 13.90	63.6	1	+ 3.907	− 32 10 54.8	69.2	3	− 2.51
7337	B. A. C. 5962	6.0*	31 17.04	59.5	2	2.290	+ 30 52 24.9	53.4	4	2.51
7338	Anonymous . . .	8.5	31 17.94	68.5	2	4.003	− 35 4 25.1	63.5	1	2.50
7339	B. A. C. 5961 . . .	7.4	31 30.95	64.3	5	3.805	− 28 50 28.7	67.6	3	2.48
7340	Anonymous . . .	7.0	31 36.17	65.1	2	3.904	− 32 4 28.1	71.3	3	2.48
7341	B. A. C. 5964 . . .	6.5	17 31 51.10	65.0	5	+ 3.906	− 32 8 3.7	69.5	8	− 2.46
7342	B. A. C. 5966 . . .	8.0	31 54.32	63.3	6	3.772	− 27 48 42.8	65.1	2	2.45
7343	Weisse XVII, 620 .	7.5	31 57.26	62.5	2	2.770	+ 12 49 16.4	66.0	2	2.45
7344	B. A. C. 5968 . . .	8.0	32 30.91	65.6	1	3.903	− 32 2 1.9	70.6	2	2.40
7345	O. Arg. S. 17063 . .	8.2	32 32.63	68.9	2	3.503	− 18 0 15.4	56.5	3	2.40
7346	Lacaille 7395 . . .	6.2	17 32 45.60	63.5	3	+ 3.948	− 33 25 38.0	68.5	4	− 2.38
7347	κ Scorpii	3.0	32 48.28	63.0	3	4.145	− 38 57 11.8	70.9	3	2.37
7348	O. Arg. S. 17068 . .	8.8	32 56.68	68.9	2	3.505	− 18 4 10.3	56.4	2	2.36
7349	Rumker 5943 . . .	6.0	32 58.11	63.2	3	1.562	+ 48 40 8.0	66.5	2	2.36
7350	Anonymous . . .	7.2	32 59.00	69.5	2	4.016	− 35 25 22.6	67.5	2	2.27

Number.	Name of Star.	Magnitude.	Mean Right Ascension, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.	Mean Declination, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.
			h. m. s.			″	° ′ ″			″
7351	O. Arg. S. 17070	8.8	17 33 1.98	69.3	3	+ 3.539	− 19 22 41.4	57.5	2	− 2.36
7352	Anonymous	9.0	33 3.81	61.6	1	2.606	+ 19 21	. .	.	2.35
7353	Anonymous	7.8	33 16.15	69.0	2	3.976	− 34 14 39.4	67.5	2	2.33
7354	o Serpentis	5.0	33 32.86	60.3	21	3.374	− 12 47 48.5	67.1	2	2.31
7355	O. Arg. S. 17091	7.5	33 50.	. .	.	3.643	− 23 16 34.9	64.6	2	2.28
7356	O. Arg. S. 17094	7.5	17 33 50.53	64.4	4	+ 3.654	− 23 39 45.4	68.6	1	− 2.28
7357	B. A. C. 5977	6.4	33 55.53	63.8	3	3.934	− 32 58 42.1	61.5	3	2.28
7358	Anonymous	8.7	34 1.43	64.8	4	3.772	− 27 46 13.9	68.0	2	2.27
7359	Anonymous	6.8	34 4.01	69.0	2	4.010	− 35 13 31.7	63.5	1	2.26
7360	O. Arg. S. 17098	9.0	34 8.23	67.1	4	3.538	− 19 19 41.4	56.9	3	2.26
7361	Anonymous	8.8	17 34 25.21	67.6	2	+ 3.779	− 28 0 15.8	69.5	2	− 2.23
7362	B. A, C. 5980	6.6	34 25.56	64.1	2	3.922	− 32 35 28.1	67.6	2	2.23
7363	Lacaille 7406	6.0	34 25.82	63.1	2	4.138	− 38 44 0.2	68.6	2	2.23
7364	Anonymous	7.5	34 28.24	67.6	4	4.017	− 35 25 45.1	67.5	2	2.23
7365	B. A. C. 5981	6.5	34 28.92	63.1	13	3.773	− 27 48 43.5	65.6	2	2.23
7366	Anonymous	8.0	17 34 30.	. .	.	+ 3.981	− 34 22 47.3	67.0	2	− 2.23
7367	B. A. C. 5983	7.0	34 31.59	62.5	3	3.843	− 30 6 17.7	65.0	2	2.22
7368	B. A. C. 5986	6.0*	34 40.20	59.5	2	2.265	+ 31 16 43.6	53.5	4	2.21
7369	Rumker 5958	6.9	34 51.43	62.8	4	2.710	+ 15 15 13.5	64.5	2	2.20
7370	O. Arg. S. 17114	9.0	34 52.98	59.6	2	3.541	− 19 26 10.2	65.6	3	2.19
7371	Lalande 32322	8.0	17 34 53.62	69.0	2	+ 2.060	+ 37 17 45.1	48.5	1	− 2.19
7372	Anonymous	8.0	35 1.41	69.0	2	3.877	− 31 12 20.3	67.5	2	2.18
7373	58 Ophiuchi	5.5	35 2.60	53.3	14	3.599	− 21 36 40.4	56.2	5	2.18
7374	ι Herculis.	4.0*	35 30.86	53.8	4	1.691	+ 46 4 55.7	70.6	2	2.14
7375	Lacaille 7414	7.0	35 38.77	63.2	4	4.019	− 35 27 49.4	67.2	3	2.13
7376	B. A. C. 5989	6.9	17 35 45.53	63.5	6	+ 3.653	− 23 36 37.9	61.8	4	− 2.12
7377	O. Arg. S. 17132	8.7	35 46.96	62.6	2	3.782	− 28 6 39.3	69.1	2	2.12
7378	O. Arg. S. 17133	8.5*	35 57.	. .	.	3.600	− 21 39 52.0	70.5	1	2.10
7379	Anonymous	8.2	35 57.19	69.0	2	4.007	− 35 7 24.0	67.0	2	2.10
7380	B. A. C. 5992	6.5	35 57.53	70.6	2	3.613	− 22 7 39.1	68.5	2	2.10
7381	Weisse XVII, 697	8.6	17 36 23.96	65.5	4	+ 3.258	− 7 57 27.2	65.6	2	− 2.06
7382	β Ophiuchi	4.2	36 33.50	48.5	19	2.964	+ 4 37 45.5	68.6	2	2.05
7383	O. Arg. S. 17152	8.9	36 33.97	65.6	2	3.779	− 27 58 48.5	67.6	2	2.05
7384	O. Arg. S. 17157	9.2	36 42.01	65.6	2	3.779	− 28 0 2.5	67.6	2	2.04
7385	Anonymous	. .	36 46.	. .	.	3.254	− 7 48 15.4	65.6	2	2.03
7386	Lacaille 7420	6.0	17 36 48.08	63.9	2	+ 4.157	− 39 12 8.0	69.6	2	− 2.03
7387	O. Arg. S. 17159	9.0	36 48.47	69.6	2	3.600	− 21 38 38.6	67.5	1	2.03
7388	Weisse XVII, 713	8.1	36 58.45	65.7	5	+ 3.254	− 7 47 26.0	65.6	2	2.01
7389	O. Arg. N. 17415	8.5	37 13.84	71.5	1	− 0.301	+ 68 28 29.7	71.4	2	1.99
7390	Lacaille 7424	6.2	37 30.93	63.1	2	+ 4.114	− 38 3 5.0	68.5	2	1.96

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			h. m. s.			″	° ′ ″			″
7391	Lacaille 7423	7.0	17 37 35.82	63.1	2	+ 4.164	− 39 21 41.5	70.6	2	− 1.96
7392	84 Herculis	5.5	37 36.82	59.5	2	+ 2.468	+ 24 23 27.2	54.5	3	1.96
7393	ω Draconis	4.6	37 46.42	63.0	8	− 0.363	+ 68 49 21.2	64.0	11	1.94
7394	ι¹ Scorpii	3.5	37 47.52	63.6	2	+ 4.191	− 40 4 3.7	63.5	2	1.94
7395	Anonymous	8.0	38 2.14	71.5	1	3.993	− 34 40 33.6	70.6	1	1.92
7396	Anonymous	8.2	17 38 7.	. .	.	+ 3.997	− 34 47 27.9	72.0	3	− 1.91
7397	Anonymous	7.4	38 9.50	63.6	2	3.654	− 23 37 28.1	61.0	4	1.91
7398	Dorpat 2204, (1st *)	7.6	38 26.78	64.4	3	3.385	− 13 14 52.1	69.7	2	1.88
7399	Dorpat 2204, (2d *)	7.6	38 27.13	64.4	3	3.385	− 13 14 38.0	69.7	2	1.88
7400	Anonymous	7.4	38 29.87	71.5	2	3.981	− 34 20 23.9	69.5	1	1.88
7401	Lacaille 7430	6.6	17 38 29.92	63.4	2	+ 3.978	− 34 15 11.3	69.6	4	− 1.88
7402	3 Sagittarii	5.0	38 44.97	62.9	16	3.773	− 27 46 23.9	60.6	3	1.86
7403	Lacaille 7435	6.5	38 49.90	66.0	2	4.033	− 35 50 17.8	72.6	1	1.85
7404	Lacaille 7433	6.5	38 51.26	67.2	3	4.115	− 38 4 43.2	68.5	2	1.85
7405	Weisse XVII, 755	7.6	38 55.43	65.6	4	3.257	− 7 55 16.8	65.6	4	1.84
7406	Lalande 32418	8.5	17 39 5.83	59.5	2	+ 3.697	− 25 7 53.8	57.6	1	− 1.83
7407	B. A. C. 6011	7.1	39 7.12	64.0	2	3.924	− 32 36 52.3	60.1	4	1.82
7408	O. Arg. S. 17209	7.2	39 10.15	64.5	2	3.577	− 20 46 49.1	65.1	2	1.82
7409	Taylor 8219	6.8	39 15.77	68.5	2	3.506	− 18 3 0.9	56.4	6	1.81
7410	Anonymous	8.0	39 21.06	69.1	2	4.116	− 38 3 53.1	68.5	2	1.81
7411	Weisse XVII, 779	8.6	17 39 32.62	65.6	3	+ 3.260	− 8 0 54.9	65.6	3	− 1.79
7412	B. A. C. 6015	6.3	39 42.63	57.5	7	3.748	− 26 55 13.1	67.2	3	1.77
7413	Lacaille 7443	6.0	39 43.41	66.0	2	4.148	− 38 55 53.3	69.1	2	1.77
7414	B. A. C. 6016	5.5	40 4.90	65.5	2	3.893	− 31 39 3.1	67.2	3	1.74
7415	Lacaille 7448	6.8	40 6.32	67.4	5	4.016	− 35 19 35.4	69.2	3	1.74
7416	Weisse XVII, 787	8.2	17 40 9.79	59.6	2	+ 3.393	− 13 33 8.0	56.1	4	− 1.73
7417	B. A. C. 6017	6.8	40 16.05	67.1	3	3.858	− 30 32 39.0	63.5	2	1.72
7418	B. A. C. 6018	4.0*	40 19.76	55.9	3	4.076	− 36 59 40.9	54.5	3	1.72
7419	ι² Scorpii	5.0	40 23.77	66.0	2	4.191	− 40 2 25.6	66.5	2	1.71
7420	γ Ophiuchi	4.0*	40 52.40	54.6	9	3.008	+ 2 45 47.3	59.0	5	1.67
7421	μ Herculis	3.4*	17 40 58.73	64.1	67	+ 2.369	+ 27 48 18.9	58.6	19	− 1.66
7422	Weisse XVII, 810	9.0	41 17.12	60.5	2	3.338	− 11 17 24.8	56.5	3	1.64
5423	O. Arg. S. 17249	7.2	41 20.86	68.5	2	3.744	− 26 45 43.8	68.0	2	1.63
7424	B. A. C. 6023	6.4	41 23.84	63.8	5	3.670	− 24 9 25.2	64.1	4	1.63
7425	B. A. C. 6024	6.7	41 35.62	62.5	3	3.752	− 27 0 43.7	65.4	2	1.61
7426	Lacaille 7459	7.2	17 41 37.45	63.5	3	+ 3.960	− 33 40 32.3	70.1	2	− 1.61
7427	Anonymous.	7.6	41 43.49	67.8	6	4.016	− 35 18 2.5	68.9	6	1.60
7428	Anonymous.	8.2	41 45.35	68.4	5	4.016	− 35 17 25.8	68.0	4	1.59
7429	Anonymous.	9.0	41 50.00	67.5	2	3.635	− 22 54 59.7	70.6	1	1.59
7430	Anonymous.	8.2	42 11.28	64.6	2	3.799	− 28 36 43.7	69.1	4	1.56

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			h. m. s.			″	° ′ ″			″
7431	B. A. C. 6026, (1st *) .	7.4	17 42 11.74	70.0	4	+ 3.858	— 30 30 40.8	66.0	2	— 1.56
7432	B. A. C. 6026, (2d *) .	8.2	42 11.92	70.2	3	3.858	— 30 30 40.8	66.0	2	1.56
7433	Anonymous . . .	8.5	42 28.66	67.5	2	4.017	— 35 19 19.4	70.6	2	1.53
7434	Anonymous . . .	7.0	42 31.11	64.5	2	3.885	— 31 22 9.5	69.9	2	1.53
7435	Anonymous . . .	7.5	42 32.74	68.4	1	3.996	— 34 44 20.0	70.6	2	1.53
7436	Weisse XVII, 834 ..	8.0	17 42 33.10	61.0	2	+ 3.358	— 12 6 53.3	59.2	4	— 1.53
7437	Weisse XVII, 835 . .	9.0	42 37.34	65.1	2	3.377	— 12 53 25.2	56.5	2	1.52
7438	B. A. C. 6027 . . .	7.2	42 38.01	65.5	4	3.634	— 22 52 25.1	69.3	3	1.52
7439	O. Arg. S. 17275 . .	8.8	42 48.50	67.5	2	3.485	— 17 12 41.8	69.6	2	1.50
7440	B. A. C. 6029 . . .	6.0	42 53.39	69.1	2	3.997	— 34 45 23.9	67.2	3	1.50
7441	Anonymous . . .	. .	17 43 0.56	64.5	2	+ 3.798	— 28 34 45.5	66.9	3	— 1.49
7442	B. A. C. 6031 . . .	5.3	43 1.46	66.5	2	3.984	— 34 22 29.8	67.5	2	1.48
7443	Weisse (2) XVII, 1394.	7.0	43 3.67	69.1	2	2.097	+ 36 10	. .	.	1.48
7444	Anonymous . . .	7.0	43 4.87	69.1	2	2.082	+ 36 35 31.9	48.4	1	1.48
7445	87 Herculis.	6.0	43 8.58	59.5	2	2.431	+ 25 40 18.5	54.5	3	1.47
7446	Weisse (2) XVII, 1398.	7.5	17 43 9.67	69.1	2	+ 2.096	+ 36 12	. .	.	— 1.47
7447	B. A. C. 6032 . . .	7.5	43 13.28	62.8	8	3.882	— 31 17 9.3	60.2	8	1.47
7448	O. Arg. S. 17281 . .	7.9	43 14.55	65.2	6	3.715	— 25 43 48.0	66.3	4	1.47
7449	Weisse XVII, 846 . .	8.8	43 14.84	61.1	2	3.402	— 13 55 3.1	57.7	5	1.47
7450	O. Arg. S. 17284 . .	9.0	43 21.05	65.6	1	3.715	— 25 45 5.8	72.6	1	1.46
7451	Lacaille 7469 . . .	7.5	17 43 29.24	63.6	1	+ 3.881	— 31 17 10.8	72.6	2	— 1.44
7452	Lalande 32631 . . .	7.2	43 29.31	69.5	2	2.019	+ 38 17 2.6	48.5	1	1.44
7453	Lacaille 7464 . . .	6.2	43 34.35	67.0	2	4.005	— 34 58 43.1	67.5	3	1.44
7454	Weisse XVII, 857 . .	9.0*	43 38.38	61.1	2	3.403	— 13 55 30.7	61.0	2	1.43
7455	O. Arg. S. 17291 . .	8.0	43 49.98	67.3	3	3.753	— 27 3 7.3	68.0	2	1.41
7456	B. A. C. 6037 . . .	8.0	17 43 56.68	63.4	4	+ 3.995	— 34 41 30.0	68.6	2	— 1.41
7457	Anonymous . . .	7.0	44 1.48	62.6	2	4.058	— 36 28 13.4	70.6	2	1.40
7458	B. A. C. 6038 . . .	7.0	44 2.21	64.6	1	4.001	— 34 51 25.0	69.7	2	1.40
7459	Anonymous . . .	. .	44 2.26	69.6	3	4.005	— 34 58	. .	.	1.40
7460	Anonymous . . .	7.5	44 2.80	69.6	1	4.002	— 34 54	. .	.	1.40
7461	Weisse XVII, 867 . .	8.5	17 44 3.82	59.6	2	+ 3.429	— 14 59 8.2	56.6	2	— 1.39
7462	B. A. C. 6041 . . .	7.2	44 4.43	62.9	3	3.533	— 19 4 50.2	60.0	2	1.39
7463	B. A. C. 6039 . . .	6.5	44 5.21	68.5	2	3.905	— 31 59 38.4	58.5	3	1.39
7464	Anonymous . . .	. .	44 9.19	69.6	1	3.995	— 34 36 40.0	72.6	1	1.39
7465	Anonymous . . .	6.5	44 23.99	67.1	4	3.995	— 34 41 30.8	72.6	1	1.36
7466	Anonymous . . .	. .	17 44 25.41	70.5	2	+ 3.995	— 34 41	. .	.	— 1.36
7467	ψ^1 Draconis	4.7	44 26.07	62.9	10	— 1.087	+ 72 12 57.4	64.6	6	1.36
7468	B. A. C. 6042, (1st *) .	8.0	44 27.	. .	.	+ 3.998	— 34 45 26.7	70.9	3	1.36
7469	B. A. C. 6042, (2d *) .	7.5	44 29.	. .	.	3.997	— 34 44 56.7	71.0	2	1.36
7470	Anonymous. . . .	7.5	44 31.25	69.5	2	3.782	— 28 1 10.6	56.4	4	1.35

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			h. m. s.			″	° ′ ″			″
7471	Anonymous . . .	9.0	17 44 32.79	69.6	2	+ 3.714	− 25 42 47.3	69.1	2	− 1.36
7472	B. A. C. 6043 . . .	7.5	44 34.75	67.3	4	3.996	− 34 42 56.5	67.5	3	1.35
7473	Anonymous . . .	7.0	44 37.81	69.6	1	3.999	− 34 47	. .	.	1.34
7474	Anonymous . . .	8.0	44 40.34	69.5	1	3.990	− 34 32	. .	.	1.34
7475	B. A. C. 6044 . . .	7.0*	44 47.45	60.9	7	3.759	− 27 14 47.5	68.7	1	1.33
7476	Anonymous . . .	8.0	17 44 50.81	64.6	1	+ 4.053	− 36 20 16.4	71.5	1	− 1.33
7477	Anonymous . . .	8.3	44 52.69	69.5	1	3.999	− 34 47	. .	.	1.32
7478	Anonymous . . .	7.1	44 54.49	66.6	2	3.996	− 34 41 29.7	69.6	3	1.32
7479	O. Arg. S. 17320 . .	7.4	44 55.61	65.5	4	3.801	− 28 39 7.8	69.5	2	1.32
7480	B. A. C. 6045 . . .	6.0	45 2.85	68.6	1	4.001	− 34 50 36.7	70.1	2	1.30
7481	B. A. C. 6046 . . .	6.9	17 45 8.46	65.6	3	+ 3.986	− 34 25 53.5	64.6	2	− 1.30
7482	B. A. C. 6049 . . .	6.0*	45 16.87	55.2	3	3.328	− 10 51 41.2	56.5	2	1.29
7483	Anonymous . . .	6.5	45 18.41	63.6	1	3.990	− 34 32	. .	.	1.28
7484	Weisse XVII, 905 . .	7.7	45 22.95	64.5	5	3.256	− 7 52 25.7	70.0	2	1.28
7485	Anonymous . . .	6.7	45 28.79	66.0	5	3.989	− 34 30 30.5	68.5	1	1.27
7486	Anonymous . . .	8.0	17 45 28.93	63.6	1	+ 4.000	− 34 49 50.4	70.5	1	− 1.27
7487	B. A. C. 6051 . . .	5.2	45 39.56	63.5	4	4.057	− 36 26 32.5	71.5	2	1.25
7488	Anonymous . . .	. .	45 40.	. .	.	3.997	− 34 43 5.1	70.6	1	1.25
7489	30 Draconis	5.5	45 43.91	61.5	2	1.435	+ 50 48 57.4	62.6	2	1.25
7490	Weisse XVII, 929 . .	7.5	45 57.15	70.0	3	2.868	+ 8 41 3.7	68.6	1	1.23
7491	Anonymous . . .	8.5	17 46 6.32	67.5	2	+ 3.803	− 28 43 26.6	68.6	1	− 1.22
7492	Anonymous . . .	7.4	46 9.53	68.6	2	2.039	+ 37 44 49.4	46.5	1	1.21
7493	Anonymous . . .	. .	46 12.	. .	.	3.987	− 34 25 57.7	68.5	1	1.21
7494	63 Ophiuchi	6.5	46 17.21	52.4	8	3.690	− 24 51 16.1	70.7	2	1.20
7495	O. Arg. S. 17340 . .	8.5	46 18.59	64.5	3	3.584	− 20 59 22.5	65.6	2	1.20
7496	Lalande 32747 . . .	7.0	17 46 25.83	69.5	3	+ 2.011	+ 38 28 50.6	48.5	1	− 1.19
7497	Anonymous . . .	7.5	46 27.46	61.6	1	3.904	− 31 55 32.9	69.6	2	1.19
7498	Anonymous . . .	8.0	46 28.	. .	.	3.905	− 31 58 10.1	70.6	1	1.18
7499	O. Arg. S. 17349 . .	8.0	46 52.15	63.6	2	3.749	− 26 54 5.5	64.5	2	1.15
7500	Lalande 32706 . . .	8.4	46 54.10	68.5	2	3.512	− 18 15 40.5	56.4	4	1.15
7501	Anonymous . . .	7.0	17 46 59.	. .	.	+ 4.206	− 40 21 28.0	69.5	2	− 1.14
7502	Anonymous. . . .	8.2	47 4.21	69.5	2	3.993	− 34 37	. .	.	1.13
7503	O. Arg. S. 17354 . .	9.0	47 6.06	67.6	2	3.752	− 27 0 17.1	68.6	2	1.13
7504	B. A. C. 6057 . . .	6.2	47 6.68	64.3	3	3.921	− 32 26 48.9	58.5	2	1.13
7505	Lacaille 7490 . . .	5.7	47 6.80	62.6	2	4.203	− 40 16 42.6	70.6	2	1.13
7506	O. Arg. S. 17361 . .	9.0	17 47 20.99	65.6	1	+ 3.752	− 26 59 45.0	68.6	2	− 1.11
7507	Anonymous. . . .	8.3	47 21.74	66.8	5	3.994	− 34 37	. .	.	1.11
7508	B. A. C. 6062 . . .	5.8	47 31.19	69.1	2	1.951	+ 40 0 52.0	54.5	3	1.09
7509	Anonymous. . . .	8.0	47 35.68	69.5	1	3.996	− 34 42	. .	.	1.08
7510	Anonymous. . . .	9.0	47 37.	. .	.	3.997	− 34 43 24.4	71.6	2	1.08

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			h. m. s.			"	° ' "			"
7511	B. A. C. 6059 . . .	6.6	17 47 40.00	62.9	4	+ 3.744	− 26 44 35.4	60.0	2	− 1.08
7512	B. A. C. 6063 . . .	6.6	47 51.51	61.5	10	3.782	− 28 2 19.1	58.2	9	1.06
7513	O. Arg. S. 17376 . .	7.8	47 58.46	64.4	5	3.649	− 23 21 47.9	69.6	2	1.05
7514	Lacaille 7499 . . .	6.0	47 58.74	63.0	3	4.156	− 39 4 37.8	69.7	1	1.05
7515	O. Arg. S. 17379 . .	8.2	48 10.80	68.9	3	3.756	− 27 6 36.3	69.5	2	1.03
7516	Lacaille 7504 . . .	6.2	17 48 15.40	63.1	4	+ 4.158	− 39 6 45.2	70.1	2	− 1.03
7517	B. A. C. 6065 . . .	6.0*	48 15.84	60.0	4	3.449	− 15 47 1.1	56.5	3	1.03
7518	Weisse XVII, 966 . .	9.0	48 18.42	59.6	2	3.434	− 15 9 20.3	56.5	3	1.02
7519	Anonymous . . .	9.0	48 21.06	59.6	2	3.437	− 15 17 51.5	56.8	3	1.02
7520	Anonymous . . .	7.5	48 22.32	69.6	2	3.907	− 32 1 32.6	67.6	2	1.02
7521	B. A. C. 6066 . . .	7.3	17 48 34.16	56.2	6	+ 3.664	− 23 54 54.2	59.2	2	− 1.00
7522	*f* Herculis	5.5	48 44.65	53.6	4	1.950	+ 40 2 10.4	54.5	3	0.98
7523	Madras 1209 . . .	8.0	48 45.30	60.0	2	3.446	− 15 39 34.4	56.2	3	0.98
7524	O. Arg. S. 17394 . .	8.0	48 56.65	67.5	2	3.696	− 25 3	. .	.	0.97
7525	Anonymous . . .	7.8	49 18.24	68.5	2	3.786	− 28 8 26.2	70.6	1	0.94
7526	Anonymous . . .	7.8	17 49 19.24	68.5	2	+ 3.786	− 28 7 12.7	70.6	1	− 0.94
7527	Anonymous . . .	8.3	49 21.14	64.6	2	4.073	− 36 50 25.7	68.6	1	0.93
7528	B. A. C. 6071 . . .	5.5	49 24.27	62.2	3	3.167	− 4 3 30.7	68.6	2	0.93
7529	B. A. C. 6070 . . .	6.2	49 25.09	64.0	3	4.073	− 36 50 20.5	67.3	3	0.93
7530	Anonymous . . .	6.0	49 31.08	69.5	2	4.136	− 38 33 12.6	67.2	3	0.91
7531	Anonymous . . .	. .	17 49 32.	. .	.	+ 3.784	− 28 4 9.2	57.5	1	− 0.92
7532	Anonymous . . .	. .	49 35.	. .	.	3.783	− 28 1 53.5	57.5	2	0.91
7533	O. Arg. S. 17412 . .	8.0	49 42.20	65.6	3	3.698	− 25 7 17.5	68.6	2	0.90
7534	Lacaille 7516 . . .	7.0	49 42.40	64.6	2	4.076	− 36 55 9.7	66.6	2	0.90
7535	Lacaille 7514 . . .	6.0	49 45.03	65.9	2	4.252	− 41 28 8.4	68.5	2	0.90
7536	B. A. C. 6072 . . .	6.4	17 49 46.14	63.8	9	+ 3.804	− 28 44 21.6	63.5	2	− 0.89
7537	89 Herculis	5.5*	49 46.27	55.3	3	2.418	+ 26 4 29.1	54.5	4	0.89
7538	Weisse XVII, 1014 .	7.0	49 54.08	67.1	2	3.070	+ 0 5 20.9	68.6	2	0.88
7539	O. Arg. S. 17419 . .	9.0	50 5.22	69.5	2	3.747	− 26 48 32.2	65.5	2	0.86
7540	B. A. C. 6074, (1st *) .	6.0	50 5.84	61.6	7	3.851	− 30 14 4.1	69.3	3	0.87
7541	B. A. C. 6074, (2d *) .	8.1	17 50 6.22	64.1	2	+ 3.851	− 30 14 5.8	69.3	3	− 0.87
7542	Anonymous. . . .	8.5	50 10.60	69.5	1	3.888	− 31 25 28.2	67.0	2	0.86
7543	Dorpat 2245, (1st *) .	7.8	50 15.95	66.7	8	2.629	+ 18 21 2.3	66.9	3	0.85
7544	Dorpat 2245, (2d *) .	7.8	50 16.13	67.0	9	2.629	+ 18 21 2.3	66.9	3	0.85
7545	O. Arg. S. 17426 . .	7.8	50 23.65	65.6	2	3.700	− 25 10 16.3	70.1	2	0.84
7546	O. Arg. S. 17433 . .	9.5	17 50 34.92	65.0	2	+ 3.445	− 15 35 13.8	57.5	2	− 0.82
7547	Lacaille 7520 . . .	6.9	50 35.02	62.6	4	4.163	− 39 13 50.4	70.5	2	0.82
7548	B. A. C. 6076 . . .	6.8	50 42.66	63.6	2	3.953	− 33 23 34.4	58.6	2	0.81
7549	ξ Draconis	4.0*	51 6.37	46.0	5	1.023	+ 56 53 43.8	64.4	2	0.78
7550	Anonymous . . .	7.5	51 8.25	66.6	2	4.078	− 36 57 8.4	71.5	2	0.78

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7551		O. Arg. S. 17443 . .	7.5	17 51 9.39	64.6	2	+ 3.586	− 21 1 45.3	66.6	2	− 0.77
7552	4	Sagittarii	4.8	51 14.73	62.8	25	3.661	− 23 47 57.0	65.6	2	0.77
7553		O. Arg. S. 17447 . .	8.1	51 16.29	67.5	2	3.699	− 25 8 47.4	68.1	2	0.76
7554	ν	Ophiuchi	5.0	51 19.33	48.2	3	3.302	− 9 45 11.4	70.0	2	0.76
7555		O. Arg. S. 17449 . .	8.2	51 22.05	67.5	2	3.697	− 25 4 19.9	70.5	2	0.76
7556	θ	Herculis	4.8	17 51 27.08	68.6	2	+ 2.055	+ 37 16 17.2	47.6	3	− 0.75
7557	5	Sagittarii	5.5	51 36.59	57.2	9	3.674	− 24 16 8.1	66.5	2	0.74
7558		B. A. C. 6081 . . .	5.3	51 40.40	67.1	2	3.567	− 20 19 28.0	66.6	2	0.73
7559		Anonymous . . .	8.5	51 50.30	65.6	2	3.804	− 28 41 53.5	69.6	2	0.71
7560		Anonymous . . .	6.0	51 54.70	68.9	3	4.119	− 38 4 14.8	65.1	3	0.71
7561		O. Arg. N. 17663 . .	8.5	17 51 56.58	59.2	2	+ 1.392	+ 51 31 8.7	70.6	2	− 0.71
7562		O. Arg. N. 17680 . .	9.5	51 59.36	65.1	2	2.501	+ 76 31	. .	.	0.70
7563		O. Arg. S. 17466 . .	7.5	52 17.86	69.9	3	3.672	− 24 11 50.8	68.5	3	0.68
7564		B. A. C. 6083 . . .	6.4	52 20.21	63.4	8	4.056	− 36 22 3.6	68.9	3	0.67
7565		Anonymous . . .	8.4	52 21.43	64.5	2	3.071	+ 0 2 7.8	70.6	1	0.67
7566		Anonymous . . .	. .	17 52 28.	. .	.	+ 2.698	− 15 39 25.5	56.5	2	− 0.66
7567		Anonymous . . .	8.2	52 28.88	68.5	2	3.779	− 27 52 6.3	56.4	4	0.66
7568		O. Arg. S. 17467 . .	7.8	52 30.23	66.0	2	3.830	− 29 34 38.3	68.5	2	0.66
7569		Anonymous . . .	8.0	52 38.48	65.5	3	3.654	− 23 32 36.3	68.5	2	0.64
7570		Anonymous . . .	7.6	52 41.90	63.6	2	4.056	− 36 21 2.6	68.8	1	0.64
7571	ν	Herculis.	5.0*	17 53 8.70	59.5	2	+ 2.294	+ 30 12 11.5	53.9	7	− 0.60
7572		Anonymous . . .	7.0	53 16.18	63.3	1	3.671	− 24 8 56.2	70.5	1	0.59
7573	γ	Draconis	2.3*	53 21.34	50.3	94	1.391	+ 51 30 23.9	49.6	102	0.58
7574		O. Arg. S. 17503 . .	9.2	53 47.88	65.0	2	3.446	− 15 38 26.0	69.1	2	0.54
7575		Anonymous . . .	6.0	53 49.43	48.5	1	2.090	+ 36 18 10.6	48.5	1	0.54
7576	93	Herculis.	5.0*	17 53 49.44	59.5	2	+ 2.669	+ 16 45 41.2	54.5	3	− 0.54
7577		O. Arg. S. 17506, (1st *)	9.0	53 53.23	64.5	3	3.640	− 23 1	. .	.	0.53
7578		O. Arg. S. 17506, (2d *)	8.5	53 53.63	64.5	4	3.640	− 23 1 27.6	64.6	1	0.53
7579		Anonymous . . .	7.9	54 2.11	68.5	2	3.777	− 27 49 17.9	56.4	4	0.52
7580		O. Arg. S. 17509 . .	7.5	54 2.33	65.5	4	3.637	− 22 53 58.4	68.6	2	0.52
7581		O. Arg. S. 17510 . .	7.0	17 54 3.98	63.2	10	+ 3.674	− 24 14 58.5	66.5	2	− 0.52
7582		Lalande 32974 . . .	5.8	54 5.17	69.1	2	3.777	− 27 49	. .	.	0.52
7583		O. Arg. S. 17512 . .	8.0	54 5.24	62.4	3	3.674	− 24 14 29.7	69.7	1	0.52
7584		Lalande 32986 . . .	8.5	54 5.80	59.6	2	3.461	− 16 13 9.7	55.5	3	0.52
7585		Anonymous. . . .	7.6	54 15.18	65.5	5	3.599	− 21 30 9.9	69.5	2	0.50
7586		B. A. C. 6098 . . .	7.0	17 54 16.20	66.0	2	+ 3.578	− 20 43 57.5	67.5	2	− 0.50
7587	7	Sagittarii	5.8	54 16.38	63.0	11	3.675	− 24 16 37.4	66.6	2	0.50
7588		Lacaille 7534 . . .	7.0	54 46.98	62.6	2	4.219	− 40 38 8.8	68.5	2	0.46
7589		Anonymous. . . .	7.9	54 49.53	65.5	3	3.636	− 22 52 50.6	68.6	2	0.45
7590		O. Arg. S. 17533 . .	9.0	55 5.18	60.6	2	3.775	− 27 43 40.6	69.6	2	0.43

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7591	O. Arg. S. 17535	9.3	17 55 6.92	69.6	1	+ 3.775	− 27 44 21.9	68.6	1	− 0.43
7592	Anonymous	7.8	55 17.30	68.6	2	3.714	− 25 39 50.2	58.5	2	0.41
7593	9 Sagittarii	6.1	55 17.36	64.1	15	3.677	− 24 21 34.5	65.5	3	0.41
7594	O. Arg. S. 17540	6.9	55 21.97	65.8	9	3.676	− 24 18 40.9	67.6	2	0.40
7595	B. A. C. 6103	6.0	55 24.85	65.5	2	4.040	− 35 54 2.0	69.1	2	0.40
7596	Anonymous	7.2	17 55 26.73	65.0	6	+ 3.635	− 22 50 10.4	66.9	3	− 0.40
7597	95 Herculis, (1st *)	5.5	55 33.63	62.4	7	2.542	+ 21 35 55.5	57.3	4	0.39
7598	95 Herculis, (2d *)	5.5	55 34.10	62.4	7	2.542	+ 21 35 56.1	67.6	2	0.39
7599	Anonymous	7.2	55 40.84	71.5	1	3.674	− 24 14 37.2	66.5	1	0.38
7600	Anonymous	7.5	55 41.	. .	.	+ 3.672	− 24 10 59.7	70.9	3	0.38
7601	35 Draconis	5.5	17 55 43.14	68.5	1	− 2.709	+ 76 58 41.4	64.3	4	− 0.37
7602	O. Arg. S. 17555	7.0	55 50.67	63.6	4	+ 3.678	− 24 23 8.8	69.1	2	0.36
7603	O. Arg. S. 17558	8.5	55 52.45	66.0	2	3.779	− 27 51 55.8	69.1	2	0.36
7604	O. Arg. S. 17560	8.0	55 53.07	65.6	1	3.677	− 24 21 44.1	67.5	2	0.36
7605	Lacaille 7546	6.1	55 59.50	62.7	2	4.097	− 37 28 24.2	68.5	1	0.35
7606	γ^1 Sagittarii	4.8	17 56 4.64	62.1	7	+ 3.831	− 29 34 54.5	68.0	2	− 0.34
7607	Anonymous	. .	56 8.	. .	.	3.656	− 23 36 17.7	68.6	1	0.34
7608	B. A. C. 6108	6.5	56 8.47	66.0	2	3.713	− 25 37 25.0	70.1	2	0.34
7609	Lacaille 7551	7.5	56 15.36	63.6	4	3.064	− 36 34 58.4	68.6	2	0.33
7610	Anonymous	8.7	56 16.68	70.1	2	3.656	− 23 35 58.7	71.5	1	0.33
7611	Weisse XVII, 1174	8.0	17 56 24.31	65.6	1	+ 3.013	+ 2 30 55.1	69.1	2	− 0.31
7612	Lalande 33089	7.8	56 29.97	64.6	2	3.482	− 17 2 0.1	56.8	10	0.31
7613	Anonymous	8.2	56 31.11	70.5	1	4.095	− 37 26 14.3	70.5	1	0.30
7614	O. Arg. S. 17576	7.5	56 31.76	60.6	3	3.777	− 27 50 14.3	58.8	6	0.30
7615	B. A. C. 6111	6.5	56 35.35	63.3	5	3.678	− 24 24 5.0	66.5	2	0.30
7616	Anonymous	8.0	17 56 39.09	70.5	1	+ 4.098	− 37 30 0.4	69.5	2	− 0.29
7617	B. A. C. 6113	7.0*	56 44.96	59.5	2	3.822	− 29 16 47.7	55.2	8	0.28
7618	γ^2 Sagittarii	3.4*	56 48.86	64.0	31	3.857	− 30 25 19.4	68.3	4	0.28
7619	Anonymous	8.5	57 5.57	65.1	2	3.777	− 27 47 38.5	57.5	2	0.25
7620	O. Arg. S. 17597	7.5	57 30.26	66.9	3	3.673	− 24 12 5.1	68.9	3	0.22
7621	Anonymous	8.3	17 57 34.54	68.5	2	+ 4.078	− 36 36 55.9	66.6	1	− 0.21
7622	Anonymous	8.7	57 46.58	65.5	3	3.598	− 21 28 5.4	69.6	2	0.20
7623	O. Arg. S. 17610	9.0	57 53.48	64.5	2	3.709	− 25 28 56.0	70.1	2	0.18
7624	B. A. C. 6120	6.6	57 54.48	62.5	4	3.794	− 28 22 16.4	68.6	2	0.18
7625	O. Arg. S. 17612	8.5	57 55.50	67.6	2	3.672	− 24 9 55.2	70.6	2	0.18
7626	Lacaille 7563	7.0	17 58 14.96	62.9	3	+ 4.139	− 38 34 32.4	62.6	2	− 0.15
7627	70 Ophiuchi, (1st *)	6.0	58 22.77	64.8	4	3.013	+ 2 31 58.1	69.6	4	0.14
7628	70 Ophiuchi, (2d *)	7.2	58 23.18	64.8	4	3.013	+ 2 31 55.9	70.3	3	0.14
7629	Lalande 33147	7.5	58 27.15	65.5	2	3.599	− 21 30 50.3	70.3	3	0.14
7630	Rumker 6208	8.0	58 39.84	66.1	2	1.729	+ 45 7 39.0	66.1	2	0.12

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7631	B. A. C. 6125	6.8	17 58 47.55	65.5	5	+ 3.598	− 21 27 15.1	68.6	2	− 0.11
7632	O. Arg. S. 17648	7.5	58 57.20	64.4	1	3.591	− 21 12 43.3	69.1	2	0.09
7633	Lalande 33178	9.0	59 6.65	59.6	2	3.472	− 16 40 2.4	58.1	3	0.08
7634	Anonymous	8.6	59 12.68	67.5	2	3.637	− 22 54 32.8	69.1	2	0.07
7635	B. A. C. 6127	4.9	59 12.93	63.3	4	3.797	− 28 28 6.6	66.0	2	0.07
7636	Anonymous	7.5	17 59 20.85	67.5	4	+ 3.637	− 22 53 30.4	69.6	3	− 0.06
7637	B. A. C. 6128	6.5	59 31.02	63.6	1	4.407	− 44 57 37.4	69.0	2	0.04
7638	Anonymous	7.0	59 37.35	68.6	2	3.773	− 27 39 28.8	56.4	9	0.03
7639	Lacaille 7580	6.5	59 52.82	63.2	3	4.068	− 36 41 16.2	68.6	2	0.01
7640	B. A. C. 6131	7.0	59 55.64	61.5	7	3.881	− 31 10 28.3	58.6	2	0.01
7641	B. A. C. 6130	7.0	17 59 56.12	60.9	5	+ 3.844	− 30 0 29.3	54.0	3	− 0.01
7642	O. Arg. S. 17680	7.6	18 0 5.12	61.5	4	3.777	− 27 47 56.9	65.0	4	+ 0.01
7643	O. Arg. S. 17681	7.3	0 5.28	64.5	4	3.592	− 21 16 4.1	66.3	3	0.01
7644	Anonymous	8.5	0 9.98	61.0	2	3.776	− 27 45 18.5	61.2	3	0.01
7645	B. A. C. 6132	7.2	0 14.58	61.8	11	3.710	− 25 29 19.8	56.2	5	0.02
7646	Lalande 33210	6.5	18 0 14.75	65.5	4	+ 3.598	− 21 27 54.2	68.6	3	+ 0.02
7647	O. Arg. S. 17695	7.6	0 27.82	61.3	6	3.776	− 27 45 3.8	58.4	8	0.04
7648	Anonymous	8.0	0 31.92	65.5	2	3.596	− 21 24 58.4	70.1	2	0.05
7649	72 Ophiuchi	5.5	0 42.81	57.5	2	2.847	+ 9 32 50.4	68.6	2	0.06
7650	Lacaille 7588	6.0	0 49.46	65.6	2	3.931	− 32 43	. .	.	0.07
7651	ε Telescopii	5.5	18 0 50.16	48.5	1	+ 4.455	− 45 58 27.8	71.6	4	+ 0.07
7652	B. A. C. 6144	7.4	0 54.85	68.6	2	3.913	− 32 9 45.6	58.7	1	0.08
7653	B. A. C. 6145	6.0*	1 4.	. .	.	3.867	− 30 44 47.1	69.6	2	0.09
7654	Lamont 5992	8.0	1 4.23	68.1	2	3.011	+ 2 37 4.0	68.0	2	0.09
7655	Lamont 5993	7.2	1 6.79	68.6	3	3.011	+ 2 35 16.4	68.6	2	0.10
7656	Anonymous	8.0	18 1 18.08	60.6	2	+ 3.880	− 31 7 39.1	69.1	2	+ 0.11
7657	O. Arg. S. 17728	8.5	1 20.60	64.6	2	3.542	− 19 22 33.1	65.1	2	0.12
7658	b Herculis	5.5*	1 42.68	59.5	2	2.283	+ 30 32 38.1	53.5	4	0.15
7659	(* 33) Washington	. .	1 58.31	61.6	1	3.486	− 17 13 34.6	56.0	4	0.17
7660	ο Herculis	4.0*	2 4.85	56.7	7	2.339	+ 28 44 43.6	55.1	11	0.18
7661	100 Herculis, (1st *)	5.5	18 2 10.87	68.6	2	+ 2.417	+ 26 5 0.5	62.6	2	+ 0.19
7662	100 Herculis, (2d *)	5.5	2 10.95	68.6	2	2.417	+ 26 4 45.5	62.6	2	0.19
7663	Weisse (2) XVIII, 44	7.6	2 13.75	69.5	2	2.086	+ 36 24 15.1	48.6	1	0.20
7664	Lacaille 7595	6.7	2 19.27	63.2	3	4.010	− 35 2 56.1	68.6	2	0.21
7665	B. A. C. 6153	6.5	2 24.64	62.6	5	3.718	− 25 47 8.9	69.7	2	0.21
7666	Anonymous	8.5	18 2 25.76	69.0	2	+ 4.169	− 39 22 5.4	69.6	2	+ 0.21
7667	Weisse XVIII, 18	8.5	2 25.89	64.9	3	3.012	+ 2 34 46.2	68.0	2	0.21
7668	Anonymous	9.5	2 36.15	63.6	2	3.485	− 17 9 46.2	69.6	2	0.23
7669	73 Ophiuchi	6.5	2 36.21	64.4	2	2.979	+ 3 58 23.7	71.0	5	0.23
7670	Anonymous	8.5	2 37.19	63.0	5	3.485	− 17 9 54.7	67.3	3	0.23

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			h. m. s.			"	° ′ "			"
7671	Anonymous . . .	8.5	18 2 37.20	67.5	2	+ 3.650	− 23 22 29.0	70.5	2	+ 0.23
7672	Lacaille 7598 . . .	7.6	2 45.39	69.0	2	4.169	− 39 22 2.0	69.6	2	0.24
7673	B. A. C. 6160 . . .	6.4	3 4.39	64.4	4	3.811	− 28 55 37.0	61.8	4	0.27
7674	B. A, C. 6161 . . .	5.7	3 10.75	57.8	10	3.660	− 23 43 32.4	59.6	5	0.28
7675	Lacaille 7605 . . .	6.9	3 15.98	69.0	2	4.162	− 39 11 2.5	66.6	2	0.29
7676	Dorpat 2288 . . .	7.5	18 3 21.18	67.0	2	+ 3.013	+ 2 30 24.6	72.6	1	+ 0.29
7677	O. Arg. S. 17796 . .	7.5	3 37.04	67.6	2	3.570	− 20 26 59.2	69.6	2	0.31
7678	O. Arg. S. 17797 . .	8.7	3 40.65	70.1	2	3.791	− 28 15 46.6	58.6	2	0.32
7679	B. A. C. 6163 . . .	7.5	3 46.76	67.1	5	3.791	− 28 15 52.7	61.2	3	0.33
7680	O. Arg. S. 17809 . .	8.0	3 58.27	65.6	1	3.544	− 19 27 37.3	67.5	2	0.35
7681	O. Arg. S. 17817 . .	8.7	18 4 18.17	65.5	3	+ 3.586	− 21 0 57.7	71.5	2	+ 0.38
7682	B. A. C. 6166 . . .	7.0*	4 30.20	60.1	2	3.907	− 31 59 52.8	53.6	2	0.39
7683	12 Sagittarii	7.8	4 32.28	64.6	2	3.644	− 23 8 49.4	68.6	2	0.40
7684	Anonymous . . .	8.0	4 34.87	69.5	1	2.084	+ 36 27 57.5	48.4	1	0.40
7685	Anonymous . . .	. .	4 35	. .	.	3.587	− 21 3 37.5	69.7	1	0.40
7686	Anonymous . . .	8.2	18 4 35.26	66.6	2	+ 4.103	− 37 39 11.6	68.6	2	+ 0.40
7687	Anonymous. . . .	7.2	4 35.28	68.6	2	3.492	− 17 26 37.0	58.1	2	0.40
7688	O. Arg. S. 17833 . .	8.3	4 44.32	69.5	1	3.700	− 25 10 51.3	56.4	4	0.41
7689	Anonymous . . .	6.8	4 46.53	63.5	2	3.995	− 34 37 44.2	70.0	2	0.42
7690	Anonymous . . .	8.0	4 53.02	69.6	1	4.105	− 37 41 0.7	68.6	2	0.43
7691	Anonymous . . .	6.5	18 4 59.16	69.6	2	+ 2.010	+ 38 27 10.0	48.6	1	+ 0.44
7692	Lalande 33472 . . .	5.5	5 6.73	69.6	1	2.085	+ 36 26 25.1	47.6	1	0.45
7693	Anonymous . . .	9.4	5 20.93	69.0	4	3.587	− 21 4 53.5	70.3	3	0.47
7694	Anonymous . . .	. .	5 22.	. .	.	3.769	− 27 32 6.6	56.5	4	0.47
7695	μ Sagittarii	4.9	5 23.46	57.9	226	3.588	− 21 5 29.6	51.0	18	0.47
7696	Anonymous . . .	9.3	18 5 26.75	69.0	4	+ 3.588	− 21 5 54.5	70.3	3	+ 0.48
7697	O. Arg. S. 17861 . .	7.2	5 39.93	66.6	2	3.809	− 28 52 24.4	70.1	2	0.50
7698	O. Arg. S. 17871 . .	7.0	5 51.28	68.2	3	3.605	− 21 44 47.0	70.2	3	0.51
7699	B. A. C. 6173 . . .	6.8	6 7.57	64.9	3	3.839	− 29 51 31.4	67.2	3	0.54
7700	Lacaille 7629 . . .	6.3	6 8.02	63.5	2	3.995	− 34 37 51.8	66.1	2	0.54
7701	Anonymous . . .	9.2	18 6 10.66	67.6	2	+ 3.531	− 18 57 54.3	69.1	2	+ 0.54
7702	B. A. C. 6174 . . .	7.0	6 21.80	63.0	3	4.065	− 36 36 40.9	66.1	2	0.56
7703	B. A. C. 6175 . . .	7.0	6 28.18	69.0	2	3.920	− 32 22 46.4	58.6	2	0.57
7704	(* 34) Washington. .	9.0	6 29.20	61.5	2	3.491	− 17 23 55.8	56.3	4	0.57
7705	A Herculis	5.0	6 38.03	61.6	3	2.257	+ 31 22 21.9	53.4	4	0.58
7706	O. Arg. S. 17892 . .	7.9	18 6 45.69	65.8	6	+ 3.532	− 18 58 50.2	68.6	2	+ 0.59
7707	15 Sagittarii	5.5	6 51.82	66.6	2	3.579	− 20 45 58.3	63.0	6	0.60
7708	Anonymous . . .	8.0	6 54.87	48.6	1	2.040	+ 37 41 11.6	48.6	1	0.61
7709	O. Arg. S. 17905 . .	8.0	7 2.03	65.1	5	3.533	− 19 1 50.7	69.8	4	0.62
7710	B. A. C. 6181 . . .	7.0*	7 7.28	69.6	2	3.882	− 31 12 55.4	58.5	2	0.62

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			h. m. s.			″	° ′ ″			″
7711	O. Arg. S. 17916 . .	8.2	18 7 13.38	65.1	5	+ 3.531	− 18 57 47.4	69.1	2	+ 0.63
7712	B. A. C. 6182 . . .	7.0	7 14.52	63.6	2	3.886	− 31 21 37.4	62.6	2	0.63
7713	Anonymous . . .	6.3	7 17.22	68.5	4	3.524	− 18 42 2.0	68.6	2	0.64
7714	O. Arg. S. 17922 . .	8.5	7 17.41	69.6	2	3.717	− 25 45 2.6	56.4	4	0.64
7715	O. Arg. S. 17927 . .	7.5	7 26.62	67.2	2	3.812	− 28 58 19.2	70.1	2	0.65
7716	O. Arg. S. 17928 . .	8.2	18 7 30.60	65.0	4	+ 3.532	− 18 59 34.7	70.0	7	+ 0.66
7717	Anonymous . . .	8.6	7 30.72	69.5	2	3.857	− 30 26 43.1	64.6	2	0.66
7718	Anonymous . . .	7.3	7 31.92	65.5	3	3.531	− 18 57 2.3	70.1	2	0.66
7719	Anonymous . . .	8.0	7 35.80	69.0	2	3.766	− 27 27 14.7	56.4	3	0.66
7720	Lalande 33592 . . .	8.0	7 55.68	68.6	3	2.007	+ 38 33 49.0	48.4	1	0.69
7721	Anonymous . . .	9.0	18 7 59.59	68.6	2	+ 2.007	+ 38 33 20.2	48.4	1	+ 0.70
7722	B. A. C. 6187 . . .	6.7	8 8.98	62.9	4	3.775	− 27 45 15.5	68.7	2	0.71
7723	η Sagittarii	3.0	8 9.09	61.6	4	4.072	− 36 47 56.8	54.6	2	0.71
7724	Anonymous . . .	7.5	8 11.01	65.2	3	3.532	− 19 0 52.5	68.6	2	0.72
7725	B. A. C. 6188 . . .	7.0	8 12.13	63.6	2	3.886	− 31 20 24.2	62.6	2	0.72
7726	17 Sagittarii	7.0	18 8 14.92	65.5	2	+ 3.574	− 20 35 10.8	67.0	2	+ 0.72
7727	Lalande 33602 . . .	7.2	8 17.65	68.7	2	2.131	+ 35 9 34.9	48.6	1	0.73
7728	Lacaille 7646 . . .	6.8	8 19.31	65.0	4	3.978	− 34 9 4.2	68.5	3	0.73
7729	Anonymous . . .	8.8	8 24.28	66.6	2	3.978	− 34 7 52.6	67.5	1	0.74
7730	B. A. C. 6193 . . .	6.0	8 24.56	68.6	2	2.000	+ 38 44 12.6	48.5	1	0.73
7731	B. A. C. 6191 . . .	6.0	18 8 31.42	64.6	2	+ 3.792	− 28 19 38.3	67.7	2	+ 0.75
7732	B. A. C. 6190 . . .	6.4	8 31.48	62.6	2	3.804	− 28 41 45.1	63.0	3	0.75
7733	B. A. C. 6192 . . .	6.2	8 37.38	69.5	2	3.955	− 33 26 30.6	58.6	2	0.76
7734	Anonymous. . . .	9.0	8 38.01	67.6	2	3.521	− 18 35 35.0	70.5	2	0.76
7735	O. Arg. S. 17965 . .	7.6	8 43.88	65.3	4	3.532	− 19 0 43.0	68.6	3	0.76
7736	Anonymous . . .	6.5	18 9 2.80	68.5	2	+ 3.491	− 17 25 6.4	55.7	2	+ 0.79
7737	O. Arg. S. 17975 . .	9.0	9 4.33	61.6	2	3.657	− 23 38 6.8	58.0	4	0.79
7738	Lacaille 7657 . . .	6.4	9 10.76	66.6	2	3.998	− 34 43 59.7	68.1	2	0.80
7739	B. A. C. 6194 . . .	5.4	9 17.37	67.6	3	3.755	− 27 5 21.0	56.5	4	0.81
7740	Lalande 33598 . . .	6.0	9 37.05	69.5	1	3.528	− 18 50 42.2	56.5	3	0.84
7741	O. Arg. S. 18000 . .	8.0	18 9 44.89	68.3	3	+ 3.525	− 18 44 59.3	67.1	2	+ 0.85
7742	Anonymous . . .	. .	10 0.	. .	.	3.723	− 25 59 3.3	56.5	3	0.87
7743	B. A. C. 6199 . . .	6.4	10 1.91	63.4	2	3.713	− 25 39 8.9	68.6	2	0.88
7744	Lalande 33692 . . .	8.2	10 7.44	69.6	2	2.052	+ 37 22 10.5	48.6	1	0.89
7745	O. Arg. S. 18015 . .	7.2	10 29.93	65.5	5	+ 3.523	− 18 40 9.3	66.1	2	0.92
7746	40 Draconis	5.0*	18 10 30.62	62.7	4	− 4.485	+ 79 58 39.3	67.7	2	+ 0.92
7747	O. Arg. S. 18017 . .	8.0	10 30.90	65.8	4	+ 3.523	− 18 39 56.2	67.6	2	0.92
7748	41 Draconis	5.0*	10 36.85	62.7	4	− 4.487	+ 79 58 50.7	67.7	2	0.93
7749	Lacaille 7661 . . .	6.5	10 53.56	63.5	4	+ 4.024	− 35 28 54.6	68.1	2	0.95
7750	Anonymous . . .	8.8	11 21.14	68.5	2	3.500	− 17 46 32.4	58.1	2	0.99

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			h. m. s.			"	° ' "			"
7751	Lacaille 7662	6.5	18 11 21.64	62.6	2	+ 4.098	− 37 32 33.2	66.6	2	+ 0.99
7752	B. A. C. 6202	7.0*	11 22.47	61.6	4	3.886	− 31 22 17.6	56.9	6	0.99
7753	O. Arg. S. 18044	8.0	11 24.07	62.7	5	3.649	− 23 22 6.2	56.3	3	1.00
7754	Lalande 33694	7.1	11 39.96	66.2	3	3.501	− 17 48 15.5	61.2	8	1.02
7755	Anonymous	7.2	11 52.99	68.6	2	2.067	+ 36 58 44.4	48.6	1	1.04
7756	δ Sagittarii	2.9	18 12 1.85	61.4	13	+ 3.839	− 29 53 0.0	58.9	5	+ 1.05
7757	B. A. C. 6210	6.0*	12 5.14	60.1	2	3.452	− 15 53 6.7	54.6	2	1.06
7758	Anonymous.	8.4	12 9.08	65.1	2	3.794	− 28 24 13.4	69.1	2	1.06
7759	18 Sagittarii	6.0	12 14.14	65.5	1	3.874	− 30 59 52.4	71.0	6	1.07
7760	B. A. C. 6212	7.0*	12 19.79	59.6	2	3.914	− 32 14 16.8	57.9	4	1.08
7761	B. A. C. 6214	6.5	18 12 30.60	63.6	2	+ 3.727	− 26 8 33.9	56.4	3	+ 1.09
7762	B. A. C. 6217	5.7	12 54.23	60.6	2	3.694	− 24 58 27.9	68.6	2	1.13
7763	B. A. C. 6220	6.6	13 8.56	65.1	2	3.796	− 28 29 22.9	65.1	2	1.15
7764	Lalande 33748	6.3	13 8.77	69.1	2	3.530	− 18 55 6.2	56.5	3	1.15
7765	B. A. C. 6221	6.2	13 23.80	62.7	2	4.068	− 36 43 48.9	66.5	2	1.17
7766	B. A. C. 6222	6.5	18 13 33.68	62.2	6	+ 3.638	− 22 58 54.6	60.8	4	+ 1.19
7767	Taylor 8458	8.4	13 37.77	69.4	6	3.737	− 26 28 39.5	61.2	7	1.19
7768	Anonymous.	9.0	13 54.34	69.4	6	3.738	− 26 30 30.7	69.4	5	1.21
7769	Anonymous.	9.3	13 58.38	69.5	4	3.738	− 26 31 16.0	72.6	2	1.22
7770	B. A. C. 6226	6.0	14 1.58	64.1	2	4.052	− 36 18 8.1	67.1	2	1.23
7771	η Serpentis	2.9	18 14 3.82	63.6	13	+ 3.140	− 2 56 0.2	68.6	4	+ 1.23
7772	O. Arg. S. 18115, (1st *)	8.4	14 12.74	64.9	3	3.433	− 15 9 11.2	68.1	2	1.24
7773	O. Arg. S. 18115, (2d *)	8.2	14 13.29	64.9	3	3.433	− 15 9 0.6	68.1	2	1.24
7774	ε Sagittarii	3.0	14 52.64	55.2	5	3.987	− 34 26 47.4	63.6	4	1.30
7775	Anonymous	9.0	14 53.77	70.3	3	4.140	− 38 40 46.0	70.6	3	1.30
7776	κ Lyræ	4.5*	18 14 57.28	60.0	4	+ 2.103	+ 36 0 12.4	52.8	10	+ 1.31
7777	Anonymous	8.5	15 6.13	69.8	4	3.735	− 26 26 9.9	69.6	2	1.32
7778	Anonymous	8.0	15 18.47	70.3	3	4.139	− 38 38 38.2	69.3	6	1.34
7779	O. Arg. S. 18151	7.2	15 26.88	69.1	6	3.738	− 26 30 53.4	61.5	4	1.35
7780	B. A. C. 6236	6.8	15 28.57	69.6	2	3.917	− 32 21 34.1	64.5	2	1.36
7781	Anonymous	8.8	18 15 28.89	70.1	2	+ 3.827	− 29 31 11.7	69.6	1	+ 1.36
7782	Anonymous	8.5	15 30.38	70.1	2	3.830	− 29 35 33.3	65.4	2	1.36
7783	Lacaille 7695	6.0	15 56.13	69.1	2	4.043	− 36 3 45.5	63.5	2	1.40
7784	O. Arg. S. 18160	7.9	15 56.46	69.1	5	3.739	− 26 33 42.2	58.6	6	1.39
7785	B. A. C. 6241	5.5*	16 18.40	60.1	2	2.500	+ 23 12 59.8	60.7	9	1.43
7786	Lalande 33952	8.8	18 16 24.90	69.5	2	+ 2.072	+ 36 52 31.5	48.6	1	+ 1.44
7787	Anonymous	. .	16 25.68	69.6	1	3.912	− 32 12 55.2	65.6	2	1.44
7788	B. A. C. 6244	7.9	16 48.92	69.6	2	+ 3.900	− 31 49 38.9	68.6	2	1.47
7789	Anonymous	. .	16 56.48	69.6	1	−14.542	+ 85 40 15.8	46.4	3	1.48
7790	21 Sagittarii	5.0	17 0.71	69.6	2	+ 3.573	− 20 36	. .	.	1.49

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			h. m. s.			″	° ′ ″			″
7791	Dorpat 2313, (1st *)	9.0	18 17 11.58	65.6	2	+ 3.228	− 6 40 31.4	67.1	2	+ 1.50
7792	Dorpat 2313, (2d *)	7.0	17 11.68	65.6	2	3.228	− 6 40 24.2	66.3	4	1.50
7793	Anonymous	7.0	17 14.91	69.6	2	2.095	+ 36 14 13.6	48.4	1	1.51
7794	O. Arg. S. 18198	8.0	17 16.82	69.5	1	+ 3.587	− 21 6 35.7	65.6	2	1.51
7795	δ Ursæ Minoris	4.5*	17 30.	. .	.	−19.380	+ 86 36 6.9	56.5	166	1.53
7796	Lalande 33997	7.5	18 17 34.22	69.5	2	+ 2.074	+ 36 50 1.4	49.6	1	+ 1.54
7797	B. A. C. 6249	6.5*	17 39.89	69.6	5	3.856	− 30 28 0.1	67.1	2	1.55
7798	Lacaille 7708	6.8	17 57.20	66.1	2	4.044	− 36 5 34.3	63.5	2	1.57
7799	Anonymous	7.9	18 9.22	68.6	2	3.829	− 29 35 5.7	68.7	4	1.59
7800	O. Arg. S. 18209	8.0	18 10.38	69.6	2	3.652	− 23 30 40.8	67.6	2	1.59
7801	B. A. C. 6258	6.0*	18 18 11.97	61.1	2	+ 1.412	+ 51 14 3.3	54.6	3	+ 1.59
7802	Lalande 33966	8.0	18 15.17	61.5	2	3.509	− 18 9 43.7	56.2	3	1.60
7803	B. A. C. 6254	7.0	18 18.21	65.7	2	3.954	− 33 29 18.3	62.6	2	1.60
7804	B. A. C. 6256	8.3	18 27.	. .	.	3.892	− 31 36 32.3	71.9	3	1.61
7805	B. A. C. 6261	6.0	18 59.92	59.5	3	3.742	− 26 42 46.8	55.2	8	1.66
7806	λ Sagittarii	4.0	18 19 19.78	60.5	14	+ 3.707	− 25 29 42.1	63.8	4	+ 1.69
7807	B. A. C. 6264	6.5	19 21.89	64.6	2	3.746	− 26 50 12.1	54.1	4	1.69
7808	O. Arg. S. 18234	8.5	19 24.64	64.6	2	3.746	− 26 50 56.4	68.6	2	1.70
7809	Anonymous	8.2	19 35.41	70.1	2	3.806	− 28 51 36.2	69.6	2	1.71
7810	B. A. C. 6266	7.0	19 37.56	63.5	4	3.640	− 23 4 54.8	59.1	4	1.72
7811	(* 18) Washington	9.0	18 19 44.69	70.0	3	+ 3.624	− 22 29 44.1	56.6	3	+ 1.73
7812	B. A. C. 6267	6.6	19 46.30	65.2	5	3.502	− 17 52 52.1	67.2	2	1.73
7813	Anonymous	8.5	19 58.20	69.6	3	3.635	− 22 54 8.5	55.6	3	1.74
7814	*d* Serpentis, (1st *)	7.0	20 2.57	65.6	4	3.069	+ 0 6 58.6	69.6	3	1.75
7815	*d* Serpentis, (2d *)	8.5	20 2.76	65.6	4	3.069	+ 0 6	. .	.	1.75
7816	B. A. C. 6270	7.0*	18 20 13.82	59.6	2	+ 3.741	− 26 39 55.7	53.6	2	+ 1.77
7817	B. A. C. 6271	7.0	20 17.26	60.6	2	3.821	− 29 20 31.4	56.4	4	1.77
7818	Lacaille 7728	7.5	20 22.13	67.5	2	3.971	− 34 1 6.9	67.7	2	1.78
7819	Weisse XVIII, 473	6.5	20 40.11	67.6	2	3.069	+ 0 7 5.4	68.1	2	1.81
7820	B. A. C. 6273	6.2	20 43.81	63.6	2	3.703	− 25 20 28.9	67.7	2	1.81
7821	Anonymous	8.0	18 20 47.04	69.5	2	+ 4.072	− 36 54 33.9	67.6	2	+ 1.82
7822	B. A. C. 6274	6.8	20 48.38	63.5	2	3.956	− 33 34 52.4	65.2	2	1.82
7823	B. A. C. 6279	5.4	21 13.02	62.0	4	3.420	− 14 39 4.8	69.6	3	1.85
7824	(* 17) Washington	9.0	21 13.84	61.6	2	3.631	− 22 46 11.2	56.6	2	1.85
7825	Anonymous	8.2	21 32.39	68.5	2	4.018	− 35 24 43.9	67.7	2	1.88
7826	B. A. C. 6283	6.9	18 21 38.36	68.7	2	+ 3.806	− 28 53 0.3	66.1	2	+ 1.89
7827	Lacaille 7741	7.0	21 41.31	62.7	2	4.071	− 36 53 57.3	67.6	2	1.89
7828	B. A. C. 6284	6.0	21 47.65	64.9	2	3.420	− 14 40 12.4	69.8	4	1.90
7829	B. A. C. 6285	5.5	21 53.71	66.1	2	3.939	− 33 4 39.3	67.1	4	1.91
7830	23 Sagittarii	7.0	21 58.78	64.5	2	3.646	− 23 20 21.8	65.1	2	1.92

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			h. m. s.			″	° ′ ″			″
7831	Anonymous	7.8	18 22 1.48	68.6	2	+ 2.105	+ 35 59 28.7	48.4	1	+ 1.92
7832	Anonymous	7.9	22 2.35	69.5	2	3.916	− 32 22 40.2	67.0	2	1.93
7833	Anonymous	7.8	22 6.32	68.6	2	+ 2.106	+ 35 56 46.9	48.5	2	1.93
7834	24 Ursæ Minoris	6.0	22 36.24	67.1	3	−22.145	+ 86 58 46.3	64.8	2	1.97
7835	O. Arg. S. 18314	8.5	22 36.55	64.6	2	+ 3.599	− 21 37 1.9	65.1	2	1.97
7836	O. Arg. S. 18317	7.0	18 22 49.86	67.5	2	+ 3.648	− 23 24 30.2	68.7	2	+ 1.99
7837	B. A. C. 6292	7.3	23 6.16	65.1	4	3.530	− 18 59 36.5	65.1	2	2.02
7838	Lacaille 7757	6.6	23 10.99	62.9	3	4.019	− 35 26 38.5	66.7	2	2.02
7839	B. A. C. 6293	6.7	23 11.59	62.5	4	3.513	− 18 21 19.1	60.6	4	2.03
7840	Anonymous	7.0	23 12.64	68.9	6	3.937	− 33 1 57.7	67.3	4	2.03
7841	B. A. C. 6294	6.0*	18 23 14.11	61.5	3	+ 3.517	− 18 29 41.0	62.1	4	+ 2.03
7842	B. A. C. 6295	7.0*	23 19.64	61.5	5	3.818	− 29 17 6.3	56.1	5	2.04
7843	θ Coronæ Australis	5.2	23 30.10	68.7	2	4.287	− 42 24 31.3	66.1	2	2.05
7844	Lalande 34274	7.5	23 54.57	69.1	2	2.116	+ 35 42 26.2	48.6	1	2.09
7845	Anonymous	8.3	24 1.09	67.3	3	3.938	− 33 4 41.1	69.6	3	2.10
7846	Lalande 34222	8.5	18 24 4.38	65.1	2	+ 3.620	− 22 23 20.9	55.5	2	+ 2.10
7847	Anonymous	8.4	24 10.15	69.1	2	4.070	− 36 54 12.6	67.6	2	2.11
4848	B. A. C. 6301	7.0	24 14.87	65.5	2	3.532	− 19 4 7.2	58.0	5	2.12
7849	Lalande 34229	8.5	24 18.79	60.9	3	3.615	− 22 13 57.0	56.2	2	2.12
7850	Weisse XVIII, 570	9.1	24 31.45	65.6	4	3.340	− 11 23 9.6	65.6	3	2.14
7851	B. A. C. 6304	6.2	18 24 40.75	64.9	5	+ 3.670	− 24 12 26.3	59.2	4	+ 2.15
7852	*e* Serpentis	5.8	24 43.16	69.0	2	3.097	− 1 5 56.9	57.6	3	2.16
7853	B. A. C. 6305	6.0	24 46.59	63.3	5	3.939	− 33 6 57.3	62.9	3	2.16
7854	Anonymous	8.3	24 51.50	69.6	3	0.659	+ 61 8 55.0	54.5	3	2.18
7855	B. A. C. 6308	7.1	24 54.21	63.3	5	3.937	− 33 3 39.0	66.1	4	2.17
7856	B. A. C. 6309	6.0	18 24 57.88	69.6	2	+ 3.516	− 18 27 59.1	69.6	3	+ 2.18
7857	B. A. C. 6310	7.1	25 14.85	64.7	7	3.870	− 30 59 1.4	66.6	4	2.20
7858	24 Sagittarii	5.9	25 20.26	64.4	5	3.667	− 24 7 56.8	69.4	3	2.21
7859	Anonymous	9.0	25 23.03	66.8	5	3.869	− 30 58 8.4	69.1	2	2.22
7860	Lacaille 7765	7.0	25 31.65	62.7	2	4.179	− 39 47 47.9	68.1	2	2.23
7861	O. Arg. S. 18395	8.0	18 25 53.01	64.1	2	+ 3.494	− 17 38 20.1	66.6	2	+ 2.26
7862	25 Sagittarii	7.0	25 58.81	58.5	3	3.673	− 24 19 30.1	68.2	2	2.27
7863	B. A. C. 6317	7.2	26 16.00	63.5	2	3.934	− 32 59 43.7	63.1	2	2.29
7864	Anonymous	8.4	26 22.72	69.1	2	4.070	− 36 54 59.5	67.6	2	2.30
7865	B. A. C. 6319	7.4	26 46.24	62.3	3	3.840	− 30 2 36.1	69.6	3	2.34
7866	O. Arg. S. 18413	7.5	18 26 54.63	68.6	2	+ 3.614	− 22 11 47.8	56.2	2	+ 2.35
7867	B. A. C. 6322	6.0*	26 56.60	59.9	3	2.494	+ 23 30 53.7	53.5	4	2.35
7868	B. A. C. 6321	6.0	27 3.27	69.0	3	3.833	− 29 48 19.5	66.6	2	2.36
7869	Lalande 34354	7.5	27 24.05	59.9	3	3.520	− 18 39 26.3	59.0	5	2.39
7870	1 Aquilæ	5.5*	27 35.27	65.4	93	3.266	− 8 20 19.6	64.5	10	2.41

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7871	Lalande 34412	7.6	18 28 4.48	69.1	2	+ 2.060	+ 37 19 40.0	48.6	1	+ 2.45
7872	B. A. C. 6327	6.5	28 12.02	65.6	2	3.795	− 28 37 7.1	67.7	2	2.46
7873	Lalande 34401	7.5	28 19.24	60.0	2	3.526	− 18 53 48.8	56.6	2	2.47
7874	B. A. C. 6331	7.0	28 31.58	69.0	2	3.713	− 25 46 19.1	63.6	2	2.49
7875	Anonymous	8.5	28 37.81	66.5	3	3.601	− 21 45 44.2	68.6	2	2.50
7876	O. Arg. S. 18462	8.5	18 29 6.96	65.0	2	+ 3.602	− 21 48 47.2	56.6	2	+ 2.54
7877	B. A. C. 6334	7.1	29 10.44	64.6	3	3.926	− 32 47 44.9	67.7	2	2.55
7878	Anonymous	7.9	29 19.80	69.6	2	3.648	− 23 30 40.6	64.6	2	2.56
7879	Lalande 34503	7.0*	29 25.54	69.6	2	2.024	+ 38 19 39.7	48.5	2	2.57
7880	B. A. C. 6336	6.5	29 31.44	60.1	2	3.595	− 21 30 33.9	63.4	3	2.58
7881	Weisse XVIII, 696	9.0	18 29 39.98	65.6	5	+ 3.373	− 12 47 44.6	65.6	3	+ 2.59
7882	B. A. C. 6341	6.0*	29 40.69	61.6	2	2.496	+ 23 29 40.9	57.7	2	2.59
7883	O. Arg. S. 18486	7.5	29 56.93	64.5	2	3.641	− 23 13 4.4	67.7	2	2.61
7884	B. A. C. 6343	5.7	29 59.71	62.3	8	3.652	− 23 37 10.2	65.0	2	2.62
7885	Lacaille 7802	6.8	30 1.68	65.7	2	3.976	− 34 16 59.6	67.7	2	2.62
7886	O. Arg. S. 18489	8.2	18 30 8.18	70.0	5	+ 3.515	− 18 29 54.8	69.1	2	+ 2.63
7887	Anonymous	8.0	30 18.74	68.6	2	3.905	− 32 9 9.9	66.6	2	2.65
7888	B. A. C. 6344	7.0	30 19.70	62.9	4	3.937	− 33 6 45.5	65.2	2	2.65
7889	(* 35) Washington	8.5	30 29.01	60.0	2	3.526	− 18 54 0.1	56.6	2	2.66
7890	O. Arg. S. 18495	7.5	30 32.19	68.7	2	3.463	− 16 25 36.5	67.6	3	2.66
7891	B. A. C. 6346	6.6	18 30 32.28	64.1	5	+ 3.643	− 23 18 0.2	64.9	3	+ 2.68
7892	B. A. C. 6349	7.0*	30 40.42	59.5	2	2.007	+ 38 46 57.9	53.5	4	2.68
7893	Anonymous	9.0	30 51.51	67.6	2	3.372	− 12 43 48.7	68.7	2	2.69
7894	O. Arg. S. 18505	8.6	31 9.64	66.0	7	3.708	− 25 37 14.1	68.9	3	2.72
7895	O. Arg. S. 18506, (1st *)	8.8	31 13.13	64.6	5	3.708	− 25 37 36.3	69.3	3	2.72
7896	O. Arg. S. 18506, (2d *)	7.6	18 31 13.49	64.6	5	+ 3.708	− 25 37 31.0	69.3	3	+ 2.72
7897	Lacaille 7815	6.7	31 21.02	63.2	3	3.965	− 33 58 45.6	62.6	2	2.73
7898	Lalande 34581	7.1	31 26.34	68.7	2	2.040	+ 37 55 14.7	48.6	1	2.74
7899	Weisse XVIII, 779	8.0	32 10.21	65.6	4	3.335	− 11 13 34.0	65.6	3	2.81
7900	O. Arg. S. 18525	9.0	32 10.62	70.5	3	3.693	− 25 8 8.1	69.6	2	2.81
7901	α Lyræ	1.0	18 32 11.80	54.4	285	+ 2.013	+ 38 39 17.7	52.8	639	+ 2.81
7902	O. Arg. S. 18531	8.8	32 19.27	60.6	2	3.601	− 21 46 56.0	56.6	2	2.82
7903	Weisse XVIII, 793	8.4	32 41.30	66.1	2	3.288	− 9 15 50.0	70.3	3	2.85
7904	Anonymous	7.4	32 43.83	68.6	2	2.051	+ 37 39 41.0	48.5	1	2.86
7905	Weisse XVIII, 792	9.0	32 44.68	65.6	5	3.373	− 12 49 39.5	66.6	3	2.86
7906	Anonymous	7.2	18 32 53.44	68.6	2	+ 3.886	− 31 36 16.9	66.5	2	+ 2.87
7907	O. Arg. S. 18536	7.0	33 0.12	69.6	3	3.692	− 25 6 52.1	67.7	2	2.88
7908	Lacaille 7823	6.0	33 11.33	66.1	2	4.159	− 39 24 51.6	66.6	2	2.89
7909	26 Sagittarii	5.6	33 19.15	65.1	5	3.660	− 23 57 35.0	67.0	3	2.90
7910	Anonymous	9.0	33 34.96	69.2	3	4.104	− 37 58 30.5	67.0	2	2.93

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7911	B. A. C. 6358	7.0*	18 33 43.93	60.1	4	+ 3.419	− 14 41 32.1	54.6	2	+ 2.94
7912	Anonymous	9.0	33 47.41	69.5	2	4.106	− 38 0 42.8	67.6	2	2.94
7913	O. Arg. S. 18564	7.4	34 6.59	64.6	2	3.565	− 20 26 28.8	66.6	3	2.97
7914	λ Coronæ Australis	5.0	34 10.45	66.1	2	4.122	− 38 27 13.6	66.6	2	2.98
7915	Anonymous	7.5	34 12.13	68.7	2	3.891	− 31 46 3.4	67.1	2	2.99
7916	O. Arg. S. 18568	7.4	18 34 16.75	66.6	2	+ 3.693	− 25 9 48.5	68.2	2	+ 2.99
7917	2 Aquilæ	5.3	34 36.42	63.6	2	3.286	− 9 10 57.5	68.2	2	3.02
7918	O. Arg. S. 18577	6.3	34 40.14	64.8	3	3.538	− 19 24 51.1	64.6	2	3.02
7919	Anonymous	8.7	34 41.86	67.6	2	3.335	− 11 14 28.2	69.2	2	3.02
7920	O. Arg. S. 18584	8.1	35 3.44	66.6	2	3.536	− 19 21 31.3	69.2	2	3.06
7921	O. Arg. S. 18587	7.5	18 35 11.55	70.0	3	+ 3.580	− 21 3 7.4	69.2	2	+ 3.07
7922	B. A. C. 6363	5.9	35 13.43	68.7	2	4.174	− 39 49 17.3	66.5	2	3.07
7923	Lacaille 7831	7.2	35 15.38	68.7	2	4.176	− 39 52 45.9	66.5	2	3.08
7924	B. A. C. 6365	6.0*	35 27.47	60.6	2	2.031	+ 38 14 19.6	61.8	5	3.09
7925	Weisse XVIII, 874	7.0*	35 44.10	65.6	2	3.340	− 11 28 15.4	65.6	3	3.10
7926	(* 36) Washington	9.0	18 35 51.74	60.0	2	+ 3.524	− 18 53 53.4	56.4	5	+ 3.12
7927	O. Arg. S. 18604	6.9	35 53.64	64.6	2	3.538	− 19 27 14.1	64.6	2	3.13
7928	Lacaille 7838	6.5	35 54.97	65.0	4	4.031	− 35 59 34.9	67.2	2	3.13
7929	Weisse XVIII, 887	7.8	35 59.64	66.6	2	3.097	− 1 5 6.6	66.7	2	3.14
7930	B. A. C. 6369	5.6	36 13.09	60.6	2	3.692	− 25 8 50.4	66.6	3	3.16
7931	O. Arg. S. 18609	7.2	18 36 17.00	66.6	2	+ 3.582	− 21 6 31.9	68.2	2	+ 3.16
7932	(* 21) Washington	9.5	36 33.22	60.6	2	3.592	− 21 29 59.5	56.6	2	3.18
7933	B. A. C. 6372	6.0*	36 39.80	59.6	2	+ 1.378	+ 52 3 56.7	53.6	3	3.19
7934	O. Arg. N. 18534	8.0	36 47.25	67.3	4	− 1.061	+ 72 17 27.2	68.2	2	3.20
7935	φ Sagittarii	5.0	36 54.45	61.5	15	+ 3.748	− 27 7 49.2	66.6	4	3.22
7936	O. Arg. S. 18623	7.0	18 36 57.11	64.5	2	+ 3.582	− 21 8 22.9	65.1	2	+ 3.22
7937	O. Arg. S. 18625	7.8	36 57.54	65.1	3	3.573	− 20 47 10.9	65.1	2	3.22
7938	Lacaille 7843	7.5	37 16.19	68.6	2	3.964	− 34 2 56.8	62.6	2	3.25
7939	Lamont 6333	8.7	37 25.74	66.2	2	+ 3.098	− 1 8 3.0	66.7	2	3.26
7940	O. Arg. N. 18555	7.5	37 40.28	68.8	6	− 1.024	+ 72 9 3.2	69.2	2	3.28
7941	O. Arg. S. 18636	6.5	18 37 41.64	65.0	2	+ 3.513	− 18 30 18.4	68.7	2	+ 3.28
7942	B. A. C. 6376	6.0	37 45.07	65.5	2	3.546	− 19 44 53.6	68.7	1	3.29
7943	B. A. C. 6377	6.0	37 52.29	65.7	2	+ 3.826	− 29 46 26.5	67.7	2	3.30
7944	Lalande 35006	7.5	38 23.19	67.6	5	− 1.047	+ 72 15 12.3	68.0	3	3.34
7945	Lacaille 7854	6.7	38 35.15	62.7	2	+ 4.168	− 39 44 58.3	66.3	3	3.36
7946	Lalande 34868	5.7	18 38 41.77	68.6	2	+ 2.100	+ 36 24 54.1	47.7	1	+ 3.37
7947	B. A. C. 6382	7.8	38 47.54	62.9	5	3.785	− 28 25 32.8	59.1	4	3.38
7948	Lacaille 7858	6.2	38 51.95	66.1	2	4.067	− 37 3 37.9	66.7	1	3.38
7949	Lacaille 7860	6.5	39 0.47	62.7	3	3.963	− 34 3 17.2	63.1	4	3.40
7950	Weisse XVIII, 971	9.0	39 4.10	70.5	4	3.362	− 12 25 39.5	69.6	3	3.40

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7951	Weisse XVIII, 972	9.0	18 39 8.56	67.6	2	+ 3.365	− 12 31 46.9	69.7	2	+ 3.41
7952	5 Aquilæ, (1st *)	7.0	39 14.80	64.1	2	3.097	− 1 6 19.2	66.7	2	3.42
7953	5 Aquilæ, (2d *)	7.7	39 15.57	64.1	2	+ 3.097	− 1 6 25.2	66.7	2	3.42
7954	Lalande 35041	8.5	39 22.68	68.6	5	− 1.015	+ 72 8 9.9	68.7	3	3.43
7955	O. Arg. S. 18672	6.1	39 33.91	64.5	2	+ 3.562	− 20 25 20.6	67.6	2	3.44
7956	110 Herculis	5.0*	18 39 38.20	59.5	2	+ 2.582	+ 20 24 55.5	53.4	3	+ 3.45
7957	ε^1 Lyræ	4.0*	39 42.11	59.6	3	1.985	+ 39 31 31.5	54.9	6	3.46
7958	ε^2 Lyræ	5.0*	39 44.35	59.6	3	1.988	+ 39 28 4.3	53.5	4	3.46
7959	6 Aquilæ	5.0	39 44.73	45.5	2	3.185	− 4 53 39.8	69.1	2	3.46
7960	O. Arg. S. 18674	7.0	39 47.30	59.6	2	3.510	− 18 22 37.1	69.6	3	3.46
7961	Weisse XVIII, 993	8.0	18 39 54.25	65.6	6	+ 3.363	− 12 28 37.7	65.6	3	+ 3.47
7962	ζ^1 Lyræ	5.0*	39 57.06	47.4	24	2.063	+ 37 27 39.0	46.4	8	3.48
7963	Lacaille 7865	5.8	39 58.73	66.1	2	3.990	− 34 53 46.7	68.6	2	3.48
7964	Lalande 34860	6.0	39 58.79	66.7	2	3.534	− 19 20 51.8	68.2	2	3.48
7965	ζ^2 Lyræ	5.5*	39 59.10	45.5	2	2.064	+ 37 26 0.7	45.6	2	3.48
7966	O. Arg. S. 18683	9.3	18 40 2.02	63.5	1	+ 3.610	− 22 13 47.3	56.6	4	+ 3.48
7967	B. A. C. 6396	7.1	40 52.14	61.9	6	3.751	− 27 16 40.7	62.9	3	3.56
7968	Dorpat 2391, (1st *)	9.7	41 8.30	65.1	2	3.214	− 6 8 50.0	69.6	2	3.58
7969	Brisbane 6501	8.0	41 8.92	66.1	2	4.371	− 44 37 44.6	55.0	5	3.58
7970	Dorpat 2391, (2d *)	7.0	41 9.51	64.8	3	3.214	− 6 9 26.2	67.6	2	3.58
7971	Lalande 34916	7.1	18 41 21.10	64.8	3	+ 3.533	− 29 17 45.7	65.9	3	+ 3.60
7972	29 Sagittarii	5.4	41 21.55	62.9	10	3.563	− 20 28 49.0	66.3	3	3.60
7973	Lacaille 7873	6.5	41 28.40	62.7	2	4.150	− 39 19 55.5	65.0	4	3.61
7974	Anonymous	7.0	41 35.76	65.7	2	4.078	− 37 24 16.1	68.1	2	3.62
7975	B. A. C. 6400	6.6	41 44.16	62.7	2	3.630	− 23 0 11.0	69.9	3	3.63
7976	B. A. C. 6401	7.6	18 41 54.46	62.6	2	+ 3.740	− 26 55 33.7	66.1	2	+ 3.65
7977	B. A. C. 6403	7.1	41 57.32	63.6	7	3.866	− 31 7 7.1	57.6	4	3.65
7978	Lacaille 7874	6.5	41 58.04	61.6	2	4.373	− 44 41 42.2	54.6	3	3.65
7979	Anonymous	8.5	41 59.32	67.8	3	3.860	− 30 57 11.6	68.7	2	3.65
7980	Weisse XVIII, 1056	6.5	42 11.41	67.1	4	3.212	− 6 4 4.5	69.2	2	3.67
7981	Weisse XVIII, 1058	8.2	18 42 12.58	67.6	3	+ 3.212	− 6 5 57.6	69.2	2	+ 3.67
7982	O. Arg. S. 18735	6.0	42 25.43	66.1	2	3.612	− 22 19 7.3	67.7	2	3.69
7983	Lalande 34990	7.0	42 41.50	68.2	3	3.562	− 20 27 12.4	67.6	4	3.71
7984	B. A. C. 6408	7.0	42 41.85	62.8	4	3.751	− 27 19 20.4	62.9	3	3.71
7985	Lalande 34993	7.0	42 48.05	69.6	2	3.562	− 20 27 30.9	67.6	4	3.73
7986	O. Arg. S. 18747, (1st *)	8.0	18 42 53.94	68.6	2	+ 3.607	− 22 10 40.0	61.7	2	+ 3.73
7987	O. Arg. S. 18747, (2d *)	8.2	42 54.50	68.6	2	3.607	− 22 10 40.0	61.7	2	3.73
7988	Anonymous	7.0	43 24.96	66.7	2	3.866	− 31 8 54.7	68.7	2	3.78
7989	B. A. C. 6414	6.5	43 42.20	63.3	10	3.858	− 30 53 46.1	67.2	2	3.80
7990	B. A. C. 6413	5.6	43 43.32	67.0	3	3.816	− 29 32 27.6	68.7	2	3.80

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7991	31 Sagittarii	5.8	18 43 43.63	68.6	2	+ 3.605	− 22 4 54.8	56.7	5	+ 3.80
7992	Lacaille 7896 . . .	7.0	43 54.71	62.6	2	4.077	− 37 26 15.0	68.2	2	3.82
7993	Lalande 35046 . . .	8.4	43 58.29	67.6	3	3.559	− 20 21 57.2	68.7	2	3.82
7994	B. A. C. 6422 . . .	7.0	44 20.74	61.6	2	3.767	− 27 55 18.6	68.1	2	3.86
7995	Lacaille 7901 . . .	6.8	44 22.09	65.0	4	4.041	− 36 27 7.6	69.3	3	3.86
7996	ν^1 Lyræ	6.0*	18 44 33.29	59.6	2	+ 2.231	+ 32 39 14.1	53.6	3	+ 3.87
7997	B. A. C. 6428 . . .	5.5*	44 34.55	61.5	2	1.584	+ 48 36 29.7	54.5	3	3.88
7998	Madras 1304 . . .	8.0	44 43.11	67.3	4	3.531	− 19 17 2.1	56.3	4	3.89
7999	β Lyræ, (1st *) . . .	3.0*	44 54.67	54.6	247	2.214	+ 33 12 8.0	50.7	113	3.90
8000	β Lyræ, (2d *) . . .	7.4*	44 56.54	67.4	4	2.214	+ 33 11 27.7	57.6	4	3.90
8001	Weisse XVIII, 1143 .	9.0	18 45 28.80	67.1	2	+ 3.248	− 7 38 40.7	67.7	2	+ 3.95
8002	33 Sagittarii	5.5	45 37.93	66.6	2	3.589	− 21 31 38.6	67.7	2	3.97
8003	O. Arg. S. 18802 . .	7.8	45 39.52	66.6	2	3.769	− 28 0 6.5	68.1	2	3.97
8004	ν^1 Sagittarii	4.5	45 42.89	64.1	6	3.626	− 22 54 47.3	62.0	7	3.97
8005	Anonymous . . .	7.2	45 47.90	65.6	2	3.624	− 22 51 19.9	65.2	2	3.98
8006	B. A. C. 6435 . . .	6.0	18 45 53.23	62.6	2	+ 4.080	− 37 33 28.1	66.7	2	+ 3.99
8007	B. A. C. 6439 . . .	6.2	46 33.06	68.6	2	3.809	− 29 23 6.1	65.7	2	4.04
8008	σ Sagittarii	3.5	46 34.94	62.5	44	3.724	− 26 27 58.9	59.2	4	4.05
8009	Schjellerup 7016 . .	8.5	46 38.86	64.6	2	3.244	− 7 29 39.7	68.2	2	4.05
8010	ν^2 Sagittarii	6.0	46 39.28	64.7	5	3.624	− 22 50 31.9	61.9	4	4.05
8011	Anonymous . . .	7.2	18 46 48.17	67.7	5	+ 3.936	− 33 25 53.5	67.5	2	+ 4.07
8012	Anonymous . . .	8.0	47 5.97	69.6	2	4.158	− 39 40 57.4	65.2	3	4.09
8013	Anonymous . . .	7.6	47 8.80	66.5	5	3.936	− 33 26 32.9	67.5	2	4.10
8014	O. Arg. S. 18831 . .	8.0	47 10.37	66.0	2	3.777	− 28 18 14.6	68.7	2	4.10
8015	B. A. C. 6444 . . .	6.0	47 10.53	62.6	2	4.077	− 37 31 3.6	66.7	2	4.10
8016	Lacaille 7919 . . .	7.0	18 47 26.26	62.7	2	+ 4.135	− 39 5 25.6	66.1	2	+ 4.12
8017	B. A. C. 6447 . . .	5.3	47 27.02	65.6	2	3.461	− 16 32 36.8	67.1	2	4.12
8018	B. A. C. 6448 . . .	6.0	47 31.95	67.6	2	3.637	− 23 20 51.9	67.7	2	4.13
8019	Anonymous . . .	. .	47 34.	. .	.	3.936	− 33 25 51.2	62.6	2	4.13
8020	O. Arg. S. 18847 . .	7.2	47 40.12	65.6	2	3.460	− 16 31 19.3	67.1	2	4.14
8021	Lacaille 7926 . . .	6.8	18 47 45.87	65.2	5	+ 3.938	− 33 30 19.4	62.6	2	+ 4.15
8022	Lacaille 7922 . . .	6.0	47 51.52	66.1	2	4.170	− 40 0 8.5	69.1	2	4.16
8023	B. A. C. 6450 . . .	8.0	48 5.53	67.1	2	3.636	− 23 19 16.7	67.7	2	4.18
8024	Weisse XVIII, 1219 .	9.6	48 24.44	65.2	4	3.292	− 9 34 4.5	64.6	3	4.20
8025	B. A. C. 6452 . . .	5.0	48 26.86	59.5	2	1.350	+ 52 47 41.0	53.9	6	4.21
8026	62 Serpentis	6.0	18 48 37.90	57.0	2	+ 2.924	+ 6 26 35.5	68.6	2	+ 4.22
8027	Anonymous . . .	7.5	48 45.73	66.1	2	4.075	− 37 29 47.4	68.2	2	4.23
8028	113 Herculis.	5.0*	48 50.27	59.6	2	2.532	+ 22 28 11.9	53.7	4	4.24
8029	ξ^1 Sagittarii	6.0*	49 1.22	60.0	6	3.569	− 20 50 8.0	56.4	4	4.26
8030	B. A. C. 6455 . . .	7.0	49 7.14	60.6	2	3.857	− 31 0 18.5	69.1	2	4.27

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8031	θ Serpentis	5.8	18 49 15.56	62.6	5	+ 2.980	+ 4 1 28.5	59.7	8	+ 4.28
8032	O. Arg. S. 18878	8.8	49 15.76	67.4	2	3.582	− 21 19 51.9	68.1	2	4.28
8033	ε Coronæ Australis	4.5	49 16.49	60.6	4	4.067	− 37 17 8.8	67.6	4	4.28
8034	B. A. C. 6462	6.0	49 17.03	62.6	5	2.980	+ 4 1 23.9	62.6	5	4.28
8035	Anonymous	6.6	49 21.81	64.5	3	3.530	− 19 19 59.4	68.7	2	4.29
8036	ξ^2 Sagittarii	4.0	18 49 22.61	61.0	11	+ 3.581	− 21 17 12.3	57.4	5	+ 4.29
8037	O. Arg. S. 18883	8.5	49 23.31	67.0	2	3.794	− 28 56 2.2	69.1	2	4.29
8038	Lacaille 7932	6.3	49 29.99	69.2	3	4.157	− 39 42 59.3	64.5	3	4.30
8039	δ^2 Lyræ	5.0*	49 36.46	59.5	2	2.098	+ 36 43 22.0	50.2	8	4.31
8040	B. A. C. 6465	6.0	49 45.41	60.6	3	3.682	− 25 3 32.9	56.8	6	4.32
8041	Anonymous.	. .	18 50 3.	. .	.	+ 3.603	− 22 9 8.0	68.2	2	+ 4.34
8042	Weisse XVIII, 1277	8.3	50 37.	. .	.	3.290	− 9 29 30.1	67.2	2	4.39
8043	Weisse XVIII, 1276	8.8	50 38.34	63.2	3	3.420	− 14 57 4.8	67.7	2	4.39
8044	Rumker 6881	7.6	50 41.83	62.8	4	2.566	+ 21 11 53.0	57.6	2	4.40
8045	O. Arg. S. 18907	9.0	50 49.31	60.6	2	+ 3.601	− 22 5 18.9	68.7	2	4.41
8046	50 Draconis	5.0*	18 50 52.00	65.5	2	− 1.887	+ 75 16 0.7	64.4	14	+ 4.42
8047	Anonymous	6.0	50 55.41	68.6	2	+ 2.137	+ 35 38 51.3	48.5	1	4.42
8048	B. A. C. 6476	6.0*	51 5.62	59.6	2	1.588	+ 48 41 8.8	54.5	3	4.43
8049	O. Arg. S. 18913	7.8	51 9.58	65.7	2	3.533	− 19 27 52.3	68.7	2	4.44
8050	Weisse XVIII, 1285	7.4	51 9.98	65.6	3	3.367	− 12 46 23.3	69.6	2	4.44
8051	Anonymous	9.0	18 51 10.46	70.6	2	+ 3.264	− 8 22 7.6	69.7	2	+ 4.44
8052	B. A. C. 6474	7.2	51 12.39	63.1	2	3.772	− 28 14 15.8	67.1	2	4.44
8053	O. Arg. S. 18916	8.0	51 12.52	63.0	5	3.599	− 22 0 54.8	55.8	5	4.44
8054	O. Arg. S. 18915	8.5	51 13.65	66.6	2	3.791	− 28 53 15.0	69.2	2	4.45
8055	Weisse XVIII, 1294	8.1	51 27.94	63.9	3	3.282	− 9 9 20.1	69.1	2	4.47
8056	Lacaille 7947, (1st *)	7.0	18 51 35.32	62.7	2	+ 4.063	− 37 14 58.6	67.0	3	+ 4.48
8057	Lacaille 7947, (2d *)	7.0	51 36.36	62.7	2	4.063	− 37 15 1.4	67.0	3	4.48
8058	Weisse XVIII, 1301	8.0	51 39.21	67.0	3	3.263	− 8 20 43.1	68.2	2	4.48
8059	B. A. C. 6479	6.0	51 49.19	64.6	2	3.683	− 25 7 58.0	64.1	2	4.50
8060	Lacaille 7953	7.0	51 50.06	62.7	5	3.932	− 33 25 18.1	62.6	2	4.50
8061	Lacaille 7955	6.6	18 52 11.92	62.7	2	+ 4.056	− 37 4 53.5	68.1	2	+ 4.52
8062	O. Arg. S, 18939	8.7	52 15.83	64.5	2	3.790	− 28 54 5.1	68.2	2	4.52
8063	Weisse XVIII, 1314	8.4	52 19.22	65.6	5	3.368	− 12 47 35.1	65.6	3	4.54
8064	10 Aquilæ	6.0*	52 21.47	54.1	7	2.754	+ 13 43 17.4	54.6	3	4.54
8065	Anonymous.	9.3	52 44.78	64.6	2	3.599	− 22 2 7.1	56.2	2	4.57
8066	O. Arg. S. 18953	7.3	18 52 50.41	67.0	2	+ 3.534	− 19 32 22.8	70.6	2	+ 4.58
8067	Weisse XVIII, 1333	8.0	52 55.73	67.2	2	3.245	− 7 34 22.5	67.7	2	4.59
8068	Dorpat, 2425, (1st *)	8.2	52 57.37	64.1	4	3.262	− 8 18 31.3	66.0	3	4.59
8069	Dorpat, 2425, (2d *)	8.0	52 57.46	64.1	4	3.262	− 8 17 58.8	66.0	3	4.59
8070	Anonymous	8.8	53 3.35	68.6	2	4.106	+ 38 28 44.6	65.4	2	4.60

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8071	B. A. C. 6485	6.4	18 53 11.23	65.0	4	+ 3.621	− 22 53 18.0	67.2	2	+ 4.61
8072	ε Aquilæ	3.5*	53 16.16	51.2	3	2.726	+ 14 52 52.2	68.7	2	4.62
8073	Lacaille 7961	8.0	53 16.71	69.7	2	3.977	− 34 49 35.8	67.6	2	4.62
8074	Lacaille 7960	7.0	53 19.64	63.0	3	4.027	− 36 17 30.3	69.7	2	4.63
8075	Weisse XVIII, 1344	8.9	53 30.40	63.2	3	3.414	− 14 42 41.2	69.6	2	4.64
8076	B. A. C. 6488	6.0	18 53 33.33	45.4	1	+ 3.432	− 15 28 34.5	68.7	2	+ 4.64
8077	ζ Sagittarii	2.8	53 42.03	61.2	7	3.825	− 30 4 33.7	63.5	3	4.66
8078	γ Lyræ	5.0	53 42.27	61.0	3	2.243	+ 32 30 0.3	69.7	2	4.66
8079	B. A. C. 6490	5.5	53 53.38	61.8	5	3.679	− 25 2 11.1	66.1	2	4.67
8080	Lalande 35468	7.8	54 0.33	62.1	5	3.471	− 17 3 2.9	63.1	2	4.68
8081	12 Aquilæ	5.5*	18 54 12.43	45.4	1	+ 3.207	− 5 55 58.3	69.7	2	+ 4.70
8082	O. Arg. S. 18978	9.0	54 22.77	66.0	3	3.561	− 20 37 39.9	56.6	2	4.71
8083	O. Arg. S. 18979	8.3	54 24.07	63.8	5	3.561	− 20 36 24.4	56.6	4	4.72
8084	B. A. C. 6495	6.0*	54 29.42	59.6	2	2.019	+ 39 1 32.3	54.6	3	4.72
8085	λ Lyræ	6.0*	54 43.91	59.5	4	2.262	+ 31 57 6.8	53.6	5	4.74
8086	O. Arg. S. 18986	8.5	18 54 46.67	60.6	2	+ 3.470	− 17 2 12.9	68.2	2	+ 4.75
8087	Lalande 35497	6.4	54 49.91	63.8	8	3.531	− 19 26 37.5	55.9	3	4.75
8088	Lalande 35499	6.0	54 53.56	65.5	4	3.527	− 19 18 4.0	68.7	2	4.76
8089	Anonymous	. .	55 4.	. .	.	3.422	− 15 4 44.0	56.7	2	4.77
8090	Anonymous	9.0	55 7.43	66.9	3	3.246	− 7 38 21.3	68.7	2	4.78
8091	Anonymous	9.5	18 55 17.53	65.6	2	+ 3.243	− 7 29 51.9	69.7	2	+ 4.79
8092	B. A. C. 6499	6.0*	55 25.39	60.8	5	3.860	− 31 14 53.1	63.6	2	4.80
8093	Weisse XVIII, 1398	9.0	55 29.40	65.4	8	3.244	− 7 32 44.8	65.6	3	4.81
8094	Dorpat 2434, (1st *)	8.0	55 31.77	64.6	7	3.093	− 0 54 18.6	72.6	3	4.81
8095	g Aquilæ	5.5	55 31.94	47.0	2	3.160	− 3 53 53.2	68.7	2	4.81
8096	Dorpat 2434, (2d *)	8.4	18 55 32.92	64.8	5	+ 3.093	− 0 54 37.1	72.6	3	+ 4.81
8097	B. A. C. 6502	6.6	55 47.16	62.6	2	3.626	− 23 5 54.1	67.7	2	4.83
8098	O. Arg. S. 19007	8.6	55 50.94	64.8	3	3.570	− 21 0 9.1	69.1	2	4.84
8099	Weisse XVIII, 1412	8.6	55 55.34	65.3	7	3.244	− 7 33 51.6	65.6	3	4.85
8100	B. A. C. 6504	7.5	55 57.73	69.6	2	+ 3.589	− 21 43 53.8	68.7	2	4.85
8101	υ Draconis	5.0*	18 56 5.97	67.0	3	− 0.719	+ 71 6 33.1	64.4	3	+ 4.86
8102	B. A. C. 6505	6.7	56 9.84	64.2	2	+ 3.689	− 25 26 0.0	66.6	2	4.87
8103	ο Sagittarii	4.5	56 17.50	52.6	13	3.594	− 21 56 33.4	51.8	21	4.88
8104	Lacaille 7985	6.8	56 27.60	63.3	3	3.946	− 33 59 21.4	67.6	2	4.89
8105	Anonymous.	8.8	56 30.00	69.3	3	3.272	− 8 46	. .	.	4.89
8106	Weisse XVIII, 1430	8.6	18 56 34.62	67.9	4	+ 3.272	− 8 46 35.5	68.2	2	+ 4.90
8107	B. A. C. 6512	7.0	56 55.78	59.6	2	3.799	− 29 17 14.9	57.3	3	4.93
8108	γ Coronæ Australis	4.0	56 56.93	62.6	2	4.058	− 37 15 37.5	67.3	3	4.93
8109	Weisse XVIII, 1443	9.0	56 59.36	63.6	3	3.275	− 8 54 43.8	68.7	2	4.94
8110	Weisse XVIII, 1449	8.0	57 10.92	63.3	6	3.274	− 8 51 24.8	67.1	2	4.95

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8111	Lacaille 7990	6.3	18 57 23.88	62.7	2	+ 4.084	− 37 59 20.5	66.2	2	+ 4.97
8112	B. A. C. 6515	6.8	57 35.38	65.6	2	3.746	− 27 29 43.5	66.7	2	4.99
8113	Weisse (2) XVIII, 1790	6.8	57 41.95	61.6	4	2.573	+ 21 3 52.6	60.0	4	5.00
8114	Anonymous	7.3	58 4.17	67.3	3	3.632	− 23 27 46.8	69.6	3	5.03
8115	Weisse (2) XVIII, 1806	8.5	58 11.23	61.8	4	3.575	+ 21 1 15.7	63.3	3	5.04
8116	τ Sagittarii	4.0	18 58 11.77	58.5	7	+ 3.756	− 27 52 18.5	69.6	3	+ 5.04
8117	Weisse XVIII, 1480	7.2	58 15.55	68.6	2	3.280	− 9 6 44.5	65.0	3	5.04
8118	O. Arg. S. 19073	8.5	58 39.83	60.4	2	3.585	− 21 38 12.9	55.7	3	5.08
8119	B. A. C. 6525	5.5	58 41.71	64.5	2	3.784	− 28 50 53.2	69.6	2	5.08
8120	O. Arg. S. 19083, (1st *)	7.2	58 49.07	66.9	3	3.454	− 16 26 23.1	68.8	5	5.09
8121	O. Arg. S. 19083, (2d *)	9.2	18 58 49.08	67.6	3	+ 3.454	− 16 26 13.3	69.6	2	+ 5.09
8122	Anonymous	6.6	58 56.57	65.6	3	3.516	− 18 56 57.4	69.7	2	5.10
8123	ζ Aquilæ	3.0*	58 58.52	53.3	226	2.758	+ 13 39 30.3	50.6	105	5.10
8124	Weisse (2) XVIII, 1835	8.0	58 58.71	61.8	5	2.575	+ 21 1 55.6	61.6	4	5.10
8125	Lamont 6587	8.5*	59 0.35	69.7	1	3.102	− 1 19 38.9	69.7	2	5.11
8126	O. Arg. S. 19086	7.6	18 59 2.87	68.6	2	+ 3.590	− 21 49 35.3	58.0	3	+ 5.11
8127	B. A. C. 6531	7.0	59 17.02	63.6	2	3.700	− 25 54 55.9	68.2	2	5.13
8128	Dorpat 2447, (1st *)	9.2	59 19.96	63.7	2	3.107	− 1 33 11.9	69.8	2	5.13
8129	Dorpat 2447, (2d *)	7.4	59 20.23	65.1	6	3.107	− 1 33 27.7	69.8	2	5.13
8130	Weisse XVIII, 1525	9.2	59 24.15	67.5	2	2.758	+ 13 38 53.5	69.7	2	5.14
8131	Anonymous	9.1	18 59 26.05	67.7	2	+ 3.515	− 18 56 22.5	68.7	2	+ 5.14
8132	Anonymous	8.0	59 31.52	61.6	1	3.372	− 13 3 25.9	70.7	2	5.15
8133	Anonymous	8.0	59 32.57	63.7	1	3.944	− 34 0 24.0	70.6	2	5.15
8134	Lacaille 7998	7.4	59 33.35	63.6	7	3.944	− 34 0 20.6	70.6	3	5.15
8135	Anonymous	9.5	59 37.47	67.1	2	3.273	− 8 50 49.6	72.0	3	5.16
8136	O. Arg. S. 19098	6.4	18 59 38.62	68.6	2	+ 3.592	− 21 54 35.7	56.2	2	+ 5.16
8137	O. Arg. S. 19104	7.1	59 49.09	68.6	2	3.594	− 22 0 19.4	56.7	1	5.18
8138	Weisse XVIII, 1539	8.3	59 52.87	67.4	2	2.759	+ 13 37 47.2	70.2	2	5.18
8139	α Coronæ Australis	5.0	59 56.51	68.7	2	4.085	− 38 7 6.8	66.2	2	5.19
8140	Lamont 6597	9.0	18 59 58.25	66.7	2	3.092	− 0 52 42.3	68.6	1	5.19
8141	Lalande 35802	7.5	19 0 2.43	68.7	2	+ 2.061	+ 38 3 59.0	48.5	1	+ 5.20
8142	B. A. C. 6536	6.5*	0 2.98	60.5	2	+ 3.530	− 19 30 20.6	56.8	4	5.20
8143	Radcliffe 4208	7.0	0 4.77	69.5	1	−18.211	+ 86 31 39.8	66.2	3	5.20
8144	B. A. C. 6537	8.0	0 10.74	67.1	4	+ 3.843	− 30 50 35.9	64.0	3	5.21
8145	B. A. C. 6538	7.5	0 12.00	65.1	2	3.682	− 25 17 43.9	67.7	2	5.21
8146	Weisse XVIII, 1542	8.0	19 0 12.30	67.6	2	+ 3.102	− 1 20 16.6	69.7	2	+ 5.21
8147	Lacaille 8008	6.1	0 14.24	62.7	5	4.023	− 36 22 55.1	68.7	2	5.21
8148	B. A. C. 6546	6.5	0 16.76	63.9	6	3.631	− 23 24 22.5	64.9	4	5.21
8149	β Coronæ Australis	5.5	0 23.50	69.6	2	4.138	− 39 33 30.8	64.9	3	5.22
8150	Anonymous	9.0	0 27.32	69.6	1	3.843	− 30 51 45.3	58.6	1	5.23

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			h. m. s.			"	° " '			"
8151	Weisse XVIII, 1547 .	7.5	19 0 34.18	61.4	2	+ 3.374	− 13 10 15.7	67.7	2	+ 5.24
8152	Lalande 35791 . . .	8.0	0 41.68	67.1	2	3.106	− 1 29 41.0	68.7	2	5.25
8153	B. A. C. 6546 . . .	7.3	1 1.22	62.8	4	3.739	− 27 19 59.7	67.2	2	5.28
8154	O. Arg. S. 19144 . .	7.5	1 6.99	64.1	2	3.630	− 23 24 35.3	67.9	3	5.29
8155	Anonymous . . .	8.5	1 20.44	68.6	2	3.584	− 21 38 29.9	55.7	2	5.30
8156	O. Arg. S. 19157 . .	8.0	19 1 22.20	68.6	2	+ 3.584	− 21 40 29.3	55.7	3	+ 5.30
8157	Anonymous . . .	8.0	1 23.95	65.1	2	3.301	− 10 3 59.7	67.7	1	5.31
8158	π Sagittarii	4.5*	1 26.18	58.8	31	3.573	− 21 14 32.6	58.6	7	5.31
8159	B. A. C. 6549 . . .	6.4	1 32.47	62.5	6	3.823	− 30 13 34.9	53.7	4	5.32
8160	B. A. C. 6550 . . .	7.0*	1 32.64	61.0	2	3.542	− 20 1 15.0	56.6	4	5.32
8161	Lalande 35866 . . .	7.5	19 1 34.81	68.8	2	+ 2.095	+ 37 10 23.2	48.6	1	+ 5.32
8162	19 Aquilæ	6.0*	2 8.46	59.6	2	2.940	+ 5 51 21.9	54.5	3	5.37
8163	O. Arg. S. 19179 . .	8.2	2 12.08	68.7	2	3.590	− 21 53 42.9	55.7	3	5.38
8164	ι Lyræ	5.5*	2 18.35	69.6	2	2.140	+ 35 52 58.7	48.2	2	5.39
8165	B. A. C. 6554 . . .	6.2	2 26.41	61.8	8	3.807	− 29 42 41.1	58.6	3	5.40
8166	O. Arg. S. 19188 . .	6.5	19 2 26.42	68.7	2	+ 3.807	− 29 43 33.4	64.7	2	+ 5.40
8167	Lacaille 8023 . . .	7.8	2 37.51	64.0	2	3.927	− 33 35 8.7	68.7	2	5.41
8168	Lacaille 8022 . . .	6.7	2 40.97	62.7	5	4.071	− 37 48 33.1	67.6	2	5.42
8169	Anonymous . . .	8.8	2 59.89	65.6	2	3.254	− 8 2 57.5	68.3	3	5.44
8170	Lacaille 8025 . . .	7.0	3 6.19	62.7	4	+ 4.068	− 37 45 4.1	68.6	2	5.45
8171	O. Arg. N. 18967 . .	8.4	19 3 9.94	63.7	3	− 0.321	+ 69 13 55.1	66.7	2	+ 5.46
8172	Lacaille 8028, (1st *) .	7.0	3 32.50	62.2	4	+ 3.942	− 34 4 38.1	66.7	2	5.49
8173	Lacaille 8028, (2d *) .	7.0	3 33.30	62.2	4	3.942	− 34 4 28.3	66.7	2	5.49
8174	Anonymous . . .	7.8	3 39.56	65.2	3	+ 3.254	− 8 3 53.9	68.3	3	5.50
8175	O. Arg. N. 18980 . .	8.2	3 47.40	63.6	4	− 0.293	+ 69 5 32.1	61.2	2	5.51
8176	Lalande 36002 . . .	7.3	19 3 49.91	68.7	2	+ 2.057	+ 38 17 11.6	48.6	1	+ 5.51
8177	B. A. C. 6561 . . .	6.5	4 6.00	66.6	3	3.588	− 21 53 11.3	58.4	4	5.54
8178	Anonymous . . .	8.0	4 30.81	65.0	2	3.257	− 8 11 35.9	68.6	2	5.57
8179	B. A. C. 6562 . . .	6.0	4 36.09	63.1	6	3.702	− 26 8 13.9	60.0	3	5.58
8180	Lalande 36051 . . .	7.5	4 54.05	68.7	2	2.084	+ 37 34 11.6	48.6	1	5.60
8181	20 Aquilæ	5.0	19 5 5.02	65.0	7	+ 3.256	− 8 10 11.7	61.6	6	+ 5.62
8182	O. Arg. S. 19256 . .	7.5	5 13.93	65.7	3	3.611	− 22 47 54.0	67.7	2	5.63
8183	B. A. C. 6565 . . .	6.9	5 15.25	62.5	7	3.729	− 27 6 21.5	61.6	4	5.63
8184	Anonymous . . .	7.5	5 35.29	63.6	5	3.798	− 29 30 28.9	67.7	2	5.66
8185	B. A. C. 6568 . . .	6.3	5 43.07	62.5	15	3.814	− 30 3 58.1	61.2	5	5.67
8186	B. A. C. 6569 . . .	6.9	19 5 49.13	63.6	5	+ 3.797	− 29 28 38.4	67.7	2	+ 5.67
8187	Lacaille 8041 . . .	6.9	6 10.40	62.6	2	4.044	− 37 11 10.1	69.1	2	5.71
8188	Anonymous . . .	9.7	6 14.56	66.6	2	3.265	− 8 33 38.8	69.7	2	5.72
8189	B. A. C. 6574 . . .	6.1	6 36.39	68.6	2	2.572	+ 21 19 16.6	61.8	3	5.75
8190	Lacaille 8045 . . .	7.3	6 37.67	64.5	9	3.929	− 33 46 6.6	66.1	4	5.75

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			h. m. s.			"	° ′ "			"
8191	21 Aquilæ	6.0*	19 6 39.09	45.6	1	+ 3.026	+ 2 3 33.2	67.7	2	+ 5.75
8192	Anonymous	8.4	6 40.43	67.6	3	3.930	− 33 49 6.2	69.2	2	5.75
8193	ψ Sagittarii	6.0	6 57.21	63.3	3	3.683	− 25 29 38.4	66.4	3	5.78
8194	B. A. C. 6576	6.4	7 1.30	63.3	3	3.653	− 24 24 50.6	66.7	2	5.78
8195	Lalande 36087	8.0	7 11.25	59.6	2	3.538	− 20 1 28.1	56.1	2	5.80
8196	B. A. C. 6577	7.0	19 7 17.77	62.7	3	+ 3.832	− 30 41 59.1	60.8	4	+ 5.80
8197	Lacaille 8049	6.7	7 17.86	62.7	2	3.937	− 34 2 59.6	65.6	2	5.81
8198	Anonymous	9.1	7 22.	. .	.	3.596	− 22 16 29.9	69.7	2	5.81
8199	Lacaille 8051	6.5	7 23.91	63.6	4	3.927	− 33 45 48.0	66.7	3	5.81
8200	O. Arg. S. 19306	8.0	7 34.41	68.6	2	3.591	− 22 4 36.6	56.7	3	5.83
8201	B. A. C. 6578	6.7	19 7 35.06	61.9	7	+ 3.693	− 25 54 23.2	60.0	3	+ 5.83
8202	Anonymous	7.0	7 39.24	66.0	3	3.875	− 32 7 34.8	67.7	2	5.84
8203	Anonymous	8.8	7 46.69	69.2	2	3.874	− 32 5 8.5	67.7	2	5.84
8204	O. Arg. S. 19314	7.5	8 0.64	64.4	4	3.778	− 28 54 32.5	67.7	2	5.86
8205	O. Arg. S. 19319	8.2	8 14.30	68.6	2	3.589	− 22 2 19.7	56.7	2	5.88
8206	Weisse XIX, 187	7.2	19 8 38.57	68.8	4	+ 3.273	− 8 55 56.2	65.5	2	+ 5.91
8207	Lalande 36229, (1st *)	7.4	8 42.80	68.7	2	2.045	+ 38 47 59.3	62.6	3	5.92
8208	Lalande 36229, (2d *)	8.2	8 45.66	68.7	2	2.045	+ 38 47 49.5	69.7	2	5.93
8209	Lalande 36238	6.8	8 53.12	69.1	2	2.138	+ 36 11 7.1	48.6	1	5.94
8210	Madras 1351	7.8	8 55.72	60.5	2	3.570	− 21 18 57.8	57.1	4	5.94
8211	Anonymous	9.0	19 8 59.30	68.6	1	+ 3.271	− 8 51 52.8	63.7	1	+ 5.94
8212	η Lyræ, (1st *)	5.0*	8 59.51	46.2	16	2.041	+ 38 54 25.4	47.0	50	5.95
8213	53 Draconis	5.0*	9 1.79	68.7	2	1.134	+ 56 37 17.6	58.6	3	5.95
8214	η Lyræ, (2d *)	. .	9 1.88	45.5	2	2.041	+ 38 54 29.3	68.6	2	5.95
8215	Lacaille 8060	7.0	9 14.65	63.2	6	3.914	− 33 23 55.7	66.7	2	5.97
8216	B. A. C. 6582	6.0*	19 9 15.41	39.6	2	+ 2.582	+ 20 59 23.4	54.6	3	+ 5.97
8217	Anonymous	8.3	9 19.01	69.3	3	3.519	− 19 18 22.0	55.7	2	5.97
8218	d Sagittarii	5.0	9 26.45	65.3	18	3.516	− 19 11 53.4	65.7	2	5.98
8219	Anonymous	8.2	9 28.96	69.6	2	3.491	− 18 9 55.6	62.2	2	5.99
8220	Anonymous	7.5	9 38.14	65.1	2	4.191	− 41 15 31.3	53.5	2	6.00
8221	Lacaille 8066	6.8	19 9 51.84	65.7	2	+ 3.917	− 33 31 19.4	67.7	2	+ 6.02
8222	Anonymous	7.1	9 59.13	62.4	4	3.912	− 33 24 28.2	66.7	2	6.03
8223	Lacaille 8061	6.7	9 59.17	62.6	3	4.038	− 37 8 35.7	69.1	2	6.03
8224	Weisse XIX, 224	7.4	10 7.39	64.0	3	3.054	+ 0 48 47.3	68.3	3	6.04
8225	Lacaille 8064	6.8	10 7.64	66.1	2	4.029	− 36 54 20.1	68.7	3	6.04
8226	Anonymous	8.0	19 10 8.55	69.6	2	+ 3.872	− 32 5 57.1	67.7	2	+ 6.04
8227	1 Vulpeculæ	5.0*	10 11.89	59.5	2	2.579	+ 21 8 44.6	53.5	3	6.05
8228	Anonymous	9.0	10 18.67	68.7	1	3.519	− 19 19 10.7	55.7	2	6.05
8229	Lalande 36252	8.0	10 31.52	67.9	3	3.596	− 22 21 11.2	69.2	2	6.08
8230	Lalande 36324	8.0*	10 33.	. .	.	2.060	+ 38 27 51.0	47.7	2	6.08

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			h. m. s.			"	° ' "			"
8231	Lalande 36311 . . .	6.7	19 10 34.52	61.6	2	+ 2.307	+ 30 59 45.8	54.6	5	+ 6.08
8232	O. Arg. S. 19371 . .	7.2	10 49.28	66.3	2	3.634	− 23 48 29.4	66.7	3	6.10
8233	O. Arg. S. 19374 . .	8.0	10 50.79	69.1	2	3.490	− 18 10 41.1	62.2	2	6.10
8234	B. A. C. 6590 . . .	8.0	11 1.12	57.5	2	3.432	− 15 46 38.3	68.2	2	6.12
8235	ω Aquilæ	6.0	11 14.67	62.1	68	2.817	+ 11 20 45.2	59.6	4	6.13
8236	23 Aquilæ, (1st *) . . .	5.5	19 11 25.04	66.5	6	+ 3.053	+ 0 50 1.4	65.7	2	+ 6.15
8237	23 Aquilæ, (2d *) . . .	8.8	11 25.10	65.6	1	3.053	+ 0 50 5.3	69.7	2	6.15
8238	54 Draconis	6.0	11 25.14	69.6	2	1.077	+ 57 27 51.8	58.6	3	6.15
8239	B. A. C. 6594 . . .	7.0*	11 25.60	59.6	2	3.869	− 32 4 18.4	60.7	6	6.15
8240	θ Lyræ	4.5	11 30.43	61.1	4	2.082	+ 37 53 10.8	55.3	7	6.16
8241	24 Aquilæ	5.5	19 11 41.16	70.6	2	+ 3.070	+ 0 5 13.5	68.7	2	+ 6.17
8242	2 Vulpeculæ	5.5*	11 48.12	59.7	2	2.538	+ 22 46 33.5	53.7	2	6.18
8243	B. A. C. 6606 . . .	7.5	11 54.17	69.1	2	1.717	+ 46 48 54.0	54.6	3	6.18
8244	Weisse XIX, 277 . .	8.5	12 9.36	66.6	2	2.816	+ 11 23 19.2	67.7	2	6.21
8245	B. A. C. 6604 . . .	7.0	12 10.82	63.6	2	3.650	− 24 27 37.3	68.2	3	6.21
8246	Lacaille 8077 . . .	6.2	19 12 14.18	63.4	5	+ 3.970	− 35 14 13.0	65.8	2	+ 6.22
8247	B. A. C. 6607 . . .	6.5	12 14.68	59.9	3	3.603	− 22 39 31.7	65.4	4	6.22
8248	Anonymous . . .	8.5	12 17.46	68.7	2	3.516	− 19 15 5.1	55.7	4	6.22
8249	Lalande 36402 . . .	6.8	12 21.47	69.5	2	2.051	+ 38 46 40.9	48.7	1	6.23
8250	δ Draconis	5.0	12 30.56	49.0	8	0.017	+ 67 24 55.8	63.5	11	6.24
8251	Schjellerup 7273 . .	8.5	19 12 34.22	68.7	2	+ 3.301	− 10 12 51.2	66.6	2	+ 6.25
8252	Anonymous . . .	8.6	12 37.66	68.7	2	3.517	− 19 19 1.2	55.7	4	6.25
8253	B. A. C. 6609 . . .	6.5	12 46.81	60.6	5	3.801	− 29 51 47.4	55.3	6	6.26
8254	Gr. 12-year Cat. 1710 .	5.7	12 50.35	66.3	3	1.722	+ 46 44 13.0	54.7	3	6.27
8255	*f* Aquilæ	5.2	13 4.45	68.7	2	3.198	− 5 40 27.1	57.7	2	6.29
8256	B. A. C. 6611 . . .	7.9	19 13 6.76	64.1	6	+ 3.703	− 26 25 24.5	61.8	3	+ 6.29
8257	Dorpat 2497, (1st *) .	7.4	13 7.60	64.6	4	2.953	+ 5 20 26.2	68.7	2	6.29
8258	Dorpat 2497, (2d *) .	7.1	13 7.67	64.6	4	2.953	+ 5 19 55.6	68.7	2	6.29
8259	B. A. C. 6613 . . .	6.0	13 11.78	66.3	3	3.798	− 29 46 54.9	59.7	3	6.30
8260	O. Arg. S. 19423 . .	8.5	13 16.77	65.6	4	3.703	− 26 26 10.9	61.4	3	6.30
8261	B. A. C. 6616 . . .	7.0	19 13 24.78	60.6	2	+ 3.521	− 19 29 33.6	56.3	5	+ 6.31
8262	ρ^1 Sagittarii	4.0	13 33.04	57.4	18	3.487	− 18 6 25.3	61.4	3	6.33
8263	Weisse XIX, 315 . .	7.6	13 39.83	65.0	2	3.306	− 10 26 3.2	64.8	2	6.34
8264	ρ^2 Sagittarii	6.0	13 40.81	45.5	1	3.498	− 18 33 51.5	69.6	2	6.34
8265	υ Sagittarii	5.8	13 42.38	66.6	3	3.441	− 16 12 50.8	68.6	2	6.34
8266	κ Cygni	5.5	19 13 52.04	67.6	3	+ 1.382	+ 53 6 39.8	62.7	2	+ 6.35
8267	Lalande 36478 . . .	6.4	14 5.43	68.6	2	2.110	+ 37 11 20.5	47.1	2	6.37
8268	Gr. 12-year Cat. 1719 .	8.0	14 23.04	61.3	4	3.556	− 20 54 2.9	60.6	5	6.40
8269	Lalande 36426 . . .	8.5*	14 24.20	68.7	2	3.515	− 19 17 6.6	55.7	5	6.40
8270	Lacaille 8090 . . .	6.5	14 35.93	63.1	8	3.967	− 35 13 52.7	68.2	2	6.41

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			h. m. s.			″	° ′ ″			″
8271	O. Arg. S. 19451	9.5	19 14 37.26	66.6	2	+ 3.703	− 26 29 31.2	69.7	2	+ 6.42
8272	Dorpat 2501, (1st *)	7.8	14 38.24	63.7	2	3.183	− 4 59 53.8	67.7	3	6.42
8273	Dorpat 2501, (2d *)	9.0	14 38.81	63.7	2	3.183	− 4 59 34.3	68.7	2	6.42
8274	Lalande 36513	6.5	14 43.49	68.7	2	2.115	+ 37 4 50.0	48.6	1	6.43
8275	Anonymous	7.0	14 46.68	69.2	3	2.135	+ 36 29 12.9	47.6	1	6.43
8276	Lalande 36448	8.5*	19 14 52.27	68.7	2	+ 3.514	− 19 14 43.1	55.7	2	+ 6.44
8277	O. Arg. S. 19459	8.3	14 52.29	65.9	3	3.772	− 28 56 1.5	67.2	2	6.44
8278	Lacaille 8092	7.6	14 53.86	63.1	4	3.920	− 33 48 21.8	68.1	2	6.44
8279	O. Arg. S. 19465	8.4	15 0.01	66.9	4	3.772	− 28 56 33.2	67.4	3	6.45
8280	Anonymous	. .	15 11.64	69.6	1	3.773	− 28 58 9.7	68.7	2	6.46
8281	O. Arg. S. 19472	7.6	19 15 21.14	68.7	2	+ 3.486	− 18 7 9.2	57.2	2	+ 6.48
8282	B. A. C. 6627	6.5	15 38.20	61.4	5	3.834	− 31 3 54.9	57.2	5	6.50
8283	B. A. C. 6628	5.6	15 46.39	54.3	4	3.748	− 28 7 56.5	66.1	2	6.51
8284	Anonymous	8.4	16 7.59	64.5	3	3.620	− 23 26 27.5	65.4	3	6.53
8285	B. A. C. 6631	6.0	16 14.66	60.6	3	3.789	− 29 34 34.0	54.2	4	6.55
8286	Anonymous	8.1	19 16 15.85	68.2	3	+ 3.260	− 8 28 59.5	68.6	2	+ 6.55
8287	Anonymous	8.4	16 26.24	69.2	2	3.942	− 34 33 10.7	69.8	1	6.57
8288	O. Arg. S. 19502	9.3	16 32.08	66.6	2	3.691	− 26 7 3.2	66.7	3	6.57
8289	Anonymous	8.0	16 37.62	69.2	2	3.946	− 34 40 36.6	65.4	2	6.58
8290	Anonymous	7.2	16 40.36	67.0	2	3.616	− 23 18 38.3	69.0	3	6.58
8291	χ^1 Sagittarii	5.5	19 16 45.13	61.6	7	+ 3.655	− 24 46 35.5	66.1	2	+ 6.59
8292	χ^2 Sagittarii	7.2	16 51.85	62.4	3	3.652	− 24 40 58.3	68.6	2	6.60
8293	Anonymous	8.8	16 53.86	66.3	3	3.515	− 19 19 27.0	55.7	4	6.60
8294	Lalande 36557	7.0	16 55.38	69.7	2	3.417	− 15 17 39.1	68.7	2	6.60
8295	χ^3 Sagittarii	5.5	17 1.00	62.3	4	3.640	− 24 13 58.5	67.6	2	6.61
8296	O. Arg. S. 19516	9.4	19 17 12.92	63.7	3	+ 3.692	− 26 10 20.2	66.7	2	+ 6.63
8297	Anonymous	8.5	17 14.17	64.5	2	3.618	− 23 24 30.4	65.6	3	6.63
8298	Anonymous	9.0	17 29.34	67.2	2	3.253	− 8 10 22.8	68.7	2	6.65
8299	O. Arg. S. 19525	8.5	17 30.30	69.1	2	3.517	− 19 26 39.9	63.1	2	6.65
8300	50 Sagittarii	5.5	17 57.94	68.6	2	3.582	− 22 3 0.3	62.2	2	6.69
8301	2 Sagittæ	6.0*	19 18 4.81	60.4	4	+ 2.695	+ 16 40 2.9	57.0	8	+ 6.70
8302	B. A. C. 6639	5.8	18 5.34	63.6	4	3.800	− 30 1 0.0	67.7	2	6.70
8303	B. A. C. 6643	5.5	18 13.09	66.1	2	+ 3.417	− 15 19 37.7	68.2	2	6.71
8304	τ Draconis	4.5*	18 13.31	66.3	2	− 1.073	+ 73 5 39.7	63.8	3	6.71
8305	δ Aquilæ	3.4*	18 26.21	53.5	294	+ 3.010	+ 2 50 18.3	50.6	100	6.73
8306	3 Sagittæ	6.5*	19 18 27.79	60.3	3	+ 2.694	+ 16 41 8.0	57.2	6	+ 6.73
8307	Weisse XIX, 438	7.8	18 33.48	67.1	2	3.008	+ 2 55 12.7	67.7	2	6.74
8308	2 Cygni	5.5*	18 36.26	60.7	2	2.364	+ 29 20 58.8	56.4	4	6.74
8309	Anonymous	9.2	18 47.49	63.7	2	3.691	− 26 10	. .	.	6.76
8310	O. Arg. S. 19551	8.5	18 47.56	63.7	2	3.692	− 26 12 44.4	66.7	3	6.76

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			h. m. s.			″	° ′ ″			″
8311	4 Vulpeculæ	6.0*	19 19 19.91	61.7	2	+ 2.626	+ 19 31 35.9	56.0	5	+ 6.80
8312	Lalande 36729	7.2	19 22.48	68.7	2	2.056	+ 38 56 27.8	48.7	1	6.81
8313	Lacaille 8111	7.2	19 28.95	62.7	3	3.995	— 36 16 47.7	64.7	3	6.82
8314	Lalande 36732	7.3	19 32.55	69.0	3	2.127	+ 36 54 54.0	47.7	1	6.82
8315	O. Arg. S. 19575	8.1	19 38.44	65.6	3	3.610	— 23 9 11.2	67.7	2	6.83
8316	O. Arg. S. 19588	8.5	19 20 13.59	64.0	3	+ 3.689	— 26 10 44.4	66.7	3	+ 6.88
8317	O. Arg. S. 19591	8.5	20 18.33	63.7	2	3.688	— 26 6 59.2	66.7	2	6.88
8318	Lalande 36774	6.5	20 20.02	68.7	1	2.127	+ 36 58 13.2	47.6	2	6.89
8319	B. A. C. 6663	6.5*	20 21.09	48.7	1	2.623	+ 19 36 56.3	67.7	2	6.89
8320	Anonymous	8.5	20 30.62	68.7	2	4.111	— 39 36 6.4	65.5	2	6.90
8321	O. Arg. S. 19600	9.0	19 20 35.70	66.2	2	+ 3.685	— 26 2 29.2	67.8	3	+ 6.91
8322	Anonymous.	5.9	20 37.36	68.6	2	3.417	— 15 23 0.3	63.2	2	6.91
8323	Weisse (2) XIX, 616	9.0*	20 41.43	69.6	2	2.628	+ 19 28 24.9	68.2	2	6.92
8324	B. A. C. 6665	6.8	20 45.65	61.3	6	3.828	— 31 4 15.0	55.6	5	6.92
8325	O. Arg. S. 19609	8.8	21 2.57	65.5	8	3.686	— 26 5 5.7	67.4	3	6.94
8326	4 Cygni	6.0*	19 21 6.53	63.3	3	+ 2.159	+ 36 2 19.6	51.2	6	+ 6.95
8327	O. Arg. S. 19612	8.5	21 9.21	60.6	2	3.731	— 27 43 7.7	58.6	2	6.95
8328	Anonymous	9.5	21 11.12	69.6	1	3.684	— 26 2 5.5	68.2	2	6.96
8329	B. A. C. 6666	5.7	21 12.35	62.1	7	3.718	— 27 16 6.3	58.7	4	6.96
8330	Lacaille 8120	6.6	21 13.54	63.1	4	3.867	— 32 22 28.3	66.2	2	6.96
8331	O. Arg. S. 19618	8.3	19 21 20.58	64.7	2	+ 3.728	— 27 37 56.8	58.6	2	+ 6.97
8332	O. Arg. S. 19623	8.5	21 28.40	69.1	2	3.523	— 19 46 31.3	62.7	2	6.98
8333	O. Arg. S. 19629	8.3	21 50.18	69.5	1	3.521	— 19 43 26.8	56.7	1	7.02
8334	Lacaille 8126	7.1	21 54.34	63.0	3	3.885	— 32 59 2.0	66.6	1	7.02
8335	Lacaille 8121	7.0	21 57.38	66.6	2	4.228	— 42 43 8.1	68.2	2	7.02
8336	O. Arg. S. 19631	7.3	19 21 57.59	69.0	3	+ 3.520	— 19 40 17.5	61.0	3	+ 7.02
8337	Lacaille 8128	7.3	22 30.64	62.7	3	3.990	— 36 14 54.5	67.6	2	7.07
8338	Anonymous	9.0	22 34.01	67.6	2	3.614	— 23 24 44.7	66.7	2	7.07
8339	Lalande 36891	6.2	22 41.25	68.7	2	2.107	+ 37 39 31.2	48.6	1	7.08
8340	B. A. C. 6673	6.5*	22 41.42	59.6	2	2.374	+ 29 10 1.6	53.6	3	7.08
8341	B. A. C. 6672	7.3	19 22 42.05	62.0	9	+ 3.683	— 26 1 25.5	61.4	6	+ 7.08
8342	α Vulpeculæ	4.0*	22 52.79	55.8	3	2.505	+ 24 23 2.3	68.7	3	7.10
8343	Anonymous	9.0	23 14.68	63.5	3	3.544	— 20 42 36.6	56.6	2	7.12
8344	Anonymous	7.7	23 16.52	64.7	2	3.612	— 23 23 17.9	66.0	3	7.12
8345	B. A. C. 6677	7.7	23 19.09	61.7	9	3.751	— 28 30 12.6	58.2	8	7.13
8346	e Aquilæ	5.0	19 23 20.44	62.6	2	+ 3.139	— 3 4 38.0	57.7	2	+ 7.13
8347	Lalande 36857	6.5	23 30.52	66.0	6	3.519	— 19 40 36.6	60.5	7	7.15
8348	O. Arg. S. 19662	8.2	23 31.09	61.9	3	3.737	— 28 2 28.0	59.4	3	7.15
8349	B. A. C. 6680	6.0	23 33.53	61.4	5	3.827	— 31 9 39.2	53.6	3	7.15
8350	Lalande 36878	9.0*	23 51.	. .	.	3.544	— 20 41 33.9	56.6	3	7.18

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8351	B. A. C. 6682	6.9	19 23 56.48	61.9	7	+ 3.744	− 28 17 1.3	58.7	3	+ 7.18
8352	O. Arg. S. 19674	8.0*	24 1.15	65.4	5	3.603	− 23 1 59.4	68.7	2	7.19
8353	B. A. C. 6684	6.6	24 10.67	63.2	4	3.812	− 30 39 22.5	66.7	2	7.20
8354	B. A. C. 6685	7.3	24 17.72	62.7	10	3.689	− 26 19 18.6	67.0	3	7.21
8355	O. Arg. S. 19685	9.1	24 23.26	63.0	8	3.719	− 27 24 40.5	58.0	3	7.22
8356	Lacaille 8138	6.0	19 24 31.86	67.0	3	+ 4.131	− 40 19 52.1	66.1	2	+ 7.23
8357	Lacaille 8143	6.3	24 33.50	62.3	3	3.929	− 34 29 34.8	68.2	2	7.23
8358	O. Arg. S. 19689	8.5	24 35.24	64.2	2	3.583	− 22 17 41.2	68.7	2	7.24
8359	O. Arg. S. 19693	8.2	25 0.90	68.7	2	3.515	− 19 34 5.5	62.2	2	7.27
8360	β Cygni, (1st *)	3.3	25 4.51	48.3	21	2.419	+ 27 40 6.0	61.7	3	7.28
8361	β Cygni, (2d *)	7.3	19 25 6.74	57.1	4	+ 2.419	+ 27 40 24.3	63.2	4	+ 7.28
8362	Anonymous	8.0	25 9.64	69.3	3	3.716	− 27 20 33.0	55.7	2	7.28
8363	Anonymous	8.8	25 11.34	69.3	3	3.716	− 27 21	. .	.	7.28
8364	O. Arg. S. 19694	9.0	25 17.31	63.0	9	3.719	− 27 27 34.8	56.5	4	7.29
8365	O. Arg. S. 19708	8.0	25 45.54	64.0	15	3.718	− 27 26 59.9	58.5	5	7.33
8366	O. Arg. S. 19713	8.9	19 25 53.53	63.9	13	+ 3.718	− 27 27 31.5	58.5	5	+ 7.34
8367	O. Arg. S. 19715	8.0	25 57.16	62.0	3	3.522	− 19 52 7.7	60.9	6	7.35
8368	B. A. C. 6694	6.6	26 6.66	62.6	5	3.630	− 24 9 27.3	65.6	2	7.36
8369	B. A. C. 6693	6.8	26 7.98	64.0	3	3.848	− 31 54 36.1	61.8	2	7.36
8370	Lacaille 8153	7.2	26 36.95	62.9	5	4.012	− 37 6 26.8	67.0	3	7.40
8371	O. Arg. S. 19732	8.4	19 27 6.36	65.7	2	+ 3.521	− 19 52 52.0	62.4	3	+ 7.44
8372	Anonymous	8.0	27 9.49	65.7	2	3.760	− 29 0 13.4	68.2	2	7.45
8373	μ Aquilæ	4.9	27 14.90	57.5	10	2.918	+ 7 5 4.4	58.7	8	7.45
8374	O. Arg. S. 19737	7.8	27 17.90	65.6	4	3.759	− 28 58 16.5	68.2	2	7.46
8375	B. A. C. 6700	6.5	27 18.33	45.5	1	3.550	− 21 4 43.8	69.0	3	7.46
8376	k Aquilæ	5.5*	19 27 24.48	45.4	1	+ 3.310	− 10 51 45.8	68.8	2	+ 7.46
8377	h^1 Sagittarii	6.0	27 31.38	63.1	4	3.651	− 25 1 18.5	69.1	5	7.47
8378	Lacaille 8159	6.4	27 34.52	62.8	5	3.878	− 32 59 45.8	68.2	2	7.48
8379	O. Arg. S. 19746	7.3	27 40.53	65.6	4	3.759	− 28 58 43.6	68.2	2	7.49
8380	Lacaille 8158	7.5	27 53.10	63.7	1	4.179	− 41 45 51.6	68.9	4	7.50
8381	O. Arg. S. 19748	8.5	19 27 54.37	68.6	2	+ 3.521	− 19 53 53.0	63.3	2	+ 7.51
8382	Anonymous	8.0	27 56.00	67.7	4	4.181	− 41 48 57.4	68.7	1	7.51
8383	O. Arg. S. 19753	8.2	28 2.30	68.7	2	3.504	− 19 12 31.5	62.2	2	7.52
8384	Anonymous	9.0	28 6.52	69.3	3	3.714	− 27 24 5.6	63.7	2	7.52
8385	Weisse XIX, 692	8.3	28 6.69	66.6	2	3.305	− 10 40 10.3	68.2	2	7.52
8386	h^2 Sagittarii	5.5	19 28 11.02	60.5	38	+ 3.655	− 25 11 19.4	60.6	4	+ 7.53
8387	B. A. C. 6707	7.0*	28 16.20	59.7	2	3.502	− 19 9 29.5	56.7	7	7.54
8388	O. Arg. S. 19758	8.0	28 16.91	64.6	2	3.725	− 27 48 22.0	69.2	2	7.54
8389	9 Vulpeculæ	5.5*	28 25.92	61.0	3	2.634	+ 19 28 11.8	57.2	4	7.55
8390	Anonymous	. .	28 28.	. . .	.	2.634	+ 19 29 29.4	69.8	1	7.55

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8391	Anonymous	8.7	19 28 37.82	70.6	1	+ 4.113	− 40 3 15.9	69.7	2	+ 7.56
8392	Anonymous	8.0	28 37.95	64.9	3	4.077	− 39 3 59.2	69.2	2	7.56
8393	B. A. C. 6711	6.0*	28 43.	. .	.	2.089	+ 38 27 34.0	48.6	1	7.57
8394	O. Arg. S. 19770	7.8	28 39.76	68.7	2	3.501	− 19 5 26.3	63.2	2	7.57
8395	Anonymous	. .	28 46.01	59.6	1	2.634	+ 19 29 31.7	71.7	3	7.57
8396	B. A. C. 6710	7.0*	19 28 55.77	59.7	2	+ 3.487	− 18 32 18.4	55.4	3	+ 7.59
8397	Lacaille 8169	6.5	28 57.96	62.8	5	3.883	− 33 13 15.8	66.6	2	7.59
8398	O. Arg. S. 19775	8.0	28 56.26	69.1	2	3.539	− 20 40 27.2	66.7	2	7.59
8399	Weisse XIX, 719	8.3	29 5.76	64.6	2	3.307	− 10 44 27.3	68.2	2	7.60
8400	O. Arg. S. 19780	8.5	29 7.40	62.2	2	3.761	− 29 7 25.3	59.4	4	7.60
8401	Weisse XIX, 722	6.2	19 29 9.26	64.0	3	+ 3.300	− 10 27 51.0	69.7	2	+ 7.61
8402	9 Cygni	5.5*	29 17.13	59.6	2	2.382	+ 29 9 25.7	53.6	6	7.62
8403	κ Aquilæ	4.0*	29 21.46	64.6	45	3.231	− 7 20 7.0	64.9	7	7.62
8404	Lacaille 8170	7.7	29 41.68	64.5	2	4.179	− 41 51 24.0	68.2	2	7.65
8405	O. Arg. S. 19796	8.6	29 42.97	69.1	2	3.732	− 28 5 55.5	65.0	3	7.65
8406	Anonymous	8.3	19 29 43.34	69.1	2	+ 3.720	− 27 40 10.7	63.2	2	+ 7.65
8407	O. Arg. S. 19798	8.0	29 50.21	69.6	3	3.758	− 29 3 8.1	66.4	3	7.66
8408	O. Arg. S. 19800	9.0*	29 54.26	69.6	1	3.762	− 29 10 25.1	58.0	3	7.67
8409	B. A. C. 6718	5.0	30 7.29	65.1	2	1.956	+ 42 6 27.3	54.6	2	7.68
8410	B. A. C. 6716	6.4	30 11.67	62.8	8	3.754	− 28 55 11.4	58.3	6	7.69
8411	O. Arg. S. 19809	7.2	19 30 16.63	68.7	1	+ 3.720	− 27 41 1.4	60.9	4	+ 7.70
8412	O. Arg. S. 19811	9.5	30 17.58	61.6	2	3.536	− 20 37 7.1	58.3	3	7.70
8413	Anonymous	9.0	30 21.06	69.6	2	3.711	− 27 22 43.7	63.1	2	7.70
8414	Lacaille 8174	6.8	30 22.98	69.6	2	4.098	− 39 44 44.8	63.6	4	7.71
8415	B. A. C. 6721	6.0*	30 41.15	69.6	2	1.708	+ 47 51 39.8	61.7	3	7.73
8416	11 Cygni	5.2	19 30 46.38	69.5	2	+ 2.155	+ 36 38 9.7	46.6	1	+ 7.74
8417	ε Sagittæ	5.0	30 57.09	69.6	2	2.715	+ 16 9 4.1	67.8	2	7.75
8418	Weisse (2) XIX, 956	9.0	31 3.32	69.6	2	2.715	+ 16 9 19.9	67.8	2	7.76
8419	O. Arg. S. 19830	8.5	31 19.32	60.6	2	3.723	− 27 51 3.8	58.7	2	7.78
8420	53 Sagittarii	6.2	31 24.39	62.2	7	3.614	− 23 44 32.3	60.5	6	7.79
8421	Lalande 37221	7.5	19 31 35.48	60.6	2	+ 3.579	− 22 22 43.1	59.7	6	+ 7.80
8422	O. Arg. S. 19837	7.8	31 40.41	68.7	2	3.650	− 25 8 21.3	66.7	1	7.81
8423	B. A. C. 6727	5.9	31 41.91	60.0	8	3.613	− 23 44 43.8	61.0	7	7.81
8424	O. Arg. S. 19839	8.8	31 52.12	64.7	2	3.716	− 27 36 53.1	58.6	2	7.83
8425	Madras 1417	7.5	31 54.92	60.6	2	3.541	− 20 51 52.7	56.6	3	7.83
8426	Anonymous	8.0	19 31 57.44	62.6	1	+ 3.611	− 23 38 51.4	67.7	2	+ 7.83
8427	Lalande 37300	6.2	32 1.23	68.7	2	2.108	+ 38 4 18.3	48.6	3	7.84
8428	B. A. C. 6728	5.5	32 5.24	59.6	3	1.908	+ 43 23 39.8	53.6	4	7.84
8429	O. Arg. S. 19845	7.5	32 8.14	60.6	2	3.727	− 28 0 50.2	58.6	2	7.85
8430	B. A. C. 6730	6.5	32 10.69	66.2	2	1.610	+ 49 55 34.7	66.7	2	7.85

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8431	σ Aquilæ	5.5	19 32 16.99	53.5	9	+ 2.962	+ 5 4 54.0	58.8	8	+ 7.86
8432	Lacaille 8185	6.8	32 30.10	63.1	4	+ 4.006	− 37 12 29.7	66.7	2	7.88
8433	σ Draconis	5.0	32 38.47	68.7	2	− 0.203	+ 69 25 24.4	58.6	2	7.89
8434	Anonymous	. .	32 39.	. .	.	+ 3.619	− 23 58 9.2	67.7	2	7.89
8435	θ Cygni	5.5	32 41.08	66.2	2	1.612	+ 49 53 55.8	62.6	4	7.89
8436	e^1 Sagittarii	5.0	19 32 41.93	65.3	2	+ 3.438	− 16 36 38.1	65.4	3	+ 7.89
8437	Lacaille 8186	6.5	32 55.11	63.1	5	3.996	− 36 57 11.0	65.2	2	7.91
8438	O. Arg. S. 19861	7.5	33 5.65	61.0	3	3.649	− 25 9 31.1	67.2	2	7.92
8439	Anonymous	7.2	33 5.96	68.7	2	3.758	− 29 10 26.4	55.7	3	7.93
8440	O. Arg. S. 19863	9.0	33 6.82	61.8	1	3.690	− 26 42 21.3	56.4	3	7.93
8441	Anonymous	8.2	19 33 16.13	65.6	5	+ 3.618	− 23 57 23.7	67.7	2	+ 7.94
8442	45 Aquilæ	4.5	33 30.50	45.6	3	3.092	− 0 56 33.5	67.8	2	7.96
8443	Lacaille 8191	7.0	33 33.87	63.0	3	4.023	− 37 45 47.4	63.8	2	7.96
8444	Anonymous	9.0	33 33.90	64.5	1	3.637	− 24 42 53.4	69.7	2	7.96
8445	Anonymous	8.5	33 37.40	66.1	2	3.856	− 32 33 44.5	69.1	2	7.97
8446	Lacaille 8193	7.0	19 33 45.08	63.1	4	+ 3.973	− 36 18 22.3	68.2	2	+ 7.98
8447	Anonymous	8.6	33 45.93	65.7	2	3.618	− 23 58 34.0	67.7	2	7.98
8448	O. Arg. S. 19874	8.8	33 47.95	66.6	3	3.691	− 26 46 4.3	56.5	3	7.98
8449	μ Sagittæ	5.0	33 50.30	58.1	2	2.681	+ 17 41 40.6	63.8	3	7.98
8450	ϕ Cygni	4.0*	33 50.80	59.6	2	2.369	+ 29 49 57.7	53.5	4	7.98
8451	B. A. C. 6738	6.5	19 33 52.61	61.8	12	+ 3.649	− 25 10 56.6	58.0	3	+ 7.99
8452	O. Arg. S. 19880	7.5	34 9.10	64.8	4	3.636	− 24 42 9.3	65.1	2	8.01
8453	Lacaille 8196	6.1	34 15.87	63.0	3	4.025	− 37 52 21.4	63.8	2	8.02
8454	Anonymous	7.1	34 17.65	64.2	2	3.898	− 33 58 19.8	69.7	3	8.02
8455	Weisse XIX, 875	7.1	34 18.61	68.7	2	2.820	+ 11 36 9.3	61.7	3	8.02
8456	e^2 Sagittarii	5.0	19 34 30.50	61.4	16	+ 3.434	− 16 26 53.5	58.4	2	+ 8.04
8457	Anonymous	7.6	34 32.50	68.7	2	2.157	+ 36 45 12.0	47.7	2	8.04
8458	Weisse XIX, 886	8.6	34 42.00	68.7	2	2.820	+ 11 37 32.6	63.6	2	8.05
8459	β Sagittæ	5.0*	34 45.63	59.6	2	2.694	+ 17 9 15.2	53.8	3	8.06
8460	Lacaille 8197	6.4	34 45.65	63.7	2	4.172	− 41 56 16.3	70.2	2	8.06
8461	14 Cygni	5.5*	19 34 53.08	59.6	2	+ 1.950	+ 42 29 45.9	53.8	4	+ 8.07
8462	O. Arg. S. 19901	7.0	35 42.21	60.6	3	3.721	− 27 58 14.9	58.7	2	8.13
8463	O. Arg. S. 19902	8.5	35 50.49	68.6	2	3.689	− 26 47 11.1	55.8	2	8.14
8464	Anonymous	9.2	35 54.62	64.1	2	2.900	+ 8 1 58.9	68.7	3	8.15
8465	Dorpat 2562, (1st *)	8.9	35 58.10	63.9	6	2.899	+ 8 3 3.9	68.2	2	8.16
8466	χ Aquilæ	6.0*	19 35 58.77	58.9	4	+ 2.824	+ 11 29 58.6	59.2	6	+ 8.16
8467	Schjellerup, 7555	9.1	35 59.21	67.2	2	2.947	+ 5 51 32.8	67.8	2	8.16
8468	Dorpat 2562, (2d *)	7.9	35 59.89	63.9	7	2.899	+ 8 3 11.5	68.2	2	8.16
8469	Anonymous	7.8	36 1.32	66.2	2	4.237	− 43 38 10.6	68.2	2	8.16
8470	Anonymous	7.5	36 10.19	64.4	5	3.595	− 23 11 9.6	65.1	2	8.17

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			h. m. s.			″	° ′ ″			″
8471	O. Arg. S. 19908 . .	8.8	19 36 15.75	65.2	2	+ 3.698	− 27 8 11.2	62.0	3	+ 8.18
8472	O. Arg. S. 19909 . .	7.5	36 16.73	64.9	4	3.605	− 23 35 37.7	65.0	3	8.18
8473	O. Arg. S. 19915 . .	8.9	36 30.48	68.7	2	3.692	− 26 56 31.5	63.7	2	8.20
8474	B. A. C. 6753 . . .	7.0	36 31.95	61.4	3	3.812	− 31 14 6.5	66.6	1	8.20
8475	O. Arg. S. 19916 . .	8.0	36.36.18	60.6	2	3.713	− 27 43 45.0	58.6	2	8.21
8476	Anonymous. . . .	7.5	19 37 1.25	69.4	4	+ 4.086	− 39 45 39.1	63.6	2	+ 8.24
8477	B. A. C. 6755 . . .	5.6	37 4.90	62.6	7	3.841	− 32 14 32.0	63.4	4	8.24
8478	O. Arg. S. 19924 . .	9.0	37 11.74	64.7	2	3.694	− 27 2 33.9	69.4	3	8.25
8479	Anonymous . . .	9.2	37 19.85	65.6	2	2.947	+ 5 50 34.7	67.8	2	8.26
8480	Weisse XIX, 958 . .	7.8	37 35.54	69.5	2	2.973	+ 4 38 34.1	67.7	2	8.28
8481	Lacaille 8209 . . .	6.8	19 37 35.75	63.6	3	+ 4.235	− 43 40 50.0	65.1	3	+ 8.29
8482	Lacaille 8214 . . .	7.3	37 39.20	63.1	6	3.841	− 32 16 16.8	63.6	2	8.29
8483	O. Arg. S. 19933 . .	6.8	37 41.24	68.7	2	3.709	− 27 36 12.2	58.6	2	8.29
8484	*f* Sagittarii	6.8	38 11.49	62.0	22	3.517	− 20 5 38.5	58.4	8	8.33
8485	Lalande 37507 . . .	7.8	38 12.51	61.2	2	3.560	− 21 51 33.4	59.6	7	8.33
8486	Anonymous . . .	9.2	19 38 15.22	66.6	2	+ 3.750	− 29 9 0.9	63.7	2	+ 8.34
8487	O. Arg. S. 19941 . .	7.5*	38 26.	. .	.	3.687	− 26 49 39.6	55.8	2	8.35
8488	Anonymous . . .	9.2	38 33.95	69.7	2	3.737	− 28 42 5.7	69.3	3	8.36
8489	Lacaille 8216 . . .	8.0	38 37.73	68.7	2	4.182	− 42 25 7.8	66.7	1	8.37
8490	O. Arg. S. 19944 . .	8.4	38 46.51	68.7	2	3.695	− 27 9 52.3	58.7	2	8.38
8491	Lalande 37597 . . .	6.5	19 38 49.	. .	.	+ 2.123	+ 37 59 20.2	47.9	3	+ 8.38
8492	B. A. C. 6769 . . .	6.0*	39 4.74	59.6	2	2.000	+ 41 26 20.7	53.6	4	8.40
8493	Anonymous . . .	7.0	39 5.84	66.2	6	3.740	− 28 49 50.7	66.7	3	8.40
8494	Anonymous . . .	. .	39 5.88	60.6	3	3.737	− 28 43 18.6	69.7	3	8.40
8495	B. A. C. 6768 . . .	7.0	39 7.17	61.4	5	3.759	− 29 30 2.3	57.4	6	8.41
8496	O. Arg. S. 19956 . .	7.5	19 39 11.60	68.7	2	+ 3.566	− 22 10 2.3	56.2	2	+ 8.41
8497	15 Cygni	5.5	39 13.72	68.8	2	2.157	+ 37 1 5.8	46.7	10	8.41
8498	Anonymous . . .	8.8	39 19.68	67.6	3	2.974	+ 4 37 50.9	61.7	2	8.42
8499	O. Arg. S. 19957 . .	9.0	39 34.91	62.3	3	3.670	− 26 14 17.6	58.1	4	8.44
8500	γ Aquilæ	3.0*	39 36.18	53.5	276	2.852	+ 10 16 29.2	50.5	102	8.44
8501	O. Arg. S. 19960 . .	8.7	19 39 44.36	60.6	1	+ 3.690	− 27 0 1.4	64.2	2	+ 8.45
8502	Anonymous . . .	8.0	39 49.46	68.6	2	3.701	− 27 26 7.3	63.2	2	8.46
8503	Lacaille 8231 . . .	6.9	40 12.56	62.6	2	4.022	− 38 7 17.7	64.8	2	8.49
8504	B. A. C. 6770 . . .	8.2	40 23.24	62.5	5	3.736	− 28 45 16.9	58.6	4	8.51
8505	O. Arg. S. 19978 . .	5.9	40 27.14	63.1	5	3.747	− 29 7 46.4	66.6	2	8.51
8506	δ Cygni	3.5	19 40 35.94	61.7	2	+ 1.871	+ 44 47 26.7	57.0	4	+ 8.52
8507	B. A. C. 6777 . . .	6.0*	40 38.07	60.7	2	2.235	+ 34 40 23.9	56.4	6	8.53
8508	B. A. C. 6778 . . .	6.9	40 58.55	63.7	3	4.169	− 42 12 25.9	66.7	2	8.55
8509	Weisse (2) XIX, 1330 .	8.0	41 13.33	59.7	2	2.235	+ 34 42 1.0	68.1	3	8.55
8510	O. Arg. S. 19985 . .	8.3	41 22.38	64.6	2	3.680	− 26 42 29.6	67.8	2	8.58

Number.	Name of Star.	Magnitude.	Mean Right Ascension, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.	Mean Declination, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.
			h. m. s.			″	° ′ ″			″
8511	Anonymous.	7.3	19 41 25.65	67.2	2	+ 3.292	− 10 19 42.3	66.2	2	+ 8.59
8512	O. Arg. S. 19987	8.2	41 31.66	65.7	2	3.612	− 24 3 53.5	67.7	2	8.60
8513	Lacaille 8237	6.9	41 44.49	63.6	2	4.176	− 42 26 34.8	68.2	2	8.61
8514	O. Arg. N. 19614	9.0	41 45.95	64.1	2	1.127	+ 58 10 18.4	65.7	2	8.62
8515	B. A. C. 6786	7.0	41 46.68	62.6	7	3.689	− 27 3 50.3	62.0	10	8.62
8516	Weisse XIX, 1060	6.9	19 41 51.37	68.6	2	+ 2.852	+ 10 20 56.6	56.6	3	+ 8.62
8517	(* 119) Washington	9.2	41 52.42	65.2	2	1.108	+ 58 25 5.3	69.1	2	8.62
8518	Lacaille 8238	7.5	41 52.93	63.5	2	3.990	− 37 14 44.5	62.6	2	8.62
8519	O. Arg. S. 19990	8.4	41 52.94	68.7	2	3.704	− 27 38 2.8	63.7	2	8.62
8520	Anonymous.	8.7	41 56.04	68.7	3	3.574	− 22 34 19.1	62.6	2	8.63
8521	O. Arg. S. 19998	8.6	19 42 8.40	68.7	2	+ 3.674	− 26 31 6.3	65.6	3	+ 8.65
8522	O. Arg. S. 19997	8.0	42 8.76	68.7	2	3.705	− 27 41 57.9	58.6	2	8.64
8523	O. Arg. S. 20002	9.0	42 21.40	69.5	1	3.685	− 26 59 17.3	63.7	2	8.66
8524	Lacaille 8242	6.1	42 27.69	62.7	2	4.003	− 37 41 6.8	62.7	4	8.67
8525	Lalande 37753	5.5	42 29.57	68.7	3	2.128	+ 38 3 46.5	48.3	3	8.67
8526	B. A. C. 6792	6.8	19 42 32.13	62.5	6	+ 3.708	− 27 49 21.1	61.2	4	+ 8.68
8527	Weisse XIX, 1068	7.0	42 34.25	65.5	3	3.379	− 14 16 22.6	67.7	2	8.68
8528	Anonymous.	8.0	42 34.86	63.4	1	4.040	− 38 45 14.6	66.8	2	8.68
8529	ζ Sagittæ	5.0*	42 45.78	56.0	3	2.662	+ 18 47 36.0	53.6	3	8.69
8530	Anonymous.	9.0	43 2.	. .	.	3.571	− 22 29 43.2	62.2	2	8.72
8531	B. A. C. 6795	6.8	19 43 3.89	62.7	6	+ 3.697	− 27 26 2.6	63.2	2	+ 8.72
8532	Lalande 37785	7.0	43 29.	. .	.	2.231	+ 34 57 38.4	48.6	2	8.75
8533	Lacaille 8249	6.3	43 49.25	63.0	3	3.833	− 32 19 51.4	63.7	2	8.78
8534	α Aquilæ	1.2*	43 56.88	54.0	337	2.892	+ 8 30 1.7	51.4	90	8.79
8535	57 Sagittarii	5.0	44 3.62	46.7	2	3.495	− 19 23 49.8	68.2	2	8.80
8536	O. Arg. S. 20022	8.0	19 44 8.41	68.6	2	+ 3.689	− 27 11 34.8	66.7	4	+ 8.80
8537	O. Arg. S. 20024	9.0	44 12.	. .	.	3.691	− 27 14 41.6	69.8	2	8.81
8538	Anonymous.	9.5	44 20.66	61.7	2	3.571	− 22 34 8.7	56.5	5	8.82
8539	O. Arg. S. 20030	7.8	44 28.25	64.2	4	3.594	− 23 30 40.7	65.8	2	8.83
8540	O. Arg. S. 20039	7.5	44 49.11	68.6	2	3.691	− 27 18 0.1	63.6	2	8.86
8541	Lacaille 8253	7.5	19 44 57.29	63.1	3	+ 3.954	− 36 20 39.1	67.0	3	+ 8.87
8542	O. Arg. S. 20046	9.0	45 23.22	64.7	2	3.705	− 27 50 57.7	58.6	2	8.90
8543	ι Sagittarii	4.5	45 35.57	63.7	3	4.159	− 42 13 57.2	66.7	2	8.92
8544	O. Arg. S. 20049	7.0	45 35.66	68.6	2	3.684	− 27 3 18.8	65.0	3	8.92
8545	19 Cygni	6.0*	45 36.49	47.4	2	2.124	+ 38 21 50.4	46.8	1	8.92
8546	B. A. C. 6817	5.0*	19 45 48.98	59.5	2	+ 2.059	+ 40 14 43.0	53.5	3	+ 8.93
8547	Weisse XIX, 1150	7.6	45 49.85	65.6	3	3.382	− 14 31 59.2	65.7	1	8.94
8548	O. Arg. S. 20051	8.3	45 50.68	64.6	2	3.680	− 26 56 9.4	65.0	3	8.94
8549	O. Arg. S. 20053	9.1	45 54.34	68.7	2	3.701	− 27 42 52.1	58.7	2	8.94
8550	B. A. C. 6814	6.4	45 54.40	63.5	7	3.612	− 24 17 9.7	64.8	2	8.94

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			h. m. s.			"	° ' "			"
8551	O. Arg. S. 20055 . .	8.5	19 46 5.58	65.3	2	+ 3.456	− 17 46 23.4	61.7	3	+ 8.95
8552	B. A. C. 6816 . . .	5.9	46 6.34	62.2	5	3.861	− 33 24 28.5	63.8	2	8.96
8553	Weisse XIX, 1160. .	8.5	46 10.24	67.2	2	3.375	− 14 12 42.3	67.7	2	8.96
8554	O. Arg. S. 20058 . .	8.3	46 31.59	68.8	2	3.693	− 27 28 17.0	58.7	1	8.99
8555	56 Aquilæ	6.0	46 32.38	63.6	5	3.260	− 8 56 4.1	65.7	2	8.99
8556	O. Arg. S. 20063 . .	8.2	19 46 46.21	66.6	2	+ 3.611	− 24 16 12.1	66.7	2	+ 9.01
8557	Lacaille 8263 . . .	5.7	46 48.49	63.6	3	4.029	− 38 41 25.7	66.8	2	9.01
8558	57 Aquilæ, (1st *) . . .	6.0	47 2.80	65.2	2	3.252	− 8 35 19.0	69.2	4	9.03
8559	57 Aquilæ, (2d *) . . .	6.2	47 3.16	65.2	2	3.252	− 8 35 54.4	69.2	4	9.03
8560	Weisse XIX, 1187. .	7.6	47 13.85	65.6	3	3.373	− 14 8 45.8	67.7	2	9.04
8561	Lalande 37873 . . .	7.0	19 47 14.61	66.2	5	+ 3.498	− 19 39 23.1	58.6	7	+ 9.05
8562	ω Sagittarii	5.4	47 15.53	62.2	5	3.671	− 26 40 0.8	68.9	4	9.05
8563	ξ Aquilæ	5.0*	47 27.69	47.7	1	2.902	+ 8 6 7.4	64.4	3	9.06
8564	Anonymous . . .	9.8	47 36.09	69.6	2	3.562	− 22 20 3.5	55.8	2	9.03
8565	Anonymous . . .	8.3	47 44.22	69.3	2	3.681	− 27 4 15.6	63.2	2	9.08
8566	Anonymous . . .	. .	19 47 53.77	69.6	3	+ 4.063	− 39 45 2.3	63.7	3	+ 9.10
8567	O. Arg. S. 20078 . .	8.2	47 58.18	68.7	2	3.705	− 27 59 18.9	64.1	2	9.10
8568	B. A. C. 6829 . . .	6.0	48 0.08	61.4	5	3.786	− 30 56 13.6	58.0	9	9.10
8569	Weisse XIX, 1205. .	8.8	48 0.38	68.7	2	3.263	− 9 7	. .	.	9.10
8570	Weisse XIX, 1208. .	8.2	48 3.80	68.7	2	3.263	− 9 6 58.2	65.4	2	9.11
8571	B. A. C. 6831 . . .	6.0	19 48 18.90	61.8	4	+ 3.588	− 23 25 55.2	58.8	6	+ 9.13
8572	Lacaille 8271 . . .	6.0	48 20.02	62.7	2	4.016	− 38 25 28.3	68.0	3	9.13
8573	b Sagittarii	5.0*	48 21.01	60.0	3	3.693	− 27 32 14.6	67.8	2	9.13
8574	Anonymous . . .	8.5	48 22.50	69.6	2	3.568	− 22 44 9.8	72.7	2	9.13
8575	β Aquilæ	4.0*	48 26.14	53.0	287	2.946	+ 6 3 40.2	49.8	100	9.14
8576	O. Arg. S. 20086 . .	8.8	19 48 37.74	64.1	2	+ 3.638	− 25 27 25.0	67.2	2	+ 9.15
8577	O. Arg. S. 20090 . .	7.8	48 43.20	66.6	2	3.667	− 26 35 19.4	63.6	2	9.16
8578	O. Arg. S. 20096 . .	8.0	48 48.27	68.6	2	3.435	− 16 58 59.3	63.7	3	9.17
8579	O. Arg. S. 20095 . .	8.3	48 49.70	66.7	2	3.637	− 25 25 31.7	67.7	1	9.17
8580	Anonymous . . .	9.5	48 49.85	68.8	1	3.701	− 27 53 19.9	68.7	1	9.17
8581	O. Arg. S. 20100 . .	9.2	19 48 58.04	68.7	2	+ 3.701	− 27 53 12.6	66.0	3	+ 9.18
8582	Lacaille 8278 . . .	6.5	48 58.88	63.6	3	3.970	− 37 3 22.9	69.2	2	9.18
8583	O. Arg. S. 20101 . .	8.0	48 59.55	66.2	2	3.640	− 25 32 46.9	68.7	3	9.18
8584	Weisse XIX, 1236. .	9.0	49 25.09	65.8	2	3.039	+ 1 36 1.1	67.7	2	9.22
8585	Anonymous . . .	9.0	49 27.06	62.6	2	3.445	− 17 27 17.6	56.6	3	9.22
8586	Anonymous . . .	. .	19 49 37.24	47.7	1	+ 3.377	− 14 23 49.2	47.7	1	+ 9.23
8587	Lalande 38039 . . .	6.5	49 41.44	68.8	2	2.190	+ 36 37 43.4	48.6	1	9.24
8588	Lalande 38037 . . .	7.2	49 44.03	68.6	2	2.255	+ 34 31 58.4	47.7	1	9.24
8589	Dorpat 2601, (1st *) .	8.3	49 45.28	65.8	4	3.040	+ 1 33 3.9	67.7	4	9.24
8590	Dorpat 2601, (2d *) .	9.0	49 45.41	69.7	2	3.040	+ 1 32 59.7	67.8	1	9.24

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			h. m. s.			″	° ′ ″			″
8591	g Sagittarii	5.5*	19 50 0.41	57.7	3	+ 3.409	− 15 51 34.8	64.7	3	+ 9.26
8592	B. A. C. 6841 . . .	6.5	50 7.54	64.2	3	3.782	− 30 54 34.8	57.0	8	9.27
8593	O. Arg. S. 20113 . .	8.8	50 7.58	65.7	2	3.480	− 18 59 26.7	68.2	2	9.27
8594	O. Arg. S. 20111 . .	8.0	50 8.21	69.6	1	3.730	− 29 1 34.0	67.7	2	9.27
8595	O. Arg. S. 20116 . .	7.4	50 15.72	68.7	2	3.566	− 22 37 27.5	56.7	2	9.27
8596	A Sagittarii	5.4	19 50 25.07	61.4	8	+ 3.665	− 26 34 15.9	63.8	4	+ 9.29
8597	Lacaille 8287 . . .	7.0	50 25.87	63.0	3	3.989	− 37 44 59.2	62.7	2	9.29
8598	O. Arg. S. 20123 . .	9.0	50 33.55	69.6	2	3.692	− 27 37 10.7	64.1	2	9.30
8599	Weisse XIX, 1259 . .	9.0*	50 33.69	47.8	1	3.376	− 14 22 59.6	47.7	1	9.30
8600	O. Arg. S. 20124 . .	8.0	50 35.05	68.7	1	3.636	− 25 28 0.5	68.2	2	9.30
8601	B. A. C. 6844 . . .	6.0	19 50 41.67	66.1	2	+ 4.192	− 43 25 13.3	69.2	2	+ 9.31
8602	O. Arg. S. 20126 . .	8.2	50 45.08	68.7	2	3.566	− 22 38 20.7	56.7	2	9.32
8603	22 Cygni	5.0*	50 51.66	46.9	3	2.143	+ 38 7 0.2	47.0	4	9.33
8604	Lacaille 8293 . . .	5.5	50 57.83	68.6	2	3.999	− 38 4 42.8	66.2	2	9.34
8605	η Cygni	5.0*	51 3.26	55.6	2	2.252	+ 34 42 48.2	53.6	5	9.34
8606	B. A. C. 6850 . . .	6.8	19 51 16.14	62.7	3	+ 3.564	− 22 35 14.9	56.4	6	+ 9.36
8607	Lacaille 8296 . . .	5.7	51 18.51	62.5	5	3.872	− 34 4 13.5	66.6	2	9.36
8608	Lacaille 8302 . . .	6.8	51 44.73	66.1	2	3.826	− 32 33 14.0	68.2	2	9.40
8609	Lacaille 8300 . . .	6.7	51 50.88	62.7	4	4.027	− 38 57 49.9	66.7	2	9.40
8610	Lacaille 8298 . . .	7.0	51 51.49	62.6	3	4.030	− 39 3 10.9	66.7	2	9.41
8611	B. A. C. 6855 . . .	6.0	19 51 51.91	48.7	1	+ 2.731	+ 16 7 9.0	69.1	2	+ 9.41
8612	B. A. C. 6854 . . .	6.8	51 55.76	61.7	7	3.725	− 28 57 55.6	59.4	11	9.41
8613	Anonymous. . . .	9.0	52 17.53	67.2	2	3.578	− 23 12 57.1	68.8	2	9.43
8614	B. A. C. 6857 . . .	6.0	52 22.16	47.4	1	2.082	+ 39 59 35.1	68.7	2	9.44
8615	B. A. C. 6861 . . .	6.0*	52 26.23	59.6	3	0.991	+ 60 27 10.5	53.6	4	9.45
8616	O. Arg. S. 20145 . .	8.0	19 52 29.10	67.2	2	+ 3.573	− 23 0 59.5	70.7	4	+ 9.45
8617	γ Sagittæ	4.5*	52 31.74	48.5	1	2.663	+ 19 6 51.5	69.8	3	9.45
8618	Weisse (2) XIX, 1729 .	7.5	52 40.39	69.6	1	2.119	+ 38 57 48.4	67.8	1	9.47
8619	Lalande 38175 . . .	6.9	52 48.82	68.7	2	2.160	+ 37 44 43.3	47.7	2	9.48
8620	B. A. C. 6864 . . .	6.4	53 4.39	63.3	7	3.575	− 23 7 6.5	66.8	3	9.50
8621	Anonymous . . .	8.0	19 53 8.56	64.6	2	+ 2.936	+ 6 33 47.2	68.7	3	+ 9.50
8622	Weisse XIX, 1319. .	7.6	53 15.12	55.7	9	3.373	+ 14 19 18.5	53.4	9	9.51
8623	Weisse XIX, 1320. .	9.3	53 16.31	66.3	2	3.373	− 14 20 9.0	68.7	2	9.51
8624	Anonymous . . .	8.0	53 21.02	68.8	1	3.559	− 22 29 30.2	56.7	2	9.52
8625	B. A. C. 6869 . . .	6.5	53 24.63	68.8	2	0.622	+ 64 20 56.7	63.1	2	9.52
8626	O. Arg. S. 20156 . .	8.0	19 53 28.38	60.7	3	+ 3.708	− 28 22 48.5	58.6	2	+ 9.53
8627	Lalande 38140 . . .	7.5	53 30.97	60.7	2	3.437	− 17 14 54.9	59.5	6	9.53
8628	Lalande 38202, (1st *) .	6.0	53 31.37	68.7	3	2.162	+ 37 43 38.8	48.1	2	9.53
8629	Lalande 38202, (2d *) .	6.5	53 31.62	68.7	1	2.162	+ 37 43 38.8	48.1	2	9.53
8630	Lacaille 8307 . . .	7.0	53 34.10	63.6	2	4.181	− 43 18 29.3	69.7	2	9.54

Number.	Name of Star.	Magnitude.	Mean Right Ascension, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.	Mean Declination, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.
			h. m. s.			"	° ' "			"
8631	13 Sagittæ	6.0*	19 53 43.93	59.6	3	+ 2.710	+ 17 8 10.1	54.1	6	+ 9.55
8632	Lalande 38164 . . .	8.0	53 53.68	60.6	2	3.488	− 19 28 57.1	66.2	2	9.56
8633	c Sagittarii	4.0	54 2.64	61.6	14	3.699	− 28 5 44.0	61.2	4	9.57
8634	63 Sagittarii	6.0*	54 7.86	57.5	2	3.365	− 14 1 17.7	68.7	2	9.58
8635	Lacaille 8309 . . .	6.2	54 12.61	66.7	2	4.031	− 39 14 13.4	63.6	2	9.59
8636	B. A. C. 6872	5.0	19 54 14.80	61.5	5	+ 4.000	− 38 19 27.7	69.7	4	+ 9.59
8637	Lacaille 8313 . . .	6.5	54 19.72	63.0	3	3.956	− 36 58 58.5	68.2	2	9.60
8638	Lacaille 8312 . . .	6.6	54 19.76	63.2	4	3.986	− 37 54 43.3	69.2	2	9.60
8639	Anonymous . . .	8.4	54 33.62	68.7	2	2.252	+ 34 55 44.0	47.6	1	9.61
8640	Anonymous . . .	7.3	54 40.18	68.7	1	2.253	+ 34 54 53.4	47.6	1	9.62
8641	Dorpat 2612, (1st *) .	8.1	19 54 32.20	65.2	4	+ 2.937	+ 6 33 52.3	66.7	2	+ 9.61
8642	Lacaille 8317 . . .	6.8	54 32.82	62.7	3	3.939	− 36 26 46.5	72.7	2	9.61
8643	Dorpat 2612, (2d *) .	9.2	54 34.18	65.2	4	2.937	+ 6 34 15.2	66.7	2	9.61
8644	Lacaille 8318 . . .	7.1	54 44.42	62.7	2	3.997	− 38 15 1.5	70.7	3	9.63
8645	O. Arg. S. 20175 . .	8.6	54 44.75	69.1	2	3.466	− 18 33 30.4	62.6	2	9.63
8646	Dorpat 2613, (1st *) .	8.0	19 54 45.95	65.1	6	+ 2.857	+ 10 21 52.5	65.7	2	+ 9.63
8647	Dorpat 2613, (2d *) .	8.3	54 46.01	65.1	6	2.857	+ 10 21 47.7	65.7	2	9.63
8648	25 Cygni	5.5*	54 47.08	47.5	3	2.199	+ 36 39 40.4	48.6	1	9.63
8649	O. Arg. S. 20180 . .	7.8	55 8.65	67.0	3	3.468	− 18 37 46.6	62.6	2	9.66
8650	15 Vulpeculæ	5.0*	55 20.02	47.5	1	2.466	+ 27 22 10.5	69.6	2	9.67
8651	B. A. C. 6878 . . .	6.5	19 55 26.21	63.7	5	+ 3.569	− 22 59 5.7	64.2	4	+ 9.68
8652	B. A. C. 6877 . . .	5.5	55 26.49	61.5	8	3.816	− 32 26 43.0	68.2	2	9.68
8653	Anonymous . . .	9.0	55 30.04	69.6	2	2.216	+ 36 11	. .	.	9.69
8654	Weisse XIX, 1394. .	7.1	55 30.31	64.9	3	2.858	+ 10 21 10.4	66.7	2	9.69
8655	O. Arg. S. 20185 . .	9.0	55 31.23	60.7	3	3.705	− 28 24 31.3	58.6	3	9.69
8656	Lalande 38283, (1st *) .	8.5	19 55 32.31	69.6	2	+ 2.216	+ 36 11 14.6	47.6	2	+ 9.69
8657	Lalande 38283, (2d *) .	7.5	55 34.46	69.6	2	2.215	+ 36 12 19.2	47.7	3	9.69
8658	O. Arg. S. 20192 . .	8.0	55 46.49	65.2	2	3.661	− 26 43 0.1	62.7	2	9.70
8659	B. A. C. 6882 . . .	6.0	55 48.85	69.6	3	2.541	+ 24 24 50.6	53.5	3	9.71
8660	O. Arg. S. 20194 . .	7.2	55 49.38	68.7	2	3.698	− 28 8 9.5	63.7	2	9.71
8661	16 Vulpeculæ	6.0*	19 56 5.11	56.0	3	+ 2.538	+ 24 32 53.4	63.6	4	+ 9.73
8662	Lacaille 8326 . . .	6.6	56 5.93	63.7	3	3.946	− 36 46 10.1	71.2	4	9.73
8663	Anonymous . . .	6.8	56 6.76	69.0	3	2.202	+ 36 42 37.9	48.6	1	9.74
8664	Dorpat 2615 . . .	7.6	56 7.05	68.0	3	2.908	+ 8 0 33.0	67.8	2	9.73
8665	O. Arg. S. 20200 . .	7.1	56 8.36	68.8	2	3.558	− 22 34 42.2	56.7	2	9.74
8666	Anonymous . . .	6.2	19 56 15.74	47.5	1	+ 2.201	+ 36 42 41.7	69.7	2	+ 9.74
8667	B. A. C. 6886	6.0*	56 35.86	61.2	2	3.842	− 33 23 32.9	65.5	3	9.77
8668	B. A. C. 6887 . . .	7.1	56 38.18	63.2	4	3.732	− 29 28 5.4	59.7	7	9.77
8669	Weisse XIX, 1421. .	8.0	56 38.94	69.6	3	2.909	+ 7 56 23.6	67.7	2	9.77
8670	B. A. C. 6888 . . .	6.9	56 39.16	61.7	10	3.672	− 27 12 20.2	58.7	3	9.77

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			h. m. s.			″	° ′ ″			″
8671	O. Arg. S. 20212	8.5	19 56 56.18	60.6	2	+ 3.478	− 19 9 50.9	59.1	7	+ 9.79
8672	62 Aquilæ	5.5	57 10.26	59.0	2	3.094	− 1 5 49.2	68.3	2	9.81
8673	τ Aquilæ	5.5*	57 17.99	64.2	17	2.931	+ 6 53 8.3	60.1	5	9.82
8674	64 Sagittarii	5.0*	57 21.17	69.6	1	3.320	− 11 59 31.5	68.7	2	9.83
8675	O. Arg. S. 20217	7.5	57 23.76	61.2	4	3.423	− 16 45 59.5	59.9	9	9.83
8676	Weisse (2) XIX, 1888	7.2	19 57 37.06	59.6	2	+ 2.731	+ 16 19 5.8	53.8	2	+ 9.85
8677	O. Arg. S. 20222	8.4	57 37.13	68.6	2	3.732	− 29 32 27.1	55.7	3	9.85
8678	Lacaille 8340	7.0	58 13.81	69.7	2	3.915	− 35 55 44.1	69.4	4	9.90
8679	O. Arg. S. 20234	7.0	58 21.10	60.6	2	3.680	− 27 37 14.6	63.2	2	9.90
8680	Lacaille 8341	6.8	58 28.68	68.8	2	3.918	− 36 3 14.7	68.6	2	9.92
8681	B. A. C. 6899	6.5	19 58 40.95	61.1	9	+ 3.746	− 30 7 15.1	57.7	7	+ 9.93
8682	η Sagittæ	5.5*	58 56.89	47.4	4	2.659	+ 19 35 30.7	68.7	2	9.95
8683	Anonymous	8.3	58 59.31	69.3	3	4.019	− 39 12 5.0	67.7	2	9.95
8684	Anonymous	8.3	59 12.29	69.2	2	2.210	+ 36 36 8.3	48.7	1	9.97
8685	O. Arg. S. 20246	7.4	59 18.23	67.1	2	3.596	− 24 16 53.6	65.2	6	9.98
8686	Anonymous	8.5	19 59 40.87	70.1	2	+ 4.015	− 39 7 30.2	65.7	2	+ 10.02
8687	Anonymous	9.0	59 42.80	67.3	2	3.455	− 18 18 39.5	66.8	2	10.02
8688	Anonymous	8.4	59 58.66	68.7	2	3.411	− 16 18 52.1	66.7	2	10.02
8689	Anonymous	6.5	20 0 3.62	68.8	2	2.165	+ 38 4 34.3	47.6	1	10.03
8690	B. A. C. 6903	7.0*	0 7.42	59.6	2	3.475	− 19 12 20.0	56.3	10	10.04
8691	Lacaille 8354	7.0	20 0 26.14	61.8	1	+ 3.860	− 34 16 43.0	66.7	3	+ 10.06
8692	B. A. C. 6906	7.0	0 34.90	60.0	5	3.652	− 26 37 31.6	55.9	5	10.07
8693	B. A. C. 6907	7.0	0 34.97	59.7	2	3.391	− 15 25 48.7	67.7	2	10.07
8694	B. A. C. 6908	7.0*	0 40.52	59.6	2	3.709	− 28 50 35.7	54.2	4	10.08
8695	Weisse XIX, 1512	7.0	0 43.77	65.2	2	3.374	− 14 39 26.1	54.8	2	10.08
8696	64 Aquilæ	6.0*	20 0 48.18	45.6	1	+ 3.094	− 1 4 40.7	64.7	3	+ 10.09
8697	17 Vulpeculæ	5.5*	0 52.41	59.6	2	2.576	+ 23 12 46.9	53.6	4	10.09
8698	Anonymous	9.2	1 9.16	65.2	2	3.410	− 16 20 0.7	68.7	1	10.11
8699	b^1 Cygni	6.0	1 9.64	68.7	2	2.246	+ 35 35 24.9	46.7	1	10.11
8700	Anonymous	8.4	1 10.68	68.7	2	3.488	− 19 49 7.9	55.7	2	10.11
8701	Lalande 38564	6.8	20 1 23.82	68.7	2	+ 2.148	+ 38 41 46.9	48.6	1	+ 10.13
8702	O. Arg. S. 20274	7.4	1 38.04	68.7	2	3.464	− 18 45 9.0	57.4	3	10.15
8703	B. A. C. 6920	7.0*	1 40.08	60.7	2	3.627	− 25 41 25.5	63.6	3	10.15
8704	O. Arg. S, 20276	8.1	1 40.95	68.7	3	3.536	− 21 55 44.7	67.0	3	10.16
8705	B. A. C. 6922	5.5	1 59.54	60.7	5	3.923	− 36 27 11.2	68.7	2	10.18
8706	Lacaille 8365	7.0	20 2 2.30	65.6	2	+ 3.812	− 32 43 52.5	67.6	3	+ 10.18
8707	B. A. C. 6923	7.0	2 18.35	68.7	2	3.486	− 19 47 14.3	55.3	5	10.20
8708	Lalande 38592	6.8	2 19.87	69.1	2	2.295	+ 34 1 8.0	48.6	1	10.20
8709	O. Arg. S. 20286	8.5	3 0.21	65.1	2	3.676	− 27 44 18.9	67.8	2	10.26
8710	O. Arg. S. 20287	7.8	3 5.97	69.0	3	3.599	− 24 38 11.8	64.3	3	10.26

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8711	Anonymous	7.2	20 3 13.28	68.8	2	+ 2.184	+ 37 43 27.2	47.7	2	+ 10.27
8712	O. Arg. S. 20294	9.0	3 14.40	65.7	6	3.450	− 18 13 53.0	65.6	3	10.27
8713	Anonymous	7.1	3 15.99	68.7	3	2.184	+ 37 43 55.4	47.7	2	10.28
8714	66 Draconis	5.0*	3 18.94	59.7	2	0.950	+ 61 35 23.2	53.7	3	10.28
8715	Anonymous	. .	3 26.79	47.8	1	3.363	− 14 12 34.5	47.8	1	10.29
8716	Weisse XX, 46.	7.0	20 3 34.38	69.6	2	+ 3.259	− 9 15 12.1	66.3	3	+ 10.30
8717	O. Arg. S. 20299	9.0	3 37.95	69.6	1	3.599	− 24 41 24.0	63.7	2	10.30
8718	Anonymous	7.8	3 39.80	66.9	4	+ 3.362	− 14 11 32.3	57.3	4	10.30
8719	λ Ursæ Minoris	5.0	3 54.	. .	.	−56.104	+ 88 53 24.6	55.7	117	10.32
8720	θ Aquilæ	4.5	4 4.75	46.5	18	+ 3.097	− 1 14 2.6	68.2	2	10.33
8721	ξ^1 Capricorni	6.0	20 4 12.02	45.4	1	+ 3.332	− 12 48 18.9	68.3	2	+ 10.34
8722	b^2 Cygni	5.0	4 13.78	69.6	2	2.227	+ 36 25 45.8	53.3	8	10.35
8723	Lacaille 8369	6.5	4 16.70	69.1	2	3.995	− 38 51 86.5	62.7	2	10.35
6724	O. Arg. S. 20309	8.1	4 22.96	66.2	2	3.611	− 25 13 9.4	66.8	2	10.36
8725	Anonymous	9.0	4 23.13	69.2	4	3.360	− 14 6 26.5	69.7	4	10.36
8726	O. Arg. S. 20311	7.2	20 4 35.81	67.6	2	+ 3.567	− 23 24 0.3	59.8	2	+ 10.37
8727	18 Vulpeculæ	6.0	4 42.94	45.6	2	2.502	+ 26 29 29.1	68.3	2	10.38
8728	Lacaille 8373	6.5	4 43.01	65.2	2	3.859	− 34 32 5.2	63.7	1	10.38
8729	Anonymous	9.0	4 46.93	69.2	2	3.359	− 14 5 25.4	47.8	2	10.39
8730	Lalande 38708	7.5	4 48.45	69.7	1	2.155	+ 38 43 36.1	48.5	1	10.39
8731	B. A, C. 6941	7.0*	20 4 53.72	59.6	2	+ 2.639	+ 20 43 12.7	54.4	5	+ 10.40
8732	Weisse XX, 81.	7.8	4 57.51	64.8	4	3.361	− 14 12 23.9	66.2	4	10.40
8733	O. Arg. S. 20316	8.5	5 5.26	60.6	2	3.666	− 27 28 12.8	68.3	2	10.41
8734	O. Arg. S. 20320	7.8	5 16.32	65.7	5	3.428	− 17 17 48.6	65.6	1	10.42
8735	Anonymous	9.0	5 20.41	68.7	1	3.359	− 14 5 44.3	69.7	3	10.43
8736	Anonymous	. .	20 5 21.28	67.8	2	+ 3.427	− 17 19 5.3	68.7	2	+ 10.43
8737	Weisse XX, 104	7.3	5 28.24	63.7	4	3.140	− 3 24 44.3	65.7	2	10.44
8738	Weisse XX, 101	8.8	5 30.38	69.3	3	3.359	− 14 5 49.5	47.8	2	10.44
8739	O. Arg. S. 20322	8.5	5 31.17	65.7	2	3.396	− 15 50 21.5	65.0	3	10.44
8740	Anonymous	8.4	5 55.16	64.2	2	2.738	+ 16 18 44.5	68.8	2	10.46
8741	Weisse (2) XX, 206	7.4	20 5 55.95	68.8	2	+ 2.642	+ 20 39 9.3	67.8	1	+ 10.46
8742	19 Vulpeculæ	6.0	5 56.83	45.6	2	2.506	+ 26 23 38.2	72.7	2	10.46
8743	Weisse XX, 122	8.5	6 19.78	65.4	4	3.357	− 14 3 24.6	69.7	1	10.50
8744	B. A. C. 6947	6.2	6 33.32	63.7	4	3.663	− 27 26 50.2	63.6	2	10.52
8745	Anonymous	6.8	6 33.94	68.7	2	2.168	+ 38 27 48.5	47.6	2	10.52
8746	O. Arg. S. 20337	8.5	20 6 40.38	61.8	2	+ 3.393	− 15 45 17.3	66.7	1	+ 10.53
8747	Anonymous	. .	6 41.89	69.6	2	2.174	+ 38 15 58.7	67.7	2	10.53
8748	Anonymous	7.5	6 47.93	69.2	2	2.174	+ 38 17 1.6	67.7	2	10.54
8749	O. Arg. S. 20339	9.0	6 48.24	65.7	2	3.394	− 15 46 25.3	69.2	2	10.54
8750	Anonymous	9.5	6 59.98	64.6	2	2.642	+ 20 43 39.5	62.2	2	10.55

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8751	B. A. C. 6949	7.4	20 7 7.08	65.8	4	+ 3.299	− 11 18 41.0	68.7	2	+ 10.56
8752	B. A. C. 6948	6.6	7 8.31	61.7	8	3.740	− 30 25 44.4	61.8	2	10.56
8753	Anonymous	9.0	7 13.82	68.8	2	3.593	− 24 37 5.5	66.6	2	10.57
8754	O. Arg. S. 20343	7.0	7 14.60	69.1	2	3.425	− 17 16 21.6	66.2	2	10.57
8755	Lacaille 8385	6.0	7 16.37	63.3	3	3.924	− 36 52 38.7	63.8	2	10.57
8756	Weisse XX, 145	6.8	20 7 18.53	68.8	2	+ 3.351	− 13 48 20.0	47.8	1	+ 10.58
8757	Lacaille 8387	6.0	7 24.56	63.0	3	3.886	− 35 37 30.8	64.7	2	10.58
8758	Anonymous	8.3	7 40.16	59.6	3	2.740	+ 16 18 18.5	53.8	2	10.60
8759	ρ Aquilæ	5.5	7 47.87	46.2	3	2.773	+ 14 46 24.5	69.2	2	10.61
8760	Anonymous	7.5	7 50.84	69.6	2	4.005	− 39 25 36.1	66.7	2	10.62
8761	Anonymous	. .	20 7 50.98	65.7	4	+ 3.583	− 24 15 33.1	64.0	5	+ 10.62
8762	Gr. 12-year Cat. 1809	8.8	8 0.62	59.6	2	2.740	+ 16 19 25.7	53.8	3	10.63
8763	Lacaille 8394	8.0	8 14.32	67.6	3	3.770	− 31 37 54.9	63.7	2	10.65
8764	Weisse (2) XX, 304	6.8	8 17.62	69.2	4	2.176	+ 38 20 40.0	47.9	3	10.65
8765	Weisse (2) XX, 306	7.8	8 18.45	69.3	3	2.175	+ 38 24	. .	.	10.65
8766	O. Arg. S. 20358	8.5	20 8 23.22	66.7	3	+ 3.424	− 17 17 12.0	66.6	2	+ 10.66
8767	Anonymous	8.4	8 28.78	69.1	2	2.174	+ 38 25 0.9	48.6	1	10.66
8768	Gr. 12-year Cat. 1810	8.5	8 29.68	64.4	4	2.740	− 16 21 0.3	53.8	4	10.66
8769	3 Capricorni	5.5	8 37.50	69.6	2	3.328	− 12 45 43.8	45.6	1	10.68
8770	Anonymous	9.0	8 40.29	68.8	1	3.354	− 13 59 17.9	47.8	1	10.68
8771	Anonymous	8.8	20 8 46.60	64.4	4	+ 2.741	+ 16 19 28.6	53.8	2	+ 10.68
8772	Weisse (2) XX, 329	6.5	8 51.64	68.7	2	2.164	+ 38 44 6.5	46.6	1	10.69
8773	O. Arg. N. 20223	8.0	8 59.	. . .	.	1.782	+ 48 45 58.5	60.7	2	10.70
8774	O. Arg. S. 20366	7.5	9 10.06	62.0	4	3.426	− 17 24 21.4	64.6	4	10.71
8775	o^2 Cygni	4.0*	9 13.47	69.7	2	1.889	+ 46 19 4.9	57.7	2	10.72
8776	b^3 Cygni	5.5	20 9 17.51	62.7	3	+ 2.240	+ 36 22 45.5	56.5	7	+ 10.72
8777	B. A. C. 6969	6.2	9 25.	. . .	.	2.222	+ 36 19 39.2	64.3	3	10.73
8778	Anonymous	9.0	9 32.44	67.7	2	3.585	− 24 22 36.5	68.7	2	10.74
8779	O. Arg. S. 20370	8.9	9 44.51	63.3	3	3.609	− 25 26 34.2	66.7	2	10.76
8780	α^1 Capricorni	4.0*	9 53.15	55.5	27	3.331	− 12 56 16.4	53.7	38	10.77
8781	23 Vulpeculæ	4.5*	20 9 58.02	59.6	2	+ 2.488	+ 27 23 11.9	53.5	3	+ 10.77
8782	O. Arg. S. 20378	7.4	9 58.07	61.8	2	3.454	− 18 41 37.9	66.7	2	10.77
8783	33 Cygni	4.5*	10 8.43	62.7	1	1.392	+ 56 8 24.7	61.4	4	10.78
8784	Anonymous	9.2	10 13.12	64.2	2	2.743	+ 16 17	. .	.	10.79
8785	α^2 Capricorni	3.0*	10 17.01	54.9	253	3.332	− 12 58 33.1	51.5	103	10.79
8786	Lacaille 8399	7.2	20 10 19.67	61.7	3	+ 3.808	− 33 9 51.3	65.6	2	+ 10.80
8787	Rumker 8156	7.6	10 32.53	68.8	2	2.742	+ 16 20 11.3	57.2	4	10.82
8788	O. Arg. S. 20384	7.0	10 34.59	68.7	2	3.581	− 24 19 36.5	64.3	6	10.82
8789	B. A. C. 6978	6.8	10 38.24	68.8	2	2.490	+ 27 20 48.7	53.6	6	10.82
8790	O. Arg. S. 20388	7.5	10 42.94	61.8	2	3.444	− 18 17 23.0	66.7	2	10.83

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8791	B. A. C. 6977	7.0	20 10 43.86	59.7	2	+ 3.723	− 30 3 26.8	56.7	6	+ 10.83
8792	Weisse (2) XX, 398	6.5	10 58.21	69.1	2	2.178	+ 38 28 14.0	47.6	4	10.85
8793	Lacaille 8403	6.3	11 7.73	69.6	2	3.803	− 33 3 4.8	63.8	2	10.86
8794	Weisse (2) XX, 412	6.1	11 14.65	68.7	2	2.237	+ 36 37 35.4	46.7	1	10.87
8795	Lacaille 8404	6.1	11 15.74	63.0	3	3.859	− 35 1 8.7	67.3	2	10.87
8796	O. Arg. S. 20393	8.9	20 11 17.11	63.3	3	+ 3.598	− 25 5 58.2	67.3	2	+ 10.87
8797	σ Capricorni	6.0	11 18.66	62.2	9	3.471	− 19 33 8.7	57.4	8	10.87
8798	Anonymous	8.8	11 18.86	68.8	2	3.471	− 19 34 5.7	55.8	1	10.87
8799	B. A. C. 6982	7.0	11 22.15	63.0	4	3.611	− 25 39 28.0	57.2	9	10.88
8800	O. Arg. S. 20398	8.0	11 37.04	69.1	2	3.709	− 29 33 59.8	65.0	3	10.89
8801	O. Arg. S. 20404	7.8	20 11 48.76	69.3	3	+ 3.710	− 29 37 39.9	67.7	2	+ 10.91
8802	Lacaille 8406	6.5	11 48.97	62.7	2	3.890	− 36 6 42.9	67.3	2	10.91
8803	B. A. C. 6984	6.9	11 50.06	69.3	3	3.710	− 29 38 1.5	66.4	3	10.91
8804	Weisse XX, 268	9.0*	11 57.32	47.8	2	3.349	− 13 53 21.1	47.8	3	10.92
8805	O. Arg. S. 20406	7.8	12 2.16	69.1	2	3.610	− 25 38 50.8	58.7	2	10.92
8806	Lacaille 8414	7.0	20 12 21.41	63.7	3	+ 3.578	− 24 19 32.6	64.7	4	+ 10.95
8807	B. A. C. 6987	6.0	12 22.07	69.1	2	3.482	− 20 4 57.6	57.6	2	10.95
8808	Weisse XX, 284	9.0	12 36.68	69.7	2	3.347	− 13 47 19.0	47.8	2	10.97
8809	34 Cygni	5.2	12 37.61	68.7	2	2.210	+ 37 35 58.2	47.5	1	10.97
8810	Anonymous	. .	12 46.	. . .	.	3.469	− 19 32 17.2	61.7	2	10.98
8811	B. A. C. 6992	6.5	20 12 54.37	63.5	2	+ 3.376	− 15 13 22.7	65.7	2	+ 10.99
8812	Weisse XX, 296	8.8	12 55.17	68.8	2	3.353	− 14 6 1.9	47.8	2	10.99
8813	B. A. C, 6989	6.3	12 56.47	62.7	2	4.096	− 42 29 10.6	67.3	2	10.99
8814	O. Arg. S. 20423	7.7	12 57.09	64.2	7	3.420	− 17 16 2.1	65.6	2	10.99
8815	β Capricorni	3.5*	13 8.49	53.7	22	3.376	− 15 13 13.6	55.8	5	11.01
8816	O. Arg. S. 20429	7.5	20 13 11.87	62.7	5	+ 3.568	− 23 55 0.8	58.7	8	+ 11.01
8817	Anonymous	8.4	13 28.30	68.7	2	+ 3.468	− 19 30 55.5	55.8	3	11.03
8818	κ Cephei, (1st *)	. .	13 32.28	66.0	2	− 1.877	+ 77 17 15.7	63.6	7	11.04
8819	κ Cephei, (2d *)	. .	13 33.87	69.6	1	− 1.877	+ 77 17 13.1	63.8	2	11.04
8820	Anonymous	6.2	13 42.59	68.7	2	+ 2.205	+ 37 50 36.1	48.6	1	11.05
8821	B. A. C. 7001	7.0	20 13 51.69	68.7	2	+ 2.183	+ 38 34 3.4	47.7	5	+ 11.06
8822	Lacaille 8418	6.5	13 59.32	62.9	4	3.877	− 35 49 13.1	66.8	2	11.07
8823	Anonymous	7.6	14 13.75	64.3	2	3.809	− 33 29 32.1	65.2	2	11.09
8824	O. Arg. S. 20442	7.6	14 18.91	65.7	5	3.393	− 16 4 1.2	65.6	3	11.09
8825	O. Arg. S. 20439	7.8	14 19.60	65.6	2	3.705	− 29 35 42.7	66.7	2	11.09
8826	O. Arg. S. 20443	8.3	20 14 23.30	64.0	3	+ 3.540	− 22 47 15.3	65.2	2	+ 11.10
8827	B. A. C. 7006	8.2	14 33.96	68.7	2	2.242	+ 36 41 36.4	47.7	2	11.11
8828	Anonymous	8.2	14 40.27	68.7	2	3.601	− 25 25 55.1	63.7	1	11.12
8829	Anonymous	9.0	14 43.66	65.7	4	3.393	− 16 4 59.7	67.7	2	11.12
8830	Lacaille 8421	6.9	14 45.39	62.4	6	3.868	− 35 34 30.2	64.8	2	11.12

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8831	Anonymous	9.0	20 14 48.67	68.8	2	+ 3.589	− 24 56 16.8	63.2	2	+ 11.13
8832	Anonymous	8.9	14 53.17	68.7	2	3.343	− 13 40 30.6	47.8	2	11.14
8833	Anonymous	9.0	14 53.75	68.7	2	3.505	− 21 17 23.6	56.7	2	11.14
8834	Weisse XX, 359	9.0	15 15.87	68.7	2	3.342	− 13 39 29.4	47.8	1	11.16
8835	O. Arg. S. 20458	8.5	15 33.40	60.6	2	3.580	− 24 36 35.0	58.7	2	11.18
8836	Anonymous	9.2	20 15 52.42	69.1	2	+ 3.458	− 19 10 35.7	55.8	2	+ 11.20
8837	O. Arg. S. 20465	8.2	16 2.13	60.0	3	3.564	− 23 55 23.6	57.0	5	11.22
8838	25 Vulpeculæ	6.0	16 2.28	45.7	1	2.578	+ 24 0 5.7	68.3	2	11.22
8839	B. A. C. 7011	6.2	16 6.34	63.4	4	3.700	− 29 31 26.7	60.5	12	11.22
8840	Lalande 39208	7.3	16 7.10	66.7	2	3.089	− 0 53 52.9	67.8	2	11.22
8841	B. A. C. 7012	6.6	20 16 11.61	61.8	8	+ 3.619	− 26 16 52.3	63.6	3	+ 11.23
8842	B. A. C. 7014	5.5	16 14.40	58.7	2	2.977	+ 4 53 52.9	68.2	2	11.23
8843	O. Arg. S. 20469	9.0	16 15.87	63.6	4	3.588	− 24 58 43.2	61.7	3	11.23
8844	Weisse XX, 387	6.5	16 18.95	58.5	4	3.345	− 13 50 35.1	47.8	3	11.24
8845	O. Arg. S. 20470	8.5	16 22.70	60.6	2	3.581	− 24 42 15.6	58.6	2	11.24
8846	O. Arg. S. 20473	8.9	20 16 25.07	63.6	4	+ 3.588	− 24 59 30.3	61.7	3	+ 11.25
8847	Anonymous	9.1	16 28.89	68.7	2	3.458	− 19 13 11.7	55.8	2	11.25
8848	B. A. C. 7018	6.2	16 52.10	61.9	5	3.688	− 29 6 51.0	56.7	7	11.28
8849	Anonymous.	7.8	16 53.04	68.8	2	3.556	− 23 37 57.0	66.9	4	11.28
8850	O. Arg. S. 20482	8.1	17 4.30	68.7	2	3.562	− 23 55 52.9	58.6	2	11.29
8851	Lacaille 8432	7.2	20 17 4.67	62.7	2	+ 3.820	− 34 5 11.7	66.6	2	+ 11.29
8852	γ Cygni	3.0*	17 12.28	46.8	10	2.151	+ 39 48 36.2	65.2	4	11.30
8853	17 Draconis	5.5	17 16.16	62.7	2	1.011	+ 61 48 48.8	60.7	6	11.31
8854	B. A. C. 7021	6.9	17 21.13	61.1	6	3.635	− 27 0 28.2	53.7	2	11.31
8855	Anonymous	8.9	17 22.36	64.0	3	3.523	− 22 14 4.1	68.3	2	11.31
8856	Anonymous	8.5	20 17 34.86	68.8	2	+ 3.809	− 33 45 33.5	56.6	3	+ 11.33
8857	Lacaille 8439	6.8	17 37.84	68.8	2	3.782	− 32 46 56.1	65.7	2	11.33
8858	Weisse (2) XX, 641	8.3	17 47.50	68.7	2	2.187	+ 38 45 46.8	46.8	4	11.34
8859	B. A. C. 7025	6.0	17 48.21	62.7	5	3.929	− 37 51 9.3	67.2	2	11.34
8860	Weisse (2) XX, 643	7.0	17 51.07	68.7	2	2.187	+ 38 45 36.8	48.6	1	11.35
8861	B. A. C. 7026	6.6	20 17 56.96	63.2	6	+ 3.696	− 29 31 31.6	63.7	9	+ 11.36
8862	Lalande 39247	7.8	18 12.54	59.7	2	3.376	− 15 26 0.4	55.7	6	11.38
8863	39 Cygni	5.0*	18 16.17	59.6	2	2.391	+ 31 44 23.5	53.5	3	11.38
8864	O. Arg. S. 20501	8.6	18 41.99	68.8	3	3.500	− 21 15 44.0	56.7	2	11.41
8865	O. Arg. S. 20502	8.5	18 45.12	62.9	4	3.587	− 25 4 51.3	66.7	2	11.41
8866	O. Arg. S. 20503	8.2	20 18 46.70	69.2	2	+ 3.539	− 23 0 39.4	62.6	2	+ 11.42
8867	B. A. C. 7030	7.1	18 53.99	62.0	3	3.688	− 29 16 12.7	60.7	4	11.42
8868	Anonymous.	8.0	18 57.96	65.6	1	3.490	− 20 0 5.5	67.7	2	11.43
8869	π Capricorni	5.0	19 18.24	66.8	30	3.443	− 18 40 2.6	65.2	4	11.45
8870	B. A. C. 7032	7.0	19 22.71	61.0	3	3.673	− 28 43 10.5	58.7	3	11.46

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8871	B. A. C. 7033	7.0	20 19 29.65	62.1	3	+ 3.701	− 29 49 53.1	54.7	2	+ 11.47
8872	Weisse XX, 498	7.5	19 37.25	68.7	2	3.338	− 13 36 53.5	64.4	3	11.48
8873	B. A. C. 7034	6.7	19 37.36	62.7	3	3.608	− 26 3 54.9	64.4	3	11.48
8874	Lacaille 8450	6.3	19 37.47	66.2	2	3.836	− 34 52 6.7	67.3	2	11.48
8875	Weisse XX, 499	7.5	19 38.74	68.7	2	3.338	− 13 36 44.1	64.4	3	11.48
8876	B. A. C. 7036	6.3	20 19 47.12	62.7	2	+ 3.870	− 36 3 15.9	63.7	2	+ 11.49
8877	Anonymous	9.0	19 50.90	68.7	2	3.863	− 35 49 20.3	66.3	2	11.49
8878	O. Arg. S. 20521	8.5	19 53.35	60.5	3	3.548	− 23 28 22.0	54.8	7	11.50
8879	B. A. C. 7039	6.5	20 10.02	63.7	2	3.574	− 24 37 6.9	64.1	3	11.52
8880	B. A. C. 7040	6.8	20 25.92	63.3	5	3.569	− 24 26 29.5	57.5	7	11.54
8881	O. Arg. S. 20533	7.0	20 20 51.66	69.6	2	+ 3.499	− 21 21 42.4	69.6	2	+ 11.57
8882	ρ Capricorni	4.0	20 52.27	63.2	67	3.433	− 18 16 24.5	60.2	12	11.57
8883	B. A. C. 7044	7.0	21 0.70	63.3	8	3.434	− 18 19 56.3	66.8	2	11.58
8884	B. A. C. 7049	6.5	21 18.08	62.9	3	3.532	− 22 51 8.8	64.0	3	11.60
8885	O. Arg. S. 20544	7.2	21 23.38	61.9	3	3.542	− 23 18 28.8	58.7	6	11.60
8886	B. A. C. 7053	7.0	20 21 50.68	61.6	2	+ 3.448	− 19 2 47.8	58.9	8	+ 11.64
8887	ο Capricorni	6.5	21 52.05	61.3	3	3.448	− 19 2 36.1	58.3	11	11.64
8888	B. A. C. 7057	6.2	22 21.93	61.9	10	3.689	− 29 34 41.8	58.1	9	11.67
8889	40 Cygni	6.0*	22 23.10	47.6	1	2.223	+ 37 58 57.1	47.7	7	11.67
8890	Weisse XX, 545	8.0*	22 29.77	47.8	2	3.333	− 13 29 32.3	47.8	3	11.68
8891	ω^1 Cygni	5.7	20 22 45.50	57.7	3	+ 1.826	+ 48 55 13.0	65.8	2	+ 11.70
8892	B. A. C. 7063	6.0	23 13.47	62.2	6	3.373	− 15 31 15.4	61.3	7	11.73
8893	Lalande 39496	6.8	23 17.42	68.7	2	2.198	+ 38 51 53.7	56.3	5	11.74
8894	Anonymous	8.0	23 19.14	68.7	2	2.197	+ 38 54 42.7	68.8	2	11.74
8895	O. Arg. S. 20570	8.2	23 25.96	59.4	2	3.531	− 22 58 19.1	57.5	4	11.75
8896	41 Cygni	5.0	20 23 40.54	46.5	5	+ 2.449	+ 29 54 12.6	59.7	2	+ 11.77
8897	O. Arg. S. 20574	9.1	23 42.07	68.7	2	3.532	− 23 1 3.9	60.4	4	11.77
8898	Anonymous	9.0	23 46.76	68.7	2	3.533	− 23 3 2.4	55.7	1	11.77
8899	O. Arg. S. 20575	8.2	23 49.14	63.7	3	3.674	− 29 4 17.9	63.6	2	11.78
8900	Anonymous	9.1	23 50.92	65.7	3	3.372	− 15 28 6.9	67.7	2	11.78
8901	O. Arg. S. 20578	7.0	20 23 58.48	63.6	5	+ 3.584	− 25 20 23.4	67.8	2	+ 11.79
8902	42 Cygni	6.0*	24 0.05	59.6	2	2.286	+ 35 59 21.0	53.6	3	11.79
8903	Lacaille 8471	6.5	24 0.22	68.7	1	4.046	− 41 59 20.3	66.6	2	11.79
8904	Lacaille 8476	7.1	24 0.68	63.7	4	3.744	− 31 51 8.8	63.7	2	11.79
8905	B. A. C. 7069	7.5	24 1.38	63.7	4	3.523	− 22 37 27.1	63.7	4	11.79
8906	B. A. C. 7070	7.8	20 24 3.55	63.7	4	+ 3.523	− 22 37 52.6	63.7	2	+ 11.79
8907	B. A. C. 7071	7.1	24 9.58	62.5	5	3.673	− 29 3 56.5	62.7	4	11.80
8908	Lacaille 8475	7.5	24 27.81	65.7	2	4.012	− 41 1 47.8	66.7	2	11.82
8909	B. A. C. 7079, (1st *)	7.0	24 30.90	66.8	3	2.866	+ 10 47 28.3	64.8	2	11.83
8910	B. A. C. 7077	6.2	24 31.86	62.1	4	3.585	− 25 24 47.6	67.8	2	11.83

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8911	B. A. C. 7079, (2d *)	7.0	20 24 31.87	66.8	3	+ 2.866	+ 10 47 31.9	64.8	2	+ 11.83
8912	B. A. C. 7080	6.0	24 43.65	45.7	1	3.269	− 10 19 40.4	68.2	2	11.84
8913	Weisse XX, 610	7.5	24 53.66	68.7	2	3.236	− 8 40 0.7	56.7	2	11.85
8914	O. Arg. S. 20595	8.9	25 9.58	67.6	2	3.372	− 15 32 58.0	65.6	3	11.87
8915	Lacaille 8485	7.0	25 14.31	61.8	3	3.688	− 29 45 57.8	66.6	2	11.88
8916	Anonymous	8.2	20 25 19.24	69.1	3	+ 3.494	− 21 22 13.3	56.7	2	+ 11.88
8917	B. A. C. 7081	7.2	25 19.95	63.7	2	3.523	− 22 42 8.6	63.7	4	11.88
8918	Anonymous	9.1	25 25.92	67.2	2	3.501	− 21 42 40.2	67.7	1	11.89
8919	ω^2 Cygni	4.2	25 43.32	62.8	5	1.857	+ 48 28 57.0	64.8	2	11.91
8920	Lacaille 8487	6.2	25 47.62	62.7	4	3.929	− 38 33 54.9	62.7	2	11.91
8921	O. Arg. S. 20607	8.2	20 25 52.51	68.8	2	+ 3.545	− 23 43 28.2	57.7	2	+ 11.92
8922	Anonymous	8.6	26 7.74	70.0	3	3.073	− 0 4 39.0	68.5	5	11.94
8923	Lacaille 8492	6.2	26 8.84	62.6	5	3.716	− 30 56 55.9	65.2	2	11.94
8924	B. A. C. 7087	5.0	26 23.96	45.6	1	3.344	− 14 11 56.8	67.8	2	11.96
8925	ε Delphini	4.0	26 31.43	63.1	46	2.867	+ 10 49 48.1	64.4	3	11.97
8926	O. Arg. N. 20664	7.0	20 26 33.93	59.2	4	+ 1.849	+ 48 44 33.8	67.8	2	+ 11.97
8927	O. Arg. S. 20621	8.8	26 52.38	68.7	2	3.529	− 23 4 9.3	55.7	3	11.99
8928	Weisse XX, 664	9.5	26 56.10	61.2	2	3.358	− 14 55 6.8	56.0	3	11.99
8929	ω^3 Cygni	5.0*	26 59.64	59.3	5	1.850	+ 48 44 57.3	53.7	3	12.00
8930	Anonymous	9.0	27 11.35	69.4	3	3.074	− 0 7 51.9	70.7	2	12.01
8931	η Delphini	5.0	20 27 19.78	45.7	1	+ 2.834	+ 12 32 59.7	68.3	2	+ 12.02
8932	Anonymous	8.0	27 26.20	70.4	3	2.801	+ 14 14 14.5	67.8	2	12.03
8933	B. A. C. 7093	7.0	27 27.90	61.6	10	3.623	− 27 15 13.0	57.7	7	12.03
8934	Lacaille 8497	6.4	28 23.24	62.9	4	4.023	− 41 42 31.0	63.8	2	12.10
8935	ζ Delphini	4.0	28 45.74	46.7	3	2.803	+ 14 11 36.7	67.8	2	12.12
8936	Anonymous	7.9	20 29 5.28	64.2	2	+ 3.788	− 33 55 37.0	68.7	2	+ 12.15
8937	Anonymous	7.0	29 6.05	68.8	2	2.259	+ 37 22 20.1	47.7	1	12.15
8938	Weisse XX, 729, (1st *)	8.3	29 10.62	68.7	2	3.322	− 13 13 7.0	47.8	1	12.15
8939	Weisse XX, 729, (2d *)	7.5	29 10.80	68.7	2	3.322	− 13 13 7.0	47.8	1	12.15
8940	B. A. C. 7112	6.0*	29 19.90	59.6	2	1.963	+ 46 12 54.1	53.6	3	12.16
8941	O. Arg. S. 20654	8.3	20 29 27.73	64.7	4	+ 3.497	− 21 49 8.8	61.0	3	+ 12.17
8942	τ^1 Capricorni	6.5	29 29.96	45.7	2	3.369	− 15 37 43.9	71.2	4	12.17
8943	B. A. C. 7108	6.2	29 31.71	62.1	7	3.581	− 25 35 36.5	56.2	9	12.18
8944	B. A. C. 7111	7.1	29 32.01	63.0	13	3.521	− 22 55 40.2	58.7	7	12.18
8945	B. A. C. 7114	6.0*	29 33.13	47.6	1	2.161	+ 40 37 3.7	68.8	2	12.18
8946	Weisse XX, 743	8.0	20 29 38.05	66.7	2	+ 3.035	+ 2 0 47.6	68.7	2	+ 12.18
8947	B. A. C. 7113	6.6	29 47.43	62.4	16	3.560	− 24 42 47.6	60.3	5	12.20
8948	Anonymous	8.8	29 47.62	68.7	2	3.443	− 19 15 41.2	55.8	2	12.19
8949	Anonymous	9.0	30 3.34	69.4	3	2.521	+ 27 26 4.5	48.6	1	12.21
8950	Anonymous	8.5	30 10.82	68.7	2	3.443	− 19 16 43.3	55.8	2	12.22

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8951	O. Arg. S. 20675 . .	8.5	20 30 12.43	63.7	5	+ 3.498	− 21 54 35.8	58.7	5	+ 12.22
8952	Weisse XX, 755 . .	7.5	30 16.27	69.6	2	3.288	− 11 31 3.3	68.3	2	12.24
8953	B. A. C. 7116 . . .	6.3	30 17.78	68.7	2	3.489	− 21 28 43.1	57.1	5	12.23
8954	Anonymous. . . .	7.6	30 22.55	68.7	2	+ 3.778	− 33 39 48.9	65.6	2	12.24
8955	B. A. C. 7124 . . .	6.0	30 34.84	67.0	3	− 0.197	+ 72 3 25.0	64.0	11	12.24
8956	Weisse XX, 767 . .	8.2	20 30 37.67	68.7	2	+ 3.319	− 13 6 58.1	69.4	3	+ 12.25
8957	Lacaille 8509 . . .	6.7	30 54.74	62.6	2	3.855	− 36 31 16.0	62.7	3	12.27
8958	Anonymous . . .	8.3	30 55.66	70.1	2	2.522	+ 27 27 50.6	69.7	2	12.27
8959	β Delphini	4.5	30 58.93	46.0	6	+ 2.806	+ 14 6 37.8	70.8	4	12.28
8960	B. A. C. 7184 . . .	5.0*	31 1.61	61.8	2	−43.539	+ 88 42 3.0	66.7	2	12.28
8961	Weisse XX, 779 . .	8.2	20 31 4.00	68.7	2	+ 3.319	− 13 8 39.7	69.2	3	+ 12.28
8962	27 Vulpeculæ	6.2	31 6.35	62.6	2	2.557	+ 25 58 36.9	60.0	8	12.28
8963	B. A. C. 7123 . . .	6.5	31 8.87	60.7	2	3.396	− 17 2 49.1	54.6	2	12.29
8964	Lacaille 8513 . . .	6.5	31 22.43	62.7	5	3.847	− 36 17 18.8	64.2	2	12.31
8965	τ² Capricorni	6.0	31 26.41	63.2	6	3.364	− 15 26 34.7	65.2	2	12.31
8966	O. Arg. S. 20697 . .	8.8	20 31 30.41	68.8	2	+ 3.486	− 21 25 39.0	60.0	3	+ 12.31
8967	Lacaille 8512 . . .	5.8	31 31.32	66.7	2	4.052	− 42 53 22.3	66.8	2	12.32
8968	Lacaille 8517 . . .	5.8	31 32.26	62.6	8	3.782	− 33 55 25.4	67.1	3	12.32
8969	48 Cygni	6.2	31 50.34	69.7	2	2.437	+ 31 5 7.2	68.3	2	12.34
8970	Anonymous . . .	9.5	31 51.43	69.7	1	3.389	− 16 43 57.7	63.7	1	12.34
8971	B. A. C. 7132 . . .	7.0	20 31 51.48	69.7	2	+ 2.438	+ 31 2 9.7	68.3	2	+ 12.34
8972	B. A. C. 7128 . . .	6.5	31 51.54	61.9	5	3.548	− 24 16 57.0	59.5	6	12.34
8973	Anonymous . . .	8.5	32 1.77	68.7	2	2.251	+ 37 54 55.8	47.8	1	12.35
8974	O. Arg. S. 20709 . .	8.8	32 4.13	68.8	2	3.486	− 21 27 5.5	56.7	3	12.35
8975	B. A. C. 7133 . . .	6.7	32 4.44	62.6	8	3.550	− 24 35 52.5	63.6	2	12.35
8976	υ Capricorni	5.0	20 32 4.54	60.1	12	+ 3.427	− 18 37 42.8	58.7	9	+ 12.35
8977	Anonymous . . .	8.5	32 5.16	69.7	1	2.255	+ 37 47 20.2	47.7	1	12.35
8978	Lalande 39884 . . .	7.0*	32 5.99	69.6	2	2.261	+ 37 36 38.1	47.6	1	12.35
8979	Lalande 39885 . . .	6.0	32 7.66	69.0	3	2.254	+ 37 50 36.8	47.2	5	12.36
8980	B. A. C. 7135 . . .	7.1	32 8.54	61.8	6	3.634	− 28 4 42.1	60.9	5	12.36
8981	B. A. C. 7136 . . .	6.0	20 32 11.63	68.7	2	+ 3.612	− 27 8 9.5	65.3	2	+ 12.36
8982	1 Aquarii	6.0	32 14.29	69.2	2	3.072	− 0 0 12.5	64.7	2	12.36
8983	B. A. C. 7139 . . .	7.0	32 22.22	61.6	5	3.656	− 29 2 29.9	65.2	2	12.37
8984	B. A. C. 7146 . . .	7.0*	32 35.29	59.3	3	2.783	+ 15 20 54.5	56.7	4	12.39
8985	Lacaille 8529 . . .	6.3	32 42.24	62.4	3	3.731	− 32 5 23.6	68.1	2	12.40
8986	O. Arg. S. 20728 . .	7.7	20 32 48.63	68.8	2	+ 3.440	− 19 16 6.2	55.8	3	+ 12.40
8987	Anonymous . . .	7.8	32 56.02	69.3	2	2.250	+ 38 3 31.5	47.8	2	12.41
8988	B. A. C. 7147 . . .	6.5	33 2.49	64.1	3	3.595	− 26 29 34.3	64.7	2	12.42
8989	B. A. C. 7148 . . .	6.8	33 5.05	62.7	2	3.642	− 28 29 18.5	68.2	2	12.40
8990	α Delphini	3.5	33 8.08	55.5	6	2.783	+ 15 25 13.8	58.6	5	12.43

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			h. m. s.			″	° ′ ″			″
8991	Weisse XX, 841	8.0	20 33 17.54	70.4	3	+ 3.206	− 7 17 22.6	70.2	2	+ 12.44
8992	73 Draconis	5.5	33 18.88	66.2	2	− 0.703	+ 74 28 25.7	59.5	5	12.44
8993	Anonymous	7.8	33 21.72	68.7	2	+ 3.241	− 9 7 54.5	67.7	2	12.44
8994	Weisse (2) xx, 1140, (1st *)	8.3	33 22.11	69.0	3	2.248	+ 38 9 24.1	48.0	5	12.44
8995	Weisse (2) xx, 1140, (2d *)	7.3	33 22.88	69.2	2	2.248	+ 38 9 9.5	47.8	4	12.44
8996	Weisse XX, 846	8.0	20 33 26.80	70.4	3	+ 3.206	− 7 16 32.1	70.2	2	+ 12.45
8997	Weisse XX, 847	8.7	33 28.02	62.1	3	3.257	− 10 0 57.4	67.0	3	12.45
8998	Weisse XX, 849	8.0	33 31.12	62.0	4	3.259	− 10 8 11.9	61.8	2	12.45
8999	Weisse XX, 851	8.5	33 35.08	69.9	5	3.207	− 7 21 7.6	69.8	2	12.45
9000	B. A. C. 7155	5.8	33 42.12	66.2	2	3.953	− 40 3 22.2	68.2	2	12.46
9001	Lacaille 8537	6.4	20 33 44.16	63.4	4	+ 3.675	− 29 54 53.9	64.8	2	+ 12.47
9002	Weisse XX, 860	9.2	34 2.08	60.7	2	3.341	− 14 23 57.7	55.6	5	12.49
9003	B. A. C. 7158	6.0*	34 26.04	59.6	2	2.193	+ 40 5 9.8	53.8	3	12.51
9004	B. A. C. 7159	7.0	34 41.67	59.5	6	3.423	− 18 36 27.3	55.9	5	12.53
9005	Lacaille 8537	7.5	34 44.14	61.7	2	3.672	− 29 54 53.9	64.8	2	12.54
9006	Anonymous	8.2	20 34 53.33	67.6	2	+ 2.037	+ 44 46 7.8	68.7	2	+ 12.55
9007	O. Arg. S. 20762	8.5	34 55.74	68.7	2	3.451	− 19 59 6.6	63.2	2	12.55
9008	B. A. C. 7162	6.6	35 16.09	63.7	4	3.513	− 22 57 8.9	65.3	2	12.57
9009	O. Arg. S. 20765	8.3	35 16.47	65.2	2	3.562	− 25 11 26.4	67.7	2	12.57
9010	Lacaille 8539	6.7	35 23.44	63.7	4	+ 3.734	− 32 25 45.2	68.7	2	12.58
9011	B. A. C. 7169	6.0	20 35 30.57	68.8	2	− 3.467	+ 80 57 19.8	65.0	2	+ 12.59
9012	Weisse XX, 905	8.5*	35 41.83	64.6	2	+ 2.619	+ 2 29 45.8	66.8	2	12.60
9013	Lacaille 8540	6.4	35 46.06	62.9	6	3.836	− 36 19 47.6	63.3	5	12.61
9014	B. A. C. 7167	6.0*	35 46.08	58.7	2	2.242	+ 38 35 6.7	53.6	3	12.61
9015	B. A. C. 7168	5.5	36 6.91	62.7	4	3.641	− 28 42 20.1	66.7	2	12.63
9016	Anonymous	6.0	20 36 19.79	69.0	3	+ 3.817	− 35 40 6.9	68.8	5	+ 12.64
9017	Weisse XX, 924	8.1	36 22.78	68.7	2	3.073	− 0 1 53.1	64.7	2	12.65
9018	α Cygni	2.1*	36 39.55	52.4	151	2.043	+ 44 46 53.4	50.6	104	12.67
9019	Anonymous	8.3	36 41.02	70.1	2	2.348	+ 34 56 14.5	69.7	2	12.67
9020	Anonymous	8.5	36 43.80	60.0	5	3.478	− 21 23 41.9	58.0	8	12.67
9021	B. A. C. 7170	6.1	20 36 48.47	63.7	3	+ 3.617	− 27 45 3.5	65.1	3	+ 12.68
9022	Lacaille 8546	7.5	36 48.74	63.7	4	3.694	− 30 58 54.8	67.3	2	12.68
9023	O. Arg. S. 20802	8.6	36 48.80	63.8	2	+ 3.539	− 24 15 37.8	66.7	2	12.68
9024	75 Draconis	5.5	36 51.39	68.8	2	− 3.425	+ 80 56 25.5	65.0	2	12.68
9025	B. A. C. 7172	6.8	36 51.87	68.7	2	+ 3.152	− 4 26 2.9	48.8	1	12.68
9026	Lalande 40043	6.0	20 36 53.18	69.6	3	+ 2.348	+ 34 57 23.4	62.7	3	+ 12.68
9027	Weisse XX, 942	8.0	36 58.57	62.1	3	3.273	− 10 59 35.4	62.6	1	12.69
9028	O. Arg. S. 20805	7.3	37 4.29	66.2	2	3.541	− 24 22 44.1	66.7	2	12.69
9029	Anonymous	9.5	37 11.01	69.7	2	3.609	− 27 26 41.3	68.7	2	12.70
9030	B. A. C. 7175	5.3	37 11.80	68.8	3	3.931	− 39 42 15.6	66.7	2	12.70

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			h. m. s.			"	° ′ ″			"
9031	Lacaille 8549 . . .	6.2	20 37 22.93	63.0	3	+ 3.841	− 36 37 27.9	68.2	2	+ 12.72
9032	O. Arg. S. 20812 . .	9.0	37 38.14	64.7	2	3.476	− 21 21 30.1	68.8	1	12.73
9033	Anonymous . . .	10.0	37 42.40	69.6	1	3.814	− 35 40 7.5	62.8	1	12.73
9034	ψ Capricorni	8.0	37 47.98	61.2	11	3.570	− 25 46 15.0	63.7	3	12.74
9035	O. Arg. S. 20817 . .	8.2	37 59.04	65.0	3	3.538	− 24 18 11.4	68.4	3	12.76
9036	17 Capricorni	4.5	20 38 2.73	45.6	1	+ 3.489	− 22 1 12.8	68.2	2	+ 12.76
9037	B. A. C. 7180 . . .	7.5	38 3.25	64.1	7	3.536	− 24 13 48.3	61.7	2	12.76
9038	O. Arg. S. 20819 . .	7.2	38 3.32	69.7	1	3.536	− 24 13 48.7	66.1	3	12.76
9039	B. A. C. 7181 . . .	6.5	38 4.28	62.7	6	3.606	− 27 22 29.4	64.8	2	12.76
9040	Anonymous . . .	9.0	38 4.76	61.8	4	3.266	− 10 37 36.5	61.8	2	12.76
9041	O. Arg. S. 20827 . .	7.0	20 38 14.52	65.2	2	+ 3.562	− 25 25 17.2	68.7	2	+ 12.77
9042	O. Arg. S. 20828 . .	7.6	38 15.84	67.1	3	3.614	− 27 44 23.0	66.7	2	12.78
9043	Anonymous . . .	9.5	38 18.14	61.8	2	3.263	− 10 29 32.0	61.8	2	12.78
9044	O. Arg. S. 20833 . .	7.3	38 20.86	67.1	3	3.613	− 27 41 25.6	66.7	2	12.78
9045	Anonymous . . .	7.8	38 23.71	68.7	3	3.812	− 35 39 33.5	70.2	2	12.78
9046	O. Arg. S. 20839 . .	7.2	20 38 36.87	68.7	2	+ 3.446	− 19 56 46.0	58.4	3	+ 12.80
9047	30 Vulpeculæ	6.0*	38 48.94	59.2	3	2.597	+ 24 46 19.0	53.6	3	12.81
9048	Anonymous. . . .	8.8	38 51.46	61.8	2	3.624	− 28 12 26.3	66.8	2	12.81
9049	B. A. C. 7187 . . .	6.9	38 58.52	62.6	4	3.594	− 26 55 28.0	67.8	2	12.82
9050	Lacaille 8559 . . .	6.9	39 12.68	63.7	2	4.048	− 43 31 2.7	71.2	4	12.84
9051	Anonymous . . .	8.5	20 39 27.20	61.8	2	+ 3.624	− 28 15 43.0	65.8	2	+ 12.85
9052	B. A. C. 7193 . . .	6.0*	39 40.27	59.6	2	1.289	+ 60 5 52.7	53.7	3	12.87
9053	Anonymous . . .	8.4	40 3.29	48.8	2	3.753	− 33 38 5.5	65.6	2	12.89
9054	ε Aquarii	6.5	40 5.66	55.0	31	3.253	− 10 0 20.3	56.8	4	12.90
9055	B. A. C. 7195 . . .	7.8	40 6.25	65.7	2	3.514	− 23 21 29.0	69.2	2	12.90
9056	γ Delphini, (1st *) . .	6.3*	20 40 8.96	63.2	2	+ 2.786	+ 15 37 19.1	66.2	2	+ 12.90
9057	γ Delphini, (2d *) . .	3.3*	40 9.83	63.0	3	2.786	+ 15 37 18.6	66.2	2	12.90
9058	B. A. C, 7197 . . .	6.7	40 11.15	64.8	7	3.512	− 23 14 47.4	69.7	2	12.90
9059	O. Arg. S. 20859 . .	7.1	40 19.81	68.7	2	3.390	− 17 14 55.4	63.7	2	12.91
9060	O. Arg. S. 20857 . .	8.6	40 20.05	68.8	2	3.499	− 22 35 15.5	66.7	2	12.91
9061	B. A. C. 7202, (1st *) .	. .	20 40 27.46	59.6	2	+ 3.418	− 18 42 43.5	56.7	3	+ 12.92
9062	B. A. C. 7202, (2d *) .	. .	40 28.41	59.3	3	3.418	− 18 42 51.0	55.4	7	12.92
9063	ε Cygni	3.0*	40 32.29	45.7	2	2.397	+ 33 26 48.9	47.8	2	12.93
9064	Weisse XX, 1023 . .	7.5	40 32.75	47.7	1	3.257	− 10 15 41.6	69.7	2	12.93
9065	Weisse XX, 1022 . .	8.1	40 33.23	68.8	2	3.307	− 12 58 6.3	56.7	2	12.93
9066	Anonymous . . .	9.0	20 40 33.65	69 8	1	+ 3.327	− 14 0 4.2	68.2	2	+ 12.93
9067	B. A. C. 7203 . . .	7.0*	40 42.	. . .	.	3.612	− 27 52 57.8	62.7	3	12.94
9068	Lacaille 8574 . . .	7.5	40 43.93	65.2	2	3.679	− 30 42 20.2	68.7	2	12.94
9069	Weisse XX, 1031 . .	8.5	40 49.77	60.6	3	3.328	− 14 3 17.2	58.0	9	12.95
9070	B. A. C. 7205 . . .	6.0	40 58.48	60.9	5	3.576	− 26 17 41.7	65.0	3	12.96

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			h. m. s.			"	° ' "			"
9071	Weisse XX, 1036	9.0	20 40 59.00	60.9	3	+ 3.328	− 14 3 27.7	61.2	4	+ 12.96
9072	Weisse (2) XX, 1357	8.4	41 12.13	69.7	3	2.388	+ 33 51 45.0	69.4	3	12.97
9073	α Microscopii	5.0	41 12.80	62.5	6	3.767	− 34 17 40.3	70.3	5	12.97
9074	Weisse XX, 1057	6.7	41 22.59	64.6	2	3.514	+ 3 8 6.6	66.8	2	12.98
9075	B. A. C. 7209	6.5*	41 23.83	60.0	3	3.414	− 18 32 58.4	54.7	3	12.98
9076	Weisse XX, 1059	9.0	20 41 34.89	61.8	3	+ 3.268	− 10 52 18.7	68.7	2	+ 13.00
9077	Weisse (2) XX, 1373	6.0	41 35.42	69.7	3	2.389	+ 33 51 41.3	58.5	4	13.00
9078	B. A. C. 7210	7.1	41 41.36	65.5	12	3.611	− 27 52 59.1	58.3	7	13.00
9079	Anonymous.	9.2	41 42.66	67.4	6	3.611	− 27 53	. .	.	13.01
9080	O. Arg. S. 20884	8.0	41 42.95	68.7	1	3.492	− 22 24 35.5	65.7	2	13.01
9081	Anonymous	9.0	20 41 48.	. . .	.	+ 2.389	+ 33 52 23.6	69.2	2	+ 13.01
9082	λ Cygni	5.0	41 57.28	68.7	2	2.334	+ 35 58 40.7	47.2	4	13.02
9083	B. A. C. 7212	5.5	42 0.51	62.6	2	3.879	− 38 25 50.4	66.3	2	13.03
9084	Lacaille 8585	6.2	42 0.86	64.3	2	3.712	− 32 14 28.8	68.7	2	13.03
9085	Lacaille 8587	7.0	42 8.42	61.7	2	3.721	− 32 34 13.6	68.7	2	13.03
9086	B. A. C. 7214	6.5*	20 42 11.	. . .	.	+ 3.607	− 27 45 47.5	61.8	1	+ 13.04
9087	B. A. C. 7216	6.2	42 14.62	61.7	7	3.556	− 25 29 46.3	57.5	7	13.04
9088	η Cephei	3.5*	42 26.34	69.6	2	1.218	+ 61 17 49.7	64.8	4	13.05
9089	Lacaille 8586	6.6	42 28.32	63.7	2	3.968	− 41 25 29.7	68.7	2	13.06
9090	B. A. C. 7219	6.0*	42 32.96	59.6	2	2.055	+ 45 4 0.8	53.6	3	13.06
9091	Weisse XX, 1082	8.8	20 42 34.86	66.7	3	+ 3.215	− 8 0 15.0	68.2	2	+ 13.07
9092	Weisse (2) XX, 1407	7.7	42 43.16	69.2	2	2.258	+ 38 46 23.4	47.4	4	13.08
9093	14 Delphini	6.5*	42 56.48	59.2	2	2.941	+ 7 20 45.0	53.7	3	13.09
9094	B. A. C. 7221	8.0	42 58.59	57.2	2	3.307	− 13 3 40.0	69.2	2	13.09
9095	Anonymous	8.1	43 2.86	68.8	2	3.397	− 17 48 37.5	63.7	4	13.09
9096	Lacaille 8594	6.8	20 43 9.26	65.3	2	+ 3.664	− 30 18 4.3	68.2	2	+ 13.10
9097	Lacaille 8596	6.7	43 10.10	68.8	2	3.655	− 29 57 29.1	63.6	2	13.10
9098	B. A. C. 7224	7.0*	43 10.50	60.0	3	3.622	− 28 30 57.7	54.1	5	13.10
9099	B. A. C. 7225	6.8	43 10.70	68.0	4	3.605	− 27 45 50.3	60.7	5	13.10
9100	O. Arg. S. 20903	7.5	43 13.79	60.2	2	3.380	− 16 56 2.2	61.3	2	13.11
9101	β Microscopii.	6.5	20 43 16.36	62.2	2	+ 3.747	− 33 41 56.9	68.2	2	+ 13.11
9102	Anonymous	8.3	43 23.80	68.7	1	3.471	− 21 32 46.9	64.2	2	13.12
9103	ω Capricorni	5.5*	43 27.56	61.7	8	3.597	− 27 26 23.9	65.2	2	13.12
9104	Anonymous	7.5	43 33.84	69.6	2	3.903	− 39 25 46.7	56.1	4	13.13
9105	Lalande 40235	7.5	43 35.30	65.7	2	3.401	− 18 1 29.8	68.8	2	13.13
9106	Lacaille 8595	6.5	20 43 38.86	62.7	2	+ 3.909	− 39 37 51.8	66.7	2	+ 13.13
9107	O. Arg. S. 20906	7.0	43 40.09	67.9	4	3.684	− 31 13 2.5	66.2	2	13.14
9108	Lalande 40277	7.0	43 40.73	69.2	2	2.363	+ 35 2 49.4	47.7	1	13.14
9109	4 Aquarii	6.0*	44 0.28	60.6	2	3.181	− 6 8 51.4	54.8	2	13.16
9110	Lacaille 8603	7.0	44 22.40	63.7	2	3.967	− 41 35 55.3	68.2	2	13.18

Number.	Name of Star.	Magnitude.	Mean Right Ascension, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.	Mean Declination, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.
			h. m. s.			"	° ' "			"
9111	Weisse XX, 1125	7.8	20 44 23.60	67.7	2	+ 3.242	− 9 33 55.5	68.8	2	+ 13.18
9112	Lacaille 8608	6.8	44 34.12	62.4	3	3.702	− 32 2 12.5	65.8	2	13.20
9113	O. Arg. S. 20917	7.3	44 40.72	67.7	2	3.536	− 24 44 16.0	67.7	2	13.20
9114	Lacaille 8609	6.0	44 47.05	62.6	1	3.822	− 36 43 9.5	65.2	2	13.21
9115	B. A. C. 7237	6.1	44 48.10	63.7	3	3.526	− 24 18 16.5	63.6	2	13.21
9116	Lacaille 8610	6.1	20 44 51.06	62.2	2	+ 3.682	− 31 14 33.5	66.2	2	+ 13.21
9117	O. Arg. S. 20921	8.5	44 54.74	65.1	2	3.619	− 28 32 53.6	68.8	2	13.22
9118	O. Arg. S. 20922	8.3	45 2.12	68.8	2	3.400	− 18 4 52.1	56.7	2	13.23
9119	μ Aquarii	4.5	45 5.98	62.5	70	3.240	− 9 30 21.4	62.2	7	13.23
9120	B. A. C. 7242	7.0	45 25.92	58.2	4	3.287	− 12 5 59.8	67.7	2	13.25
9121	Lacaille 8616	6.7	20 45 42.38	62.7	2	+ 3.615	− 28 27 4.1	65.5	3	+ 13.27
9122	B. A. C. 7244	6.8	45 47.47	62.6	9	3.535	− 24 48 22.3	60.0	4	13.28
9123	Anonymous	8.0	46 0.59	69.2	2	3.945	− 41 5 55.3	55.7	2	13.30
9124	31 Vulpeculæ	6.0*	46 8.31	45.7	1	2.571	+ 26 34 27.3	67.8	2	13.30
9125	O. Arg. S. 20937	7.2	46 11.60	66.2	2	3.614	− 28 27 31.2	66.8	2	13.30
9126	Anonymous	7.0	20 46 43.97	68.8	1	+ 2.295	+ 37 53 48.3	48.6	1	+ 13.34
9127	B. A. C. 7248	7.5*	46 48.36	59.1	2	3.422	− 19 19 20.1	53.7	2	13.34
9128	19 Capricorni	6.0*	46 52.89	59.5	5	3.405	− 18 27 4.1	55.7	6	13.35
9129	Lalande 40400	6.2	46 56.46	68.7	2	2.265	+ 38 58 33.4	48.6	1	13.35
9130	Anonymous.	8.0	47 5.55	64.7	2	3.532	− 24 45 52.0	67.1	3	13.36
9131	O. Arg. S. 20951	7.0	20 47 7.63	68.7	2	+ 3.354	− 15 48 42.1	64.2	2	+ 13.36
9132	Lacaille 8619	7.1	47 13.95	62.8	9	3.697	− 32 4 58.9	65.7	3	13.37
9133	Anonymous	7.2	47 18.81	62.8	9	3.695	− 32 2 9.2	66.7	2	13.37
9134	Anonymous	7.2	48 2.41	68.7	2	2.273	+ 38 48 45.7	47.2	2	13.42
9135	57 Cygni	5.4	48 17.70	59.6	6	2.118	+ 43 51 30.7	59.9	7	13.44
9136	Lacaille 8620	6.0	20 48 22.88	63.7	2	+ 4.052	− 44 37 43.7	67.3	2	+ 13.45
9137	B. A. C. 7254	6.0*	48 25.20	58.8	2	2.092	+ 44 39 9.9	53.8	5	13.45
9138	B. A. C. 7252	6.1	48 27.80	63.6	6	3.574	− 26 49 38.0	63.7	2	13.45
9139	32 Vulpeculæ	4.5*	48 35.58	59.8	50	2.555	+ 27 31 36.6	58.5	26	13.46
9140	B. A. C. 7255	6.0*	48 39.93	48.7	1	3.003	+ 4 0 2.5	67.8	2	13.48
9141	O. Arg. S. 20973	8.9	20 48 50.61	69.7	2	+ 3.528	− 24 43 47.5	67.7	2	+ 13.48
9142	B. A. C. 7259	7.0	48 56.06	68.7	1	2.121	+ 43 51 22.5	62.7	2	13.48
9143	17 Delphini	5.5	48 59.24	45.6	1	2.840	+ 13 11 21.8	68.3	2	13.48
9144	Anonymous	9.0	49 7.85	68.7	2	3.888	− 39 31 33.5	55.8	3	13.49
9145	Anonymous	. .	49 9.	. .	.	3.423	− 19 31 33.0	56.6	3	13.50
9146	Lalande 40494	6.2	20 49 13.93	68.7	2	+ 2.339	+ 36 32 32.2	49.5	6	+ 13.50
9147	Anonymous	9.0	49 14.98	68.8	3	2.335	+ 36 42 8.3	47.7	1	13.50
9148	B. A. C. 7262	7.0*	49 18.36	59.7	2	1.712	+ 53 58 51.1	54.2	4	13.51
9149	7 Aquarii	5.5	49 20.09	46.8	2	3.250	− 10 13 53.6	71.4	5	13.51
9150	B. A. C. 7263	5.7	49 50.07	61.6	3	3.366	− 16 34 3.9	58.7	2	13.54

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			h. m. s.			"	° ′ "			"
9151	Weisse XX, 1269 . .	6.5	20 50 0.63	69.7	2	+ 3.073	− 0 4 10.3	64.7	2	+ 13.55
9152	Anonymous . . .	8.8	50 24.88	65.1	2	3.298	− 12 55 9.3	61.8	4	13.58
9153	Lacaille 8628 . . .	7.5	50 40.41	66.2	2	4.007	− 43 33 23.2	69.0	3	13.59
9154	Anonymous . . .	9.6	50 44.32	65.7	2	3.426	− 19 40 5.5	67.7	2	13.60
9155	B. A. C. 7269 . . .	6.0*	50 48.02	45.7	1	3.009	+ 3 39 19.6	48.8	1	13.60
9156	Weisse XX, 1291 . .	7.0	20 50 51.42	68.7	2	+ 3.313	− 13 54 4.3	55.7	2	+ 13.60
9157	Anonymous . . .	7.1	50 54.25	68.8	2	3.663	− 31 2 59.9	58.2	2	13.61
9158	Anonymous . . .	9.5	51 0.78	65.7	2	3.425	− 19 41 34.7	68.2	2	13.61
9159	Piazzi XX, 401. . .	6.0	51 0.88	65.7	2	2.129	+ 43 50 18.4	65.6	2	13.61
9160	B. A. C. 7268 . . .	6.5*	51 6.26	60.1	3	+ 2.024	+ 46 52 56.3	54.7	3	13.62
9161	Anonymous . . .	8.0	20 51 7.96	69.2	2	− 4.413	+ 82 31 56.3	56.7	4	+ 13.62
9162	Lacaille 8630 . . .	6.0	51 8.74	63.1	7	+ 3.803	− 36 40 6.0	64.7	2	13.62
9163	O. Arg. S. 21007 . .	7.8	51 11.88	68.7	2	3.584	− 27 33 21.9	67.8	2	13.63
9164	Anonymous . . .	9.4	51 18.94	65.7	1	3.423	− 19 42 56.9	68.2	2	13.63
9165	20 Capricorni	7.0	51 38.55	66.7	3	3.420	− 19 34 31.7	67.8	2	13.66
9166	18 Delphini	5.0	20 51 41.47	47.1	2	+ 2.894	+ 10 18 4.3	68.2	2	+ 13.66
9167	B. A. C. 7274 . . .	7.0*	51 51.30	59.2	2	1.960	+ 48 39 30.1	54.0	6	13.67
9168	Lacaille 8632 . . .	6.5	51 53.28	62.2	2	3.778	− 35 49 56.0	66.8	2	13.67
9169	ν Cygni	5.5	51 57.25	58.8	12	2.233	+ 40 37 45.8	65.8	2	13.68
9170	Lacaille 8635 . . .	6.5	52 3.60	63.7	3	3.798	− 36 35 56.2	66.8	2	13.68
9171	Lacaille 8633 . . .	6.0	20 52 5.40	66.2	2	+ 3.872	− 39 17 3.8	69.6	2	+ 13.68
9172	76 Draconis	6.0	52 29.17	62.6	2	2.378	+ 82 0 34.7	61.3	11	13.71
9173	Anonymous . . .	7.2	52 29.36	68.7	2	3.774	− 35 43 30.4	64.2	2	13.71
9174	Anonymous . . .	7.5	52 31.24	68.7	2	3.316	− 14 2 27.5	61.8	2	13.71
9175	Lacaille 8640 . . .	6.7	52 35.32	62.7	4	3.641	− 30 16 5.8	65.3	2	13.72
9176	O. Arg. S. 21030 . .	7.8	20 52 38.39	62.4	3	+ 3.642	− 30 17 32.4	67.2	2	+ 13.72
9177	1 Piscis Australis . .	5.3	52 41.66	62.6	6	3.700	− 32 48 5.7	63.7	2	13.72
9178	Lacaille 8642 . . .	6.8	52 47.96	66.7	2	3.716	− 33 26 22.3	69.7	2	13.73
9179	Lacaille 8638, (1st *) .	7.0*	52 55.70	63.7	1	3.998	− 43 32 41.1	67.4	3	13.74
9180	21 Capricorni	6.0	52 58.75	59.5	6	3.390	− 18 4 27.3	55.6	7	13.74
9181	O. Arg. S. 21034 . .	7.8	20 52 59.33	65.3	2	+ 3.595	− 28 15 4.9	66.7	2	+ 13.74
9182	Lacaille 8641 . . .	6.9	52 59.86	64.2	2	3.809	− 37 7 10.9	66.7	2	13.74
9183	Lacaille 8638, (2d *) .	7.0	53 0.70	66.2	2	3.998	− 43 32 22.6	67.4	3	13.74
9184	B. A. C. 7285 . . .	7.0*	53 10.40	58.8	2	2.953	+ 6 58 21.4	56.4	3	13.75
9185	Lacaille 8647 . . .	7.1	53 11.01	63.4	6	3.597	− 28 20 54.8	66.7	2	13.75
9186	B. A. C. 7290 . . .	. .	20 53 18.82	60.0	4	+ 2.135	+ 43 55 40.9	60.6	5	+ 13.76
9187	B. A. C. 7287 . . .	6.2	53 26.26	63.7	3	3.576	− 27 25 30.6	69.7	2	13.77
9188	B. A. C. 7286 . . .	6.1	53 27.63	61.3	6	3.861	− 39 4 20.0	69.7	2	13.77
9189	Radcliffe 5050 . . .	7.0	53 43.84	61.7	1	+ 2.138	+ 43 52 23.5	64.8	2	13.79
9190	B. A. C. 7299 . . .	5.4	53 48.94	62.5	4	− 2.447	+ 80 1 29.8	64.2	8	13.79

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			h. m. s.			″	° ′ ″			″
9191	Weisse XX, 1370	9.0*	20 53 59.	. .	.	+ 3.315	− 14 3 11.5	55.8	2	+ 13.79
9192	O. Arg. S. 21046	8.7	54 0.32	64.2	2	3.421	− 19 47 28.1	68.7	2	13.81
9193	ζ Microscopii	5.9	54 0.50	63.8	6	3.862	− 39 10 29.0	65.6	2	13.81
9194	Anonymous	9.5	54 22.33	68.8	2	3.296	− 13 1 7.1	68.2	2	13.83
9195	Lacaille 8658	8.0	54 31.18	62.4	4	3.623	− 29 39 31.4	65.8	2	13.84
9196	B. A. C. 7297	6.0*	20 54 34.37	59.4	3	+ 2.268	+ 39 42 20.5	54.0	6	+ 13.84
9197	Weisse XX, 1394	7.0	54 45.51	59.2	2	3.295	− 12 59 38.5	58.9	7	13.85
9198	O. Arg. S. 21053	7.3	54 47.44	64.6	6	3.419	− 19 47 48.5	65.4	4	13.86
9199	Lacaille 8660	5.8	54 48.81	63.6	4	3.591	− 28 14 43.9	66.7	2	13.86
9200	f^1 Cygni	5.0	55 3.93	66.1	3	2.037	+ 46 58 32.2	57.7	3	13.87
9201	B. A. C. 7300	6.6	20 55 4.27	63.3	5	+ 3.535	− 25 37 24.0	63.7	3	+ 13.87
9202	Lacaille 8657	7.0	55 7.03	66.5	3	3.993	− 43 38 11.9	70.7	3	13.88
9203	2 Equulei	6.0*	55 18.45	45.7	3	2.960	+ 6 37 55.3	68.3	2	13.89
9204	Anonymous	7.5	55 24.72	68.7	2	2.343	+ 37 6 22.9	48.7	1	13.89
9205	O. Arg. S. 21072	7.5	56 0.68	61.8	2	3.585	− 28 5 1.8	68.2	2	13.93
9206	Lacaille 8667	6.8	20 56 16.19	62.2	4	+ 3.816	− 37 46 52.9	66.8	2	+ 13.95
9207	η Capricorni	5.0	56 25.99	48.2	4	3.429	− 20 24 22.9	68.3	2	13.96
9208	12 Aquarii	5.3	56 40.12	47.6	2	3.179	− 6 22 30.1	67.7	2	13.97
9209	Anonymous	7.3	56 42.	. .	.	3.692	− 32 53 54.8	69.2	2	13.98
9210	O. Arg. S. 21083	7.7	56 43.57	62.6	1	3.350	− 16 11 18.9	65.2	2	13.98
9211	B. A. C. 7312	6.8	20 56 59.58	66.4	3	+ 3.378	− 17 42 59.8	64.5	6	+ 13.99
9212	Lacaille 8677	7.2	57 11.92	63.2	4	3.788	− 36 48 48.3	67.2	2	14.01
9213	δ Microscopii	5.6	57 33.39	62.4	8	3.639	− 30 40 41.8	68.8	2	14.03
9214	B. A. C. 7320	6.2	57 39.00	68.6	2	2.323	+ 38 6 20.2	47.2	2	14.04
9215	Lacaille 8681	6.4	57 41.68	64.2	2	3.745	− 35 11 7.7	68.3	2	14.04
9216	Anonymous	6.8	20 57 49.77	68.7	2	+ 2.337	+ 37 36 0.9	47.7	3	+ 14.05
9217	2 Piscis Australis	5.7	57 50.46	62.4	7	3.690	− 32 53 55.6	68.1	3	14.05
9218	θ Capricorni	8.0	58 4.37	61.3	21	3.378	− 17 47 12.1	60.0	16	14.06
9219	Lacaille 8686	6.7	58 35.03	66.8	3	3.849	− 39 14 57.7	63.7	2	14.09
9220	O. Arg. S. 21106	6.8	58 43.79	61.4	8	3.491	− 23 46 27.3	61.8	2	14.10
9221	B. A. C. 7327	6.6	20 58 55.65	62.2	6	+ 3.489	− 23 42 29.7	62.5	3	+ 14.11
9222	A Capricorni	4.7	58 55.95	64.2	4	3.526	− 25 33 44.7	62.8	2	14.11
9223	O. Arg. S. 21115	7.8	59 0.93	68.7	2	3.347	− 16 7 49.3	65.2	2	14.12
9224	Lacaille 8691	7.0	59 3.97	62.4	4	3.574	− 27 50 57.2	63.6	2	14.12
9225	B. A. C. 7332	6.0	59 31.10	66.5	3	1.827	+ 52 43 47.7	61.7	3	14.15
9226	Lacaille 8693	6.6	20 59 50.99	64.2	2	+ 3.806	− 37 48 16.0	65.8	3	+ 14.17
9227	O. Arg. S. 21129	7.0	20 59 51.41	64.7	2	3.472	− 22 53 40.5	65.1	2	14.17
9228	Anonymous	7.7	21 0 18.68	70.3	3	3.620	− 30 5 40.5	69.7	3	14.20
9229	O. Arg. S. 21138	7.4	0 23.13	68.7	2	3.366	− 17 17 13.7	66.7	2	14.21
9230	Lacaille 8697	6.8	0 25.92	63.2	2	3.823	− 38 29 48.2	66.8	2	14.21

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			h. m. s.			s	° ′ ″			″
9231	61 Cygni, (1st *) . . .	5.5*	21 0 33.86	49.8	153	+ 2.334	+ 38 3 18.6	51.4	260	+ 14.22
9232	Lacaille 8699 . . .	5.8	0 34.18	62.7	2	3.790	− 37 15 53.7	68.2	2	14.22
9233	Lacaille 8701 . . .	7.0	0 36.66	62.1	5	3.596	− 29 2 8.6	68.2	2	14.22
9234	61 Cygni, (2d *) . . .	6.0*	0 37.08	54.8	23	2.334	+ 38 3 22.6	54.0	113	14.22
9235	O. Arg. S. 21148 . .	8.8	0 43.35	65.3	2	3.482	− 23 29 34.2	65.8	2	14.23
9236	Anonymous . . .	9.5	21 1 0.55	68.8	1	+ 2.392	+ 35 50 38.5	48.7	1	+ 14.24
9237	B. A. C. 7340 . . .	7.8	1 4.51	63.9	4	3.495	− 24 11 26.7	65.0	2	14.25
9238	O. Arg. S. 21154 . .	8.4	1 35.50	68.0	4	3.474	− 23 11 41.5	68.2	2	14.28
9239	Lacaille 8707 . . .	6.5	1 41.01	63.7	3	3.620	− 30 17 9.8	66.8	2	14.29
9240	Lacaille 8706 . . .	6.7	1 46.24	62.7	2	3.691	− 33 24 58.7	66.8	2	14.29
9241	f^2 Cygni	4.2	21 1 46.89	62.8	2	+ 2.063	+ 47 5 13.7	65.7	2	+ 14.29
9242	O. Arg. S. 21162 . .	7.7	1 54.84	64.5	7	3.472	− 23 5 30.0	65.7	2	14.30
9243	ν Aquarii	4.5	1 57.87	60.0	33	3.270	− 11 56 10.5	59.0	6	14.30
9244	Lalande 41011 . . .	7.6	2 10.99	65.4	3	2.573	+ 28 3 30.5	68.8	2	14.32
9245	B. A. C. 7347 . . .	6.8	2 26.19	63.9	6	3.470	− 23 2 41.1	65.5	2	14.33
9246	Anonymous . . .	7.3	21 2 33.30	65.7	3	+ 3.486	− 23 52 28.8	68.7	2	+ 14.34
9247	B. A. C. 7349 . . .	6.5	3 13.37	61.8	2	3.878	− 40 49 53.5	68.2	2	14.38
9248	O. Arg. S. 21189, (1st *)	8.2	3 28.13	67.7	3	3.480	− 23 40 45.1	67.7	1	14.39
9249	O. Arg. S. 21189, (2d *)	7.8	3 28.67	67.7	3	3.480	− 23 40 52.3	67.7	2	14.39
9250	γ Equulei	5.5	3 32.00	61.1	5	2.915	+ 9 34 9.4	68.3	2	14.40
9251	Lalande 41086 . . .	7.0	21 3 39.93	68.7	2	+ 2.341	+ 38 9 46.9	47.7	2	+ 14.41
9252	δ Equulei	6.5	3 43.00	69.7	3	2.917	+ 9 28 48.4	68.3	2	14.41
9253	O. Arg. S. 21196 . .	7.5	3 54.33	67.3	2	3.499	− 24 41 30.3	68.5	3	14.42
9254	Lacaille 8722 . . .	7.2	4 3.45	63.4	6	3.755	− 36 19 57.7	65.3	2	14.43
9255	Lacaille 8719 . . .	5.0	4 4.86	68.7	2	+ 3.851	− 39 59 31.6	63.7	2	14.43
9256	Lalande 41229 . . .	8.0*	21 4 15.88	47.8	5	− 0.383	+ 74 58 19.8	68.3	2	+ 14.44
9257	Lalande 41236 . . .	8.0*	4 21.33	47.8	5	− 0.404	+ 75 3 40.0	68.3	2	14.45
9258	Anonymous . . .	8.3	4 33.08	68.7	2	+ 3.738	− 35 42 22.1	67.8	2	14.45
9259	Lacaille 8725 . . .	6.4	4 33.50	62.7	3	3.770	− 36 59 46.5	67.8	2	14.46
9260	Anonymous . . .	8.3	4 42.76	69.7	4	3.277	− 12 29 10.8	47.7	1	14.47
9261	Anonymous . . .	8.2	21 4 48.28	68.8	2	+ 3.275	− 12 23 21.6	47.7	1	+ 14.48
9262	3 Piscis Australis . .	5.7	4 58.77	62.5	9	3.568	− 28 11 16.3	65.3	2	14.49
9263	B. A. C. 7359 . . .	7.0	5 8.79	65.2	5	3.511	− 25 25 4.4	66.7	2	14.50
9264	O. Arg. S. 21218 . .	8.0	5 18.33	65.3	2	3.511	− 25 26 52.3	66.7	2	14.51
9265	O. Arg. S. 21219 . .	7.0	5 20.98	65.7	2	3.470	− 23 20 4.6	68.3	2	14.51
9266	Anonymous . . .	6.1	21 5 26.04	68.7	2	+ 2.408	+ 35 43 44.4	46.7	3	+ 14.51
9267	Lacaille 8736 . . .	7.0	5 36.11	62.8	4	3.610	− 30 14 10.4	66.8	2	14.52
9268	Lacaille 8740 . . .	6.0	5 58.73	68.8	2	3.459	− 22 47 9.6	65.2	2	14.55
9269	Lacaille 8737 . . .	7.0	6 12.02	65.2	2	3.874	− 41 4 59.4	69.7	3	14.55
9270	B. A. C. 7366 . . .	8.0	6 32.93	60.8	8	3.530	− 26 29 15.3	59.5	5	14.58

Number.	Name of Star.	Magnitude.	Mean Right Ascension, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.	Mean Declination, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.
			h. m. s.			″	° ′ ″			″
9271	Weisse (2) XXI, 137 .	8.0	21 6 57.54	65.7	1	+ 2.744	+ 19 40 1.5	68.3	2	+ 14.61
9272	ζ Cygni	3.0*	6 58.72	55.6	236	2.550	+ 29 39 16.1	52.8	109	14.61
9273	Anonymous . . .	7.3	6 58.97	68.8	2	2.356	+ 37 59 33.2	46.8	2	14.61
9274	Lacaille 8742 . . .	6.2	7 3.12	63.2	4	3.757	− 36 47 19.1	66.8	2	14.61
9275	Weisse (2) XXI, 154 .	7.0	7 13.47	68.7	2	2.426	+ 35 13 26.4	46.8	2	14.62
9276	Anonymous . . .	7.5	21 7 25.08	68.7	2	+ 3.329	− 15 42 12.6	65.2	2	+ 14.63
9277	φ Capricorni	6.0	7 39.50	68.3	3	3.427	− 21 13 49.3	68.8	2	14.65
9278	Anonymous . . .	8.5	7 41.73	68.7	2	3.331	− 15 50 40.7	63.7	1	14.65
9279	B. A. C. 7373 . . .	6.8	7 48.80	69.3	2	2.408	+ 36 3 25.6	47.6	6	14.66
9280	29 Capricorni	5.5	7 59.70	65.7	2	3.329	− 15 45 2.5	61.5	9	14.67
9281	Lalande 41269 . . .	6.6	21 8 11.42	68.8	2	+ 2.560	+ 29 19 25.9	47.7	1	+ 14.68
9282	B. A. C. 7377 . . .	5.0*	8 14.28	69.7	2	1.531	+ 39 24 42.4	57.7	3	14.68
9283	Weisse XXI, 156 . .	6.7	8 17.78	68.7	3	3.228	− 9 42 1.6	54.7	2	14.69
9284	Lacaille 8747 . . .	7.5	8 23.95	65.7	2	3.826	− 39 37 58.6	66.8	2	14.69
9285	14 Aquarii	7.5	8 46.64	59.6	4	3.229	− 9 47 45.0	54.2	4	14.71
9286	α Equulei	4.5	21 8 49.43	58.6	5	+ 2.998	+ 4 40 15.7	60.6	5	+ 14.72
9287	Anonymous. . . .	6.0	8 54.40	68.7	2	2.347	+ 38 39 48.6	47.2	4	14.72
9288	B. A. C. 7383 . . .	7.0*	8 56.78	60.7	2	2.295	+ 40 34 2.3	53.8	3	14.72
9289	Weisse XXI, 171 . .	7.2	8 58.52	59.6	3	3.228	− 9 44 19.7	67.7	2	14.73
9290	Lacaille 8758 . . .	6.6	9 0.23	62.4	9	3.624	− 31 19 40.5	67.8	2	14.73
9291	Lacaille 8760 . . .	6.7	21 9 1.78	63.6	1	+ 3.818	− 39 24 31.7	69.8	4	+ 14.73
9292	τ Cygni	5.2	9 12.40	68.8	1	2.378	+ 37 26 52.5	46.7	13	14.74
9293	4 Piscis Australis . .	5.2	9 26.29	62.1	9	3.655	− 32 45 18.5	64.8	4	14.75
9294	Anonymous . . .	8.0	9 34.76	67.2	2	3.442	− 22 10 57.2	69.7	2	14.76
9295	Weisse (2) XXI, 225 .	9.0	9 55.15	69.2	2	2.400	+ 36 37 4.4	69.7	2	14.78
9296	Weisse (2) XXI, 226 .	7.0	21 9 55.50	60.7	2	+ 2.297	+ 40 37 42.4	53.8	3	+ 14.78
9297	Lalande 41341 . . .	7.3	9 57.51	68.7	2	+ 2.399	+ 36 40 16.3	54.3	5	14.78
9298	B. A. C. 7393 . . .	6.0*	10 15.69	47.8	6	− 0.215	+ 74 39 11.6	68.3	2	14.80
9299	Lacaille 8764 . . .	7.0	10 30.39	69.2	2	+ 3.873	− 41 38 18.2	61.8	2	14.81
9300	O. Arg. S. 21285 . .	8.5	10 34.63	65.1	3	3.535	− 27 12 0.0	66.8	2	14.82
9301	O. Arg. S. 21286 . .	6.6	21 10 37.43	63.4	6	+ 3.578	− 29 20 57.8	67.7	2	+ 14.82
9302	15 Aquarii	5.5	10 50.24	68.7	2	3.154	− 5 6 16.7	64.8	3	14.84
9303	O. Arg. S. 21290 . .	7.8	10 51.40	68.6	2	3.447	− 22 37 20.5	64.8	2	14.84
9304	Lacaille 8776 . . .	6.4	11 36.98	63.7	4	3.545	− 27 47 48.2	63.8	2	14.88
9305	Lacaille 8777 . . .	6.7	11 39.35	63.3	5	3.527	− 26 55 38.2	65.8	2	14.88
9306	Weisse XXI, 239 . .	7.0	21 11 40.86	67.3	2	+ 3.289	− 13 38 6.8	67.7	2	+ 14.88
9307	θ¹ Microscopii. . . .	5.2	11 47.48	66.2	2	3.862	− 41 23 58.5	67.8	2	14.89
9308	σ Cygni	4.5*	11 55.10	46.5	10	2.352	+ 38 48 35.0	46.1	18	14.90
9309	Lalande 41419 . . .	6.2	12 5.38	68.7	2	2.357	+ 38 37 34.8	47.7	1	14.91
9310	ν Cygni	4.8	12 9.81	47.0	4	2.462	+ 34 18 38.0	64.5	3	14.91

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			h. m. s.			"	° ' "			"
9311	Weisse XXI, 258	8.0	21 12 22.67	69.7	2	+ 3.288	− 13 34 31.0	67.7	2	+ 14.93
9312	B. A. C. 7401	5.5	13 3.35	58.7	2	1.790	+ 55 12 39.0	54.1	5	14.97
9313	Anonymous.	7.2	13 5.47	68.5	2	3.421	− 21 24 33.8	56.7	4	14.97
9314	A Cygni	6.0*	13 14.06	59.1	3	2.232	+ 43 21 29.7	53.8	2	14.98
9315	Lacaille 8787	6.6	13 29.90	62.8	10	3.580	− 29 45 26.8	64.2	2	14.99
9316	Weisse (2) XXI, 310	8.2	21 13 39.46	67.2	2	+ 2.765	+ 19 5 45.9	67.8	2	+ 15.00
9317	16 Aquarii	5.5	13 43.78	68.7	2	3.152	− 5 9 5.7	64.7	3	15.01
9318	Weisse (2) XXI, 322	6.6	13 46.85	68.7	2	2.374	+ 38 13 1.6	47.3	1	15.01
9319	Anonymous.	. .	13 47.22	47.3	3	2.388	+ 37 38 52.5	47.3	3	15.01
9320	Weisse (2) XXI, 328	8.5	14 4.03	68.7	2	2.375	+ 38 12 43.2	46.7	2	15.02
9321	Weisse (2) XXI, 325	7.5	21 14 10.54	67.2	2	+ 2.763	+ 19 15 5.3	68.3	2	+ 15.03
9322	Anonymous.	8.4	14 14.79	65.3	5	3.453	− 23 17 36.0	67.7	1	15.03
9323	Weisse (2) XXI, 327	7.8	14 16.76	68.8	2	2.763	+ 19 14 57.3	68.8	2	15.04
9324	Lacaille 8790	6.9	14 21.12	62.9	5	3.583	− 30 1 45.7	66.8	1	15.04
9325	ι Capricorni	4.8	14 26.78	59.4	20	3.350	− 17 25 40.6	71.0	4	15.05
9326	B. A. C. 7408	7.0	21 14 27.58	48.7	1	+ 3.227	− 9 55 9.8	68.3	2	+ 15.05
9327	34 Vulpeculæ	5.0	14 44.	. . .	.	2.692	+ 23 16 4.4	72.4	1	15.06
9328	Lacaille 8791	7.1	14 48.97	63.2	4	3.769	− 38 19 25.9	65.4	3	15.07
9329	B. A. C. 7413	5.7	14 58.57	63.5	6	3.451	− 23 15 51.9	65.8	4	15.08
9330	α Cephei	3.2*	15 13.96	53.4	160	1.417	+ 61 59 35.1	52.0	103	15.09
9331	B. A. C. 7417	5.2	21 15 23.24	68.8	2	+ 1.662	+ 58 1 56.0	54.7	2	+ 15.10
9332	17 Aquarii	6.5	15 25.66	69.7	2	3.226	− 9 54 49.7	68.3	2	15.10
9333	θ² Microscopii.	6.0	15 28.43	62.7	5	3.853	− 41 36 13.9	63.5	3	15.11
9334	Anonymous.	. .	15 31.	. . .	.	2.069	+ 48 45 35.3	70.7	1	15.11
9335	1 Pegasi	4.5*	15 36.81	65.8	18	2.766	+ 19 12 27.5	63.8	2	15.11
9336	Weisse XXI, 346	8.5	21 15 37.17	59.9	1	+ 3.246	− 11 11 2.7	55.6	5	+ 15.11
9337	Anonymous.	7.8	15 37.65	68.8	3	2.377	+ 38 20 11.1	69.7	2	15.11
9338	B. A. C. 7419	7.0*	15 47.60	62.5	5	2.496	− 25 47 54.3	63.7	2	15.12
9339	Lalande 41544	8.0	16 5.09	67.2	2	3.269	− 12 39 24.6	69.7	2	15.14
9340	B. A. C. 7422	7.3	16 6.15	62.2	2	3.503	− 26 9 29.9	67.3	2	15.14
9341	B. A. C. 7424	5.7	21 16 6.63	68.7	2	+ 3.450	− 23 20 39.3	68.3	2	+ 15.14
9342	O. Arg. S. 21355	7.2	16 11.44	65.2	2	3.466	− 24 13 54.7	66.8	2	15.15
9343	33 Capricorni	5.5	16 12.80	68.7	2	3.416	− 21 26 40.6	56.7	3	15.15
9344	B. A. C. 7426	6.6	16 14.71	63.7	2	3.481	− 25 1 8.6	66.8	2	15.15
9345	Lalande 41550	7.5	16 19.76	66.8	2	3.460	− 23 53 19.0	68.7	2	15.16
9346	18 Aquarii	6.0*	21 16 32.30	45.6	1	+ 3.282	− 13 28 35.5	69.2	2	+ 15.17
9347	Lacaille 8804	6.8	16 41.04	65.3	2	3.694	− 35 27 12.8	68.7	2	15.18
9348	Lalande 41614	7.5	16 58.66	68.8	2	2.386	+ 38 9 55.7	69.3	2	15.19
9349	B. A. C. 7431	6.0*	17 8.74	60.2	2	2.076	+ 48 47 25.7	70.2	2	15.20
9350	Lalande 41624	6.0	17 11.64	68.7	2	2.390	+ 38 2 17.1	62.4	3	15.20

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9351	Anonymous . . .	8.8	21 17 14.72	66.8	2	+ 3.458	− 23 51 52.8	68.7	2	+ 15.21
9352	Anonymous . . .	9.0	17 16.64	68.8	2	3.488	− 25 30 12.7	56.8	2	15.21
9353	Lalande 41627 . . .	7.2	17 19.43	68.8	2	2.389	+ 38 6 39.2	53.3	4	15.21
9354	B. A. C. 7432 . . .	5.3	17 37.11	63.7	3	3.762	− 38 25 53.4	65.4	3	15.23
9355	B. A. C. 7437 . . .	5.0	17 40.08	45.7	1	2.691	+ 23 40 28.5	69.3	2	15.23
9356	B. A. C. 7434 . . .	7.0	21 17 40.56	63.3	5	+ 3.493	− 25 50 20.3	63.7	2	+ 15.23
9357	19 Aquarii	6.0	17 41.49	63.8	2	3.231	− 10 20 32.3	67.7	1	15.23
9358	B. A. C. 7436 . . .	6.5	17 44.69	61.7	5	3.467	− 24 25 21.6	58.6	8	15.24
9359	B. A. C. 7442 . . .	6.9	18 2.52	65.4	3	3.478	− 25 5 7.3	66.8	2	15.25
9360	Anonymous . . .	9.3	18 8.14	65.7	3	3.442	− 23 4 12.4	67.8	2	15.26
9361	Weisse (2) XXI, 433 .	6.2	21 18 8.38	68.7	2	+ 2.424	+ 36 45 9.1	47.3	3	+ 15.26
9362	O. Arg. S. 21382 . .	9.0	18 14.00	66.2	2	3.478	− 25 4 59.6	66.8	2	15.26
9363	Anonymous . . .	7.7	18 15.42	68.7	2	3.430	− 22 25 55.1	66.3	2	15.26
9364	ζ Capricorni	3.7	18 40.09	62.4	17	3.440	− 23 0 54.9	59.2	9	15.29
9365	Lacaille 8821 . . .	7.0	19 19.41	62.6	7	3.537	− 28 19 51.3	64.8	2	15.33
9366	Anonymous . . .	8.0	21 19 20.80	65.2	4	+ 3.384	− 19 54 58.9	66.8	2	+ 15.33
9367	Anonymous . . .	7.3	19 32.93	69.7	7	2.444	+ 36 5 11.7	47.7	1	15.34
9368	B. A. C. 7450 . . .	7.0*	19 56.47	58.8	3	2.780	+ 18 46 14.4	53.7	2	15.36
9369	Weisse XXI, 453 . .	7.0	20 2.98	67.3	2	3.259	− 12 16 12.5	67.8	2	15.37
9370	69 Cygni	6.2	20 3.85	65.7	5	2.446	+ 36 3 51.3	50.4	6	15.37
9371	O. Arg. S. 21404 . .	7.7	21 20 9.31	61.8	3	+ 3.512	− 27 8 37.3	66.8	2	+ 15.37
9372	Anonymous . . .	7.0	20 31.86	68.7	2	2.467	+ 35 14 10.1	48.7	1	15.39
9373	Weisse XXI, 465 . .	6.6	20 38.83	67.2	2	3.257	− 12 10 23.4	67.8	2	15.40
9374	5 Piscis Australis . .	6.4	20 41.23	63.4	6	3.604	− 31 50 47.1	68.2	2	15.40
9375	*b* Capricorni	5.0	20 44.12	68.7	2	3.425	− 22 24 50.1	65.2	2	15.40
9376	Lacaille 8823 . . .	6.7	21 20 47.50	63.4	3	+ 3.758	− 38 41 38.3	67.8	2	+ 15.41
9377	Lacaille 8824 . . .	8.0	21 7.46	65.3	2	3.917	− 44 41 7.9	64.8	2	15.43
9378	Lacaille 8827 . . .	7.2	21 8.76	63.2	4	3.747	− 38 17 57.6	66.7	3	15.43
9379	70 Cygni	6.0	21 38.78	68.7	3	2.441	+ 36 30 35.6	53.1	8	15.46
9380	Anonymous . . .	8.0	21 52.70	66.1	3	3.448	− 23 51 9.7	69.0	3	15.47
9381	Anonymous . . .	9.0	21 22 3.89	68.8	1	+ 3.447	− 23 49 12.2	69.7	2	+ 15.48
9382	Anonymous . . .	8.5	22 4.20	60.8	1	3.446	− 23 45 31.7	68.7	1	15.48
9383	Lalande 41789 . . .	7.1	22 5.60	68.8	2	2.481	+ 34 48 4.2	48.7	1	15.48
9384	B. A. C. 7463 . . .	6.8	22 7.89	68.8	2	3.377	− 19 45 23.0	56.8	2	15.48
9385	B. A. C. 7466 . . .	7.0	22 20.09	64.8	2	3.482	− 25 48 12.9	63.8	3	15.49
9386	B. A. C. 7467 . . .	7.6	21 22 20.38	62.5	7	+ 3.482	− 25 48 11.6	72.7	3	+ 15.49
9387	Weisse XXI, 506 . .	9.0	22 29.73	65.7	3	3.210	− 9 12 44.5	65.7	4	15.50
9388	Lacaille 8834 . . .	6.8	22 37.31	63.3	4	3.491	− 26 19 18.4	65.3	2	15.51
9389	Weisse XXI, 522 . .	7.2	22 59.95	67.7	2	3.297	− 14 54 6.7	68.3	2	15.53
9390	(* 39) Washington. .	9.2	23 14.60	67.0	4	3.322	− 16 28 1.1	69.3	2	15.55

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			h. m. s.			″	° ′ ″			″
9391	O. Arg. S. 21438	9.0	21 23 29.35	67.3	2	+ 3.378	− 19 56 12.9	67.7	2	+ 15.56
9392	O. Arg. N. 22321	9.0	23 31.35	60.7	1	0.771	+ 69 52 9.3	68.8	4	15.56
9393	O. Arg. S. 21442	7.0	23 33.64	65.7	3	3.376	− 19 51 0.3	69.1	3	15.56
9394	O. Arg. S. 21441	7.5	23 33.95	61.7	2	3.482	− 25 54 50.4	65.7	2	15.56
9395	O. Arg. S. 21443	7.4	23 34.47	68.7	3	3.424	− 22 37 25.4	63.7	4	15.56
9396	2 Pegasi	5.0	21 23 36.46	45.7	1	+ 2.714	+ 23 1 38.0	69.2	2	+ 15.56
9397	(* 39) Washington	. .	23 43.	. .	.	3.321	− 16 28 5.0	55.4	3	15.57
9398	Lacaille 8839	6.5	23 45.32	61.7	2	3.484	− 26 1 34.9	65.0	4	15.57
9399	Weisse XXI, 543	9.8	23 59.25	65.7	3	3.211	− 9 21 22.1	65.7	4	15.59
9400	β Aquarii	3.0*	24 11.18	54.5	233	3.163	− 6 11 6.5	51.8	95	15.60
9401	Anonymous	8.5	21 24 14.55	65.7	2	+ 3.440	− 23 40 28.5	68.3	2	+ 15.60
9402	B. A. C. 7479	6.5	24 28.87	63.7	3	3.467	− 25 12 24.6	66.8	2	15.61
9403	O. Arg. S. 21452	7.2	24 34.68	68.7	3	3.459	− 24 45 58.4	68.7	3	15.62
9404	Lalande 41870	7.4	24 45.84	67.3	2	3.264	− 12 52 56.2	68.8	2	15.63
9405	B. A. C. 7485	6.8	25 55.89	66.4	3	3.324	− 16 48 53.7	55.8	6	15.69
9406	Lacaille 8846	6.0	21 26 4.05	64.2	2	+ 3.705	− 37 15 58.9	66.8	2	+ 15.70
9407	Lacaille 8849	6.2	26 36.97	62.2	4	3.557	− 30 18 56.5	64.4	3	15.73
9408	Anonymous	9.0	26 46.25	69.7	2	3.483	− 26 21 5.6	67.8	2	15.74
9409	β Cephei, (1st *)	8.0	26 48.05	63.5	1	+ 0.802	+ 69 56 43.3	67.7	3	15.74
9410	B. A. C. 7504	6.0	26 48.83	62.0	2	−10.285	+ 86 27 0.3	66.8	2	15.74
9411	β Cephei, (2d *)	3.0*	21 26 50.34	57.5	114	+ 0.802	+ 69 56 47.1	50.8	74	+ 15.74
9412	O. Arg. S. 21480	8.7	26 52.90	65.7	4	3.298	− 15 14 55.8	65.4	3	15.74
9413	Weisse XXI, 623	8.8	26 58.07	65.7	3	3.201	− 8 49 55.6	66.2	4	15.75
9414	37 Capricorni	7.0*	26 58.97	65.7	2	3.385	− 20 42 20.9	65.7	4	15.75
9415	Weisse XXI, 628	7.9	27 9.13	67.1	5	3.200	− 8 46 44.0	67.8	2	15.76
9416	B. A. C. 7492	6.3	21 27 15.04	64.0	4	+ 3.441	− 24 4 28.0	63.7	2	+ 15.76
9417	Anonymous	8.8	27 17.48	68.1	3	3.199	− 8 43 0.1	68.3	2	15.77
9418	O. Arg. S. 21490	9.2	27 32.73	67.2	2	3.296	− 15 13 9.8	70.7	2	15.78
9419	B. A. C. 7497	6.0	27 35.34	68.7	2	3.055	+ 1 12 32.1	64.8	3	15.78
9420	Lalande 42034	6.8	27 54.22	68.8	2	2.431	+ 37 54 27.0	47.7	2	15.80
9421	O. Arg. S. 21492	9.0	21 27 54.84	61.8	2	+ 3.479	− 26 17 23.8	68.2	2	+ 15.80
9422	8 Piscis Australis	5.8	28 3.52	63.0	4	3.488	− 26 47 35.7	64.8	2	15.81
9423	Anonymous	8.0	28 10.02	68.7	2	3.313	− 16 19 51.3	57.3	2	15.81
9424	Weisse XXI, 662	7.7	28 10.34	59.8	2	3.226	− 10 36 22.1	68.3	2	15.81
9425	Anonymous	8.0	28 18.00	66.7	2	3.680	− 36 30 34.3	67.8	2	15.82
9426	7 Piscis Australis	6.1	21 28 23.77	62.1	8	+ 3.619	− 33 40 17.2	65.2	2	+ 15.83
9427	Lacaille 8854	7.0	28 24.51	66.7	2	3.680	− 36 30 30.0	67.8	2	15.83
9428	O. Arg. S. 21497	9.0	28 26.23	61.8	2	3.481	− 26 27 14.0	67.1	3	15.83
9429	Anonymous	7.0	28 34.08	68.7	2	3.355	− 19 0 57.2	57.3	2	15.84
9430	ρ Cygni	4.5*	28 43.07	58.7	2	2.253	+ 44 58 27.5	53.7	4	15.84

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9431	72 Cygni	5.0	21 29 3.58	68.8	2	+ 2.435	+ 37 54 27.9	47.6	6	+ 15.86
9432	B. A. C. 7508	7.3	29 10.25	62.4	2	0.800	+ 70 12 16.0	61.7	4	15.87
9433	ε Capricorni	4.9	29 14.19	62.7	6	3.371	— 20 5 27.6	59.4	8	15.87
9434	Anonymous	6.5	29 18.82	68.7	2	2.415	+ 38 48 47.5	46.7	1	15.87
9435	Weisse XXI, 685	7.7	29 23.84	67.3	2	3.228	— 10 47 56.7	67.7	2	15.88
9436	B. A. C. 7507	6.0	21 29 32.38	68.7	2	+ 3.354	— 19 3 45.5	56.8	3	+ 15.89
9437	O. Arg. S. 21515	7.5	29 32.51	59.2	2	3.454	— 25 4 37.5	56.5	5	15.89
9438	Weisse XXI, 691	7.8	29 36.27	68.8	3	3.149	— 5 24 43.5	55.7	2	15.89
9439	Anonymous	8.0	29 40.75	67.3	2	3.193	— 8 26 27.9	67.7	2	15.89
9440	O. Arg. S. 21519	7.7	29 41.98	69.7	2	3.441	— 24 19 15.7	55.7	5	15.89
9441	Lacaille 8863	7.1	21 30 6.55	63.7	4	+ 3.470	— 26 4 19.5	63.7	2	+ 15.92
9442	Lacaille 8862	6.6	30 9.41	63.7	2	3.547	— 30 16 6.8	65.2	4	15.92
9443	O. Arg. S. 21525	6.2	30 10.57	68.7	2	3.334	— 17 50 9.1	56.7	4	15.92
9444	ξ Aquarii	5.4*	30 17.81	65.6	49	3.193	— 8 28 48.7	60.2	9	15.93
9445	Anonymous	6.8	30 20.33	64.2	2	3.758	— 40 9 25.9	66.8	2	15.93
9446	B. A. C. 7515	6.0	21 30 22.30	60.2	4	+ 3.086	— 1 0 59.0	53.7	2	+ 15.93
9447	Lalande 42108	8.0	30 36.92	69.2	2	3.238	— 11 32 4.3	55.7	2	15.94
9448	Lacaille 8867	6.5	30 40.30	65.7	2	3.625	— 34 18 22.8	66.8	2	15.95
9449	B. A. C. 7523	7.5	30 56.40	62.5	5	3.451	— 25 4 37.9	57.8	11	15.96
9450	Lacaille 8870	6.6	30 58.06	63.3	6	3.501	— 27 55 55.9	63.8	2	15.96
9451	5 Pegasi	5.5*	21 31 12.43	47.6	1	+ 2.798	+ 18 41 26.5	68.3	2	+ 15.97
9452	74 Cygni	4.9	31 20.26	60.1	3	2.399	+ 39 47 10.0	68.7	2	15.98
9453	Anonymous	8.0	31 24.73	69.2	2	3.669	— 36 28 21.1	67.8	2	15.99
9454	4 Pegasi	5.0*	31 31.09	46.7	3	2.999	+ 5 8 31.0	68.8	2	15.99
9455	Weisse XXI, 739	8.0	31 36.79	65.7	3	3.283	— 14 41 16.2	65.4	3	16.00
9456	Lacaille 8873	6.4	21 32 1.12	66.5	4	+ 3.639	— 35 9 44.9	67.8	2	+ 16.02
9457	O. Arg. S. 21550	8.5*	32 7.17	65.7	3	3.378	— 20 51 12.0	65.7	3	16.02
9458	B. A. C. 7524	6.2	32 7.73	68.7	3	2.428	+ 38 41 19.4	61.5	3	16.03
9459	γ Capricorni	4.0*	32 19.74	59.4	11	3.322	— 17 17 34.0	60.7	6	16.03
9460	Anonymous	8.0	32 25.	. . .	.	3.637	— 35 9 6.6	67.8	2	16.04
9461	d Aquarii	5.5*	21 32 27.05	45.8	1	+ 3.049	+ 1 36 56.8	68.3	2	+ 16.04
9462	B. A. C. 7528	5.5*	32 29.70	59.2	4	2.786	+ 19 38 5.9	54.3	5	16.04
9463	Weisse XXI, 768	8.0	32 38.09	68.7	2	3.234	— 11 25 54.1	55.8	3	16.05
9464	Weisse (2) XXI, 816	6.0	32 59.73	62.7	1	2.335	+ 42 39 37.0	66.8	2	16.07
9465	Anonymous	8.0	33 9.14	65.3	4	3.446	— 25 3 42.8	69.7	2	16.08
9466	Anonymous	7.0	21 33 18.06	62.6	6	+ 3.594	— 33 9 45.5	64.8	2	+ 16.09
9467	O. Arg. S. 21562	6.6	33 34.85	68.7	3	3.403	— 22 33 42.1	65.6	2	16.10
9468	Weisse XXI, 801	8.5*	33 35.91	68.7	2	3.233	— 11 24 49.4	55.8	3	16.10
9469	Lacaille 8890	6.4	33 44.32	63.0	7	3.456	— 25 44 9.3	64.9	2	16.11
9470	Rumker 9349	7.0	33 48.32	60.3	2	3.292	— 15 28 34.0	55.8	7	16.11

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9471	Lacaille 8889	6.8	21 33 52.22	62.4	6	+ 3.592	− 33 8 30.0	64.8	2	+ 16.12
9472	Lacaille 8887	8.2	33 53.05	63.4	3	3.706	− 38 34 2.5	68.3	2	16.12
9473	B. A. C. 7536	6.2	33 55.75	67.7	3	3.368	− 20 26 26.9	67.8	2	16.12
9474	42 Capricorni	5.0	33 55.86	67.8	3	3.280	− 14 40 14.4	67.2	2	16.12
9475	Lacaille 8891	7.5	33 56.62	63.4	3	3.501	− 28 19 17.3	66.8	2	16.12
9476	Lacaille 8892	7.4	21 34 0.54	63.7	3	+ 3.468	− 26 29 39.9	66.8	2	+ 16.12
9477	41 Capricorni	5.0	34 2.12	64.2	2	3.424	− 23 53 41.5	68.3	2	16.12
9478	O. Arg. S. 21575	7.1	34 4.10	63.7	2	3.497	− 28 6 19.3	68.3	2	16.13
9479	B. A. C. 7538	6.5	34 5.34	66.8	3	3.843	− 44 7 47.4	68.8	2	16.13
9480	9 Cephei	5.0	34 9.82	67.3	4	1.612	+ 61 27 4.8	60.9	4	16.13
9481	Lalande 42269	7.2	21 34 11.97	68.8	2	+ 2.431	+ 38 52 55.8	48.7	1	+ 16.13
9482	75 Cygni	5.2	34 41.56	62.7	4	2.342	+ 42 38 21.5	66.8	2	16.16
9483	κ Capricorni	5.0*	34 49.93	50.6	1	3.352	− 19 30 8.5	69.3	2	16.16
9484	Weisse (2) XXI, 871	7.5*	35 7.	. .	.	2.539	+ 34 2 25.6	47.3	2	16.18
9485	B. A. C. 7549	7.1	35 21.26	63.0	9	3.436	− 24 46 42.4	56.7	6	16.19
9486	B. A. C. 7550	6.2	21 35 23.34	65.6	6	+ 3.363	− 20 15 28.4	67.7	2	+ 16.19
9487	Lacaille 8896	6.2	35 51.77	63.4	3	3.713	− 39 11 9.6	68.1	3	16.22
9488	O. Arg. S. 21596	8.6	36 13.97	68.7	2	3.340	− 18 49 11.7	64.8	2	16.24
9489	Anonymous	7.0	36 19.14	68.7	2	2.483	+ 36 54 50.2	47.7	2	16.24
9490	Lacaille 8900	7.2	36 21.07	63.4	3	3.709	− 39 4 52.5	67.3	2	16.24
9491	45 Capricorni	6.0*	21 36 22.05	59.7	2	+ 3.288	− 15 23 19.1	59.7	8	+ 16.25
9492	Lacaille 8902	7.0	36 31.59	63.2	5	3.446	− 25 32 49.5	63.8	2	16.25
9493	ι Piscis Australis	5.0	36 35.77	66.4	3	3.594	− 33 39 46.3	67.3	2	16.26
9494	B. A. C. 7558	8.0*	36 37.02	59.6	2	3.306	− 16 36 33.9	53.8	2	16.26
9495	77 Cygni	6.0	36 45.05	64.2	4	2.405	− 40 26 21.0	63.8	4	16.27
9496	Anonymous	7.2	21 36 55.25	68.8	2	+ 2.407	+ 40 24 33.8	53.8	2	+ 16.27
9497	Lalande 42355	5.8	37 4.33	68.7	2	3.145	− 5 22 14.7	55.7	2	16.28
9498	π^1 Cygni	5.0	37 7.73	68.8	2	2.123	+ 50 33 6.7	57.8	3	16.28
9499	Anonymous	6.5	37 7.84	68.7	2	2.478	+ 37 15 56.4	48.1	3	16.28
9500	O. Arg. N. 22729	7.0	37 11.89	69.3	2	0.847	+ 70 40 36.7	65.2	1	16.29
9501	Weisse XXI, 896	8.0	21 37 12.99	63.2	3	+ 2.945	+ 9 15 56.7	68.3	2	+ 16.29
9502	ε Pegasi	2.3*	37 18.56	54.0	253	2.945	+ 9 14 5.5	51.3	143	16.29
9503	Lacaille 8907	7.0	37 20.86	63.5	5	3.500	− 28 46 3.8	64.8	2	16.29
9504	Lacaille 8906	7.5	37 23.07	62.8	4	3.510	− 29 21 55.8	67.3	2	16.30
9505	B. A. C. 7562	6.5	37 27.06	66.3	2	3.205	− 9 40 41.0	66.8	2	16.30
9506	Anonymous	6.0	21 37 28.80	68.7	2	+ 2.477	+ 37 22 42.8	48.2	4	+ 16.30
9507	B. A. C. 7565	6.0*	37 29.04	60.7	1	2.406	+ 40 30 59.2	53.8	3	16.30
9508	c^1 Capricorni	5.5	37 32.25	66.3	2	3.205	− 9 43 24.5	69.7	4	16.30
9509	79 Cygni	5.8	37 38.29	68.8	2	2.472	+ 37 38 38.3	57.8	4	16.31
9510	Weisse (2) XXI, 733	6.9	37 49.39	68.8	2	2.472	+ 37 39 56.2	68.8	2	16.32

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9511	μ Cygni, (1st *)	5.5	21 37 53.08	67.4	4	+ 2.657	+ 28 6 41.6	59.0	9	+ 16.32
9512	μ Cygni, (2d *)	6.5	37 53.48	69.4	3	2.657	+ 28 6 38.7	61.4	3	16.32
9513	Lacaille 8911	6.5	38 4.65	62.6	5	3.583	− 33 21 25.9	67.7	2	16.32
9514	B. A. C. 7570	6.8	38 6.65	69.4	3	2.657	+ 28 8 33.5	57.7	2	16.33
9515	Weisse XXI, 916	8.0	38 11.26	61.8	2	3.084	− 0 51 6.5	68.3	2	16.34
9516	c^2 Capricorni	8.2	21 38 47.90	67.7	2	+ 3.207	− 9 55 11.6	56.8	3	+ 16.37
9517	O. Arg. S. 21629	8.8	38 54.52	68.7	2	3.335	− 18 47 53.9	64.8	2	16.37
9518	Anonymous.	8.2	38 55.79	68.8	2	3.229	− 11 27 42.7	55.8	3	16.37
9519	λ Capricorni	5.5	38 59.68	66.1	4	3.236	− 12 0 35.0	57.7	2	16.38
9520	Lacaille 8915	5.7	39 1.57	63.7	2	3.688	− 38 35 49.4	66.8	2	16.38
9521	Anonymous	8.0	21 39 5.00	68.8	2	+ 2.450	+ 38 52 57.0	46.7	2	+ 16.38
9522	Weisse XXI, 933	7.0	39 9.04	65.7	3	3.241	− 12 20 14.4	66.2	4	16.39
9523	δ Capricorni	3.5*	39 18.45	53.1	23	3.304	− 16 45 37.4	55.1	12	16.39
9524	θ Piscis Australis	5.7	39 30.59	62.2	5	3.544	− 31 32 39.2	69.3	2	16.40
9525	O. Arg. S. 21635	8.8	39 31.95	68.7	2	3.420	− 24 19 0.3	55.7	2	16.40
9526	Lacaille 8918	6.8	21 39 35.06	63.1	6	+ 3.488	− 28 23 44.1	65.2	4	+ 16.41
9527	B. A. C. 7584	6.5	39 35.81	59.2	2	2.715	+ 24 56 23.4	63.2	4	16.41
9528	11 Cephei	4.7	39 51.34	63.5	4	0.884	+ 70 40 2.5	63.3	10	16.42
9529	Anonymous	6.5	39 52.71	68.7	2	3.320	− 17 56 26.6	56.7	4	16.42
9530	Anonymous	9.4	39 53.41	65.8	2	3.089	− 1 17 24.5	65.8	2	16.42
9531	O. Arg. S. 21645	7.4	21 39 59.19	68.7	2	+ 3.334	− 18 51 32.8	64.8	2	+ 16.43
9532	B. A. C. 7586	6.0	40 1.59	64.7	2	2.716	+ 24 55 1.5	71.3	6	16.43
9533	Schjellerup 8841	9.3	40 2.88	67.3	2	3.088	− 1 10 18.8	69.1	3	16.43
9534	Lacaille 8923	7.1	40 7.58	63.4	6	3.454	− 26 31 25.3	64.8	2	16.44
9535	27 Aquarii	6.0	40 7.99	65.7	3	3.045	+ 2 2 26.3	60.1	3	16.44
9536	Anonymous	9.1	21 40 8.89	67.3	2	+ 3.088	− 1 10 39.7	69.2	4	+ 16.44
9537	B. A. C. 7590	7.5*	40 25.20	58.7	2	2.845	+ 16 32 54.9	53.7	2	16.45
9538	Weisse XXI, 965	8.6	40 27.77	69.7	2	3.238	− 12 17 5.5	69.7	3	16.45
9539	Anonymous	8.5	40 31.69	68.6	1	3.335	− 19 0 51.8	70.7	1	16.45
9540	Lalande 42507	6.0	40 55.71	68.7	2	2.497	+ 37 0 44.2	47.8	2	16.48
9541	Anonymous	. .	21 40 58.	. . .	.	+ 3.416	− 24 17 11.6	55.8	2	+ 16.48
9542	Anonymous	9.0	41 6.26	65.7	3	3.050	+ 1 38 42.4	65.7	2	16.48
9543	78 Draconis	5.5	41 20.62	68.7	2	0.776	+ 71 40 43.1	57.7	3	16.50
9544	Lacaille 8929	7.5	41 29.51	63.0	4	3.693	− 39 15 28.6	63.2	2	16.50
9545	O. Arg. S. 21668	7.3	41 34.11	68.8	2	3.334	− 19 2 9.6	56.7	2	16.51
9546	B. A. C. 7596	6.4	21 41 41.66	69.7	2	+ 3.152	− 6 3 5.4	67.8	2	+ 16.51
9547	Lacaille 8934	7.2	41 48.99	62.6	8	3.476	− 28 3 12.5	66.0	4	16.52
9548	Weisse XXI, 988	8.1	41 51.02	65.8	2	3.264	− 14 14 35.9	68.3	2	16.52
9549	Anonymous	9.1	41 51.24	67.3	2	3.045	+ 2 0 23.9	69.8	1	16.52
9550	B. A. C. 7599	5.5	42 6.90	48.7	1	3.252	− 13 22 26.2	68.8	2	16.53

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9551	Weisse (2) XXI, 1031	7.0*	21 42 14.61	47.3	2	+ 2.524	+ 35 55 56.6	47.3	2	+ 16.54
9552	O. Arg. S. 21677	7.4	42 30.23	66.3	2	3.473	− 27 59 2.4	66.7	2	16.55
9553	Weisse XXI, 1002	7.5	42 32.49	65.7	3	3.236	− 12 15 27.2	66.2	4	16.56
9554	Lacaille 8937	7.1	42 40.50	63.1	6	3.483	− 28 35 2.7	63.7	3	16.56
9555	Lalande 42563	5.6	42 40.65	68.8	2	2.483	+ 37 59 57.2	47.5	3	16.56
9556	Anonymous	9.0	21 42 56.69	65.7	3	+ 3.045	+ 2 2 28.8	65.7	2	+ 16.57
9557	Anonymous	9.5	43 0.66	65.7	2	3.044	+ 2 10	. .	.	16.58
9558	Anonymous	8.0	43 20.49	68.7	2	3.142	− 5 18 3.2	55.7	2	16.59
9559	Lacaille 8941	6.8	43 26.21	62.2	7	3.405	− 23 55 10.1	64.8	3	16.60
9560	O. Arg. S. 21687	7.4	43 27.19	68.7	2	3.472	− 28 3 6.0	68.2	2	16.60
9561	Anonymous	7.1	21 43 27.49	68.8	2	+ 2.492	+ 37 41 49.7	48.7	1	+ 16.60
9562	Anonymous	8.8	43 29.01	70.7	2	3.611	− 35 41 14.0	70.7	3	16.60
9563	Anonymous	7.0	43 34.64	68.8	2	2.519	+ 36 25 51.4	47.7	2	16.61
9564	Weisse XXI, 1033	8.2	43 58.98	63.8	2	3.260	− 14 8 54.8	66.7	2	16.63
9565	Weisse XXI, 1037	8.6	44 5.24	65.7	3	3.040	+ 2 27 13.4	65.8	2	16.63
9566	Lacaille 8945	8.8	21 44 18.31	63.8	1	+ 3.627	− 36 39 18.0	66.8	2	+ 16.64
9567	Anonymous	8.7	44 21.49	66.8	2	3.340	− 19 47 17.3	67.8	3	16.64
9568	Lacaille 8947	8.0	44 25.58	63.2	4	3.468	− 27 58 11.1	65.4	3	16.65
9569	B. A. C. 7610	7.0	44 32.48	61.0	6	1.079	+ 69 30 7.5	53.7	2	16.65
9570	Lacaille 8948	6.5	44 47.60	68.7	2	3.644	− 37 33 1.5	66.3	2	16.67
9571	O. Arg. S. 21710	8.2	21 45 15.56	63.8	3	+ 3.339	− 19 48 22.4	66.8	3	+ 16.68
9572	Weisse XXI, 1063	8.8	45 16.28	70.7	2	3.150	− 6 1 12.0	70.7	1	16.68
9573	B. A. C. 7614	6.1	45 17.58	68.7	2	2.474	+ 38 52 57.3	47.4	3	16.69
9574	γ Gruis	2.5	45 26.38	62.2	4	3.651	− 38 1 17.4	64.8	2	16.70
9575	B. A. C. 7616	7.0	45 26.89	45.5	2	3.132	− 4 38 53.9	68.3	2	16.70
9576	B. A. C. 7617	7.0*	21 45 30.90	59.6	2	+ 3.219	− 11 13 2.5	54.7	2	+ 16.70
9577	Anonymous	9.2	45 33.39	65.7	2	3.165	− 7 9 13.7	72.7	2	16.70
9578	μ Capricorni	4.8	45 39.65	64.4	45	3.259	− 14 12 31.3	62.8	4	16.71
9579	Weisse XXI, 1071	8.0	45 45.36	59.7	2	3.268	− 14 50 47.8	55.9	7	16.71
9580	Lacaille 8952	6.0	45 54.49	66.3	2	3.623	− 36 43 7.6	69.1	6	16.72
9581	Anonymous	9.8	21 45 55.39	67.3	2	+ 3.033	+ 3 1 2.3	69.2	2	+ 16.72
9582	O. Arg. N. 22961	8.5	45 58.76	64.3	2	1.097	+ 69 30 47.8	61.2	2	16.72
9583	Anonymous	7.0	46 4.29	61.8	1	3.622	− 36 41	. .	.	16.73
9584	B. A. C. 7620	6.0*	46 6.85	58.7	3	3.215	− 10 58 7.6	56.9	9	16.73
9585	Anonymous	6.8	46 7.30	68.8	2	2.501	+ 37 46 26.7	47.8	1	16.73
9586	Anonymous	7.1	21 46 11.88	68.8	5	+ 2.490	+ 38 17 51.6	46.8	3	+ 16.73
9587	15 Pegasi	6.0	46 14.96	57.3	3	2.678	+ 28 8 22.8	57.7	7	16.74
9588	Anonymous	7.4	46 25.35	68.8	4	2.492	+ 38 15 54.7	46.8	1	16.74
9589	Anonymous	8.8	46 31.60	68.7	2	3.220	− 11 22 35.1	55.8	2	16.75
9590	Weisse XXI, 1085	9.0	46 34.94	65.7	2	3.164	− 7 10 20.0	65.8	3	16.75

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9591	16 Pegasi	5.5*	21 46 41.59	60.2	17	+ 2.725	+ 25 16 3.8	57.8	15	+ 16.76
9592	Weisse XXI, 1087.	8.6	46 45.34	65.7	3	3.228	− 12 1 19.7	66.9	6	16.76
9593	Anonymous	9.2	46 51.12	65.7	2	3.228	− 12 0 49.9	71.8	2	16.76
9594	Weisse (2) XXI, 1140	6.0	46 58.13	69.2	2	2.495	+ 38 10 43.3	46.8	1	16.77
9595	Radcliffe 5438	7.0	47 16.27	58.8	2	2.022	+ 55 8 4.0	67.8	2	16.79
9596	B. A. C. 7631	7.0*	21 47 16.88	58.8	2	+ 2.022	+ 55 8 23.5	54.3	5	+ 16.79
9597	B. A. C. 7630	7.0	47 22.28	60.6	2	3.280	− 15 55 0.1	59.4	6	16.79
9598	Anonymous	8.2	47 28.22	68.7	3	3.404	− 24 23 44.8	55.8	2	16.79
9599	Anonymous	9.3	47 28.38	67.3	2	3.032	+ 3 5 33.1	65.7	2	16.80
9600	Weisse XXI, 1106	8.0	47 29.55	65.7	5	3.236	− 12 37 47.5	65.7	3	16.80
9601	Lacaille 8965	6.8	21 47 45.29	62.2	12	+ 3.515	− 31 15 57.9	63.8	2	+ 16.81
9602	Lalande 42700	7.5	47 49.36	59.9	2	3.364	− 21 47 58.2	52.6	8	16.81
9603	O. Arg. S. 21737	7.5	47 49.69	59.7	2	3.392	− 23 42 47.1	67.7	2	16.81
9604	B. A. C. 7632	5.9	47 56.46	62.5	8	3.640	− 37 54 53.7	65.3	2	16.82
9605	Lacaille 8967	7.5	48 34.30	63.8	3	3.600	− 36 1 21.9	66.8	3	16.85
9606	Anonymous.	9.0	21 48 46.51	68.7	1	+ 3.356	− 21 25 38.5	53.3	4	+ 16.86
9607	Lacaille 8968	7.2	49 1.47	70.7	2	3.141	− 5 25 5.3	70.7	2	16.87
9608	B. A. C. 7639	6.3	49 2.24	63.1	6	3.443	− 27 8 24.1	63.8	2	16.87
9609	Weisse XXI, 1139	7.8	49 3.11	62.0	3	3.315	− 18 33 37.0	67.8	2	16.87
9610	Weisse (2) XXI, 1196	6.0	49 22.56	68.7	2	2.558	+ 35 29 7.2	47.3	2	16.88
9611	O. Arg. S. 21759	8.7	21 49 41.74	68.7	3	+ 3.360	− 21 46 56.3	70.2	2	+ 16.90
9612	O. Arg. S. 21760	8.7	49 42.44	68.7	3	3.360	− 21 48 32.5	70.2	2	16.90
9613	17 Pegasi	6.0*	50 6.86	51.3	5	2.927	+ 11 24 47.3	54.1	5	16.92
9614	μ Cephei	5.7	50 10.99	62.7	5	2.010	+ 55 56 58.0	65.7	2	16.92
9615	B. A. C. 7644	7.0*	50 16.22	58.8	2	0.887	+ 71 49 47.1	53.7	2	16.93
9616	Rumker XXI, 163	9.2	21 50 30.40	60.8	2	+ 3.352	− 21 24 5.6	54.3	4	+ 16.94
9617	B. A. C. 7647	6.0	50 49.40	62.5	3	3.652	− 39 3 44.7	67.3	2	16.95
9618	B. A. C. 7648	7.0*	50 51.42	46.8	12	3.241	− 13 19 59.3	46.8	11	16.95
9619	B. A. C. 7650	5.7	50 52.91	45.7	3	3.148	− 6 5 14.1	67.8	2	16.95
9620	B. A. C. 7649	6.0	50 54.91	62.7	4	3.358	− 21 50 56.3	55.9	9	16.96
9621	Lalande 42813	8.5	21 51 4.80	59.2	2	+ 3.335	− 20 16 25.3	55.4	3	+ 16.97
9622	79 Draconis	6.0*	51 7.61	64.5	5	0.735	+ 73 2 25.7	63.8	6	16.97
9623	O. Arg. S. 21772	8.2	51 18.14	64.4	6	3.397	− 24 33 25.5	66.7	2	16.98
9624	O. Arg. S. 21774	7.1	51 23.61	64.4	7	3.396	− 24 29 58.2	66.7	2	16.98
9625	B. A. C. 7652	6.2	51 25.15	64.4	6	3.382	− 23 32 23.4	59.7	9	16.98
9626	Lacaille 8981	7.4	21 51 26.28	63.8	2	+ 3.478	− 29 43 24.3	65.3	2	+ 16.98
9627	Anonymous	. .	51 32.58	66.2	4	3.340	− 20 40 18.3	58.0	4	16.99
9628	11 Piscis Australis	6.8	51 32.80	62.4	5	3.455	− 28 17 51.5	62.5	3	16.99
9629	Lacaille 8985	7.0	51 45.33	62.5	3	3.502	− 31 11 37.0	66.6	2	17.00
9630	O. Arg. S. 21789	9.2	52 1.64	68.8	2	3.348	− 21 18 8.7	55.7	2	17.01

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9631	Lalande 42878	7.3	21 52 13.41	68.7	2	+ 2.514	+ 38 15 39.2	48.8	1	+ 17.02
9632	Anonymous	9.2	52 39.84	65.7	1	3.230	− 12 39 39.9	68.8	2	17.04
9633	Lacaille 8989	6.0	52 46.15	63.7	1	3.463	− 28 59 42.8	66.8	2	17.04
9634	η Piscis Australis	6.0	52 47.08	60.4	3	3.465	− 29 7 26.0	65.2	4	17.04
9635	O. Arg. S. 21796	7.0	52 49.67	59.7	1	3.385	− 23 57 49.8	68.3	2	17.05
9636	Weisse XXI, 1223	9.0*	21 52 51.84	46.8	2	+ 3.241	− 13 31 22.7	46.8	3	+ 17.05
9637	O. Arg. S. 21800	8.8	53 8.02	68.7	2	3.342	− 21 0 47.7	57.0	3	17.06
9638	18 Pegasi	6.0	53 8.35	58.8	2	2.998	+ 6 2 52.5	58.8	2	17.06
9639	Lacaille 8993	7.1	53 12.12	62.7	2	3.555	− 34 30 12.5	64.8	2	17.06
9640	Weisse XXI, 1240	7.7	53 32.21	57.8	2	3.243	− 13 41 37.5	57.8	2	17.08
9641	Anonymous	9.1	21 53 51.60	64.4	2	+ 3.346	− 21 23 46.5	68.8	2	+ 17.09
9642	Weisse XXI, 1253	8.0	54 9.02	68.8	2	3.229	− 12 39 45.2	68.5	3	17.11
9643	Weisse XXI, 1255	8.1	54 10.12	68.8	2	3.229	− 12 39 55.7	68.5	3	17.11
9644	Weisse (2) XXI, 1331	6.2	54 11.84	68.7	2	2.602	+ 33 57 33.8	61.5	3	17.11
9645	Lacaille 9000	6.7	54 22.58	62.2	6	3.521	− 32 48 28.8	66.8	2	17.12
9646	B. A. C. 7665	6.2	21 54 29.15	66.8	2	+ 3.306	− 18 34 24.5	64.2	4	+ 17.12
9647	Lacaille 9003	6.7	54 41.63	62.8	6	3.442	− 28 2 18.6	64.8	1	17.13
9648	29 Aquarii, (1st *)	7.0	54 46.41	68.8	2	3.293	− 17 38 16.4	64.8	1	17.13
9649	29 Aquarii, (2d *)	7.0	54 46.72	68.8	2	3.293	− 17 38 13.8	64.8	2	17.13
9650	Lacaille 9005	7.5	55 9.68	63.8	5	3.436	− 27 43 28.5	72.7	2	17.15
9651	Lacaille 9004	7.2	21 55 10.74	63.1	7	+ 3.481	− 30 34 39.6	66.8	2	+ 17.15
9652	Anonymous	9.0	55 17.58	68.7	2	3.211	− 11 19 51.6	55.8	2	17.15
9653	O. Arg. S. 21828	8.8	55 23.89	68.7	2	3.414	− 26 19 32.3	67.3	2	17.16
9654	O. Arg. S. 21829	9.0	55 26.06	68.7	2	3.334	− 20 47 5.2	56.2	2	17.16
9655	Lacaille 9007	7.8	55 35.23	62.5	3	3.471	− 30 1 17.9	67.3	2	17.17
9656	O. Arg. S. 21832	9.0	21 55 39.44	60.7	2	+ 3.356	− 22 22 34.1	56.4	5	+ 17.18
9657	30 Aquarii	5.5*	55 54.40	65.7	2	3.159	− 7 11 51.4	66.8	2	17.19
9658	Lacaille 9006	7.0	55 54.53	66.8	3	3.641	− 39 33 2.0	66.8	2	17.19
9659	O. Arg. S. 21836	8.4	55 55.95	67.3	2	3.400	− 25 29 37.2	67.8	2	17.19
9660	O. Arg. S. 21837	8.4	55 56.49	67.3	2	3.401	− 25 31 18.8	67.8	2	17.19
9661	o Aquarii	4.5	21 56 4.23	45.6	3	+ 3.106	− 2 49 46.3	67.8	2	+ 17.19
9662	Weisse (2) XXI, 1398	6.5	56 15.58	69.2	2	2.567	+ 36 18 24.1	46.8	2	17.20
9663	13 Piscis Australis	6.6	56 19.03	63.4	5	3.478	− 30 35 33.8	66.8	2	17.21
9664	O. Arg. S. 21841	8.0	56 21.73	64.8	2	3.356	− 22 27 22.2	58.0	12	17.21
9665	B. A. C. 7677	6.5*	56 29.76	59.2	2	0.627	+ 74 19 35.9	54.2	4	17.21
9666	Lacaille 9012	6.7	21 56 37.80	63.2	2	+ 3.454	− 29 6 44.8	64.8	2	+ 17.22
9667	B. A. C. 7675	6.8	56 38.54	66.4	3	3.429	− 27 29 53.3	61.7	2	17.22
9668	Anonymous	8.2	57 9.14	68.7	3	3.317	− 19 45 8.8	55.5	3	17.24
9669	Anonymous	8.8	57 16.20	69.2	2	3.428	− 27 31 36.5	55.8	1	17.25
9670	B. A. C. 7680	8.0*	57 16.28	58.8	2	3.138	− 5 31 0.5	53.7	2	17.25

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9671	32 Aquarii	4.7	21 57 35.22	46.2	3	+ 3.091	− 1 34 55.0	67.8	2	+ 17.26
9672	λ Gruis.	4.5	57 39.77	62.7	6	3.647	− 40 13 3.2	65.3	2	17.27
9673	O. Arg. S. 21869	7.8	58 5.90	60.6	3	3.310	− 19 20 50.1	57.0	10	17.29
9674	Weisse XXI, 1333.	9.0	58 7.53	61.9	3	3.199	− 10 34 29.7	58.3	4	17.29
9675	Anonymous	8.1	58 7.80	68.7	2	3.325	− 20 27 8.1	49.8	3	17.29
9676	O. Arg. S. 21877	8.4	21 58 11.80	68.7	2	+ 3.313	− 19 36 37.2	56.1	3	+ 17.29
9677	O. Arg. S. 21876	6.5	58 12.86	68.7	2	3.454	− 29 23 4.0	67.3	2	17.29
9678	Anonymous	9.0	58 16.01	69.7	1	3.425	− 27 31 34.4	67.8	1	17.29
9679	α Aquarii	3.0*	58 35.50	53.1	196	3.084	− 0 59 54.2	51.5	88	17.31
9680	ι Aquarii	4.5*	58 52.35	54.4	20	3.247	− 14 32 50.0	55.0	6	17.32
9681	23 Pegasi	6.0*	21 59 14.16	46.7	1	+ 2.710	+ 28 17 8.1	46.7	1	+ 17.33
9682	α Gruis	2.0*	59 23.34	52.2	18	3.808	− 47 38 14.3	56.9	5	17.34
9683	B. A. C. 7694	6.6	59 26.66	63.9	2	3.356	− 22 55 18.8	65.2	2	17.34
9684	O. Arg. S. 21896	7.8	59 42.18	65.7	1	3.319	− 20 15 0.3	67.7	2	17.36
9685	Lacaille 9027	7.2	59 45.21	63.7	2	3.385	− 25 4 22.9	66.8	2	17.36
9686	B. A. C. 7697	6.0	21 59 50.37	64.7	2	+ 3.204	− 11 7 40.5	53.8	2	+ 17.36
9687	Weisse XXI, 1375.	9.0	59 51.92	64.8	2	3.188	− 9 51 48.3	58.4	4	17.36
9688	O. Arg. S. 21903	9.5	21 59 54.67	65.7	5	3.389	− 25 22 39.1	65.7	3	17.37
9689	O. Arg. S. 21904	6.2	22 0 0.39	68.7	3	3.253	− 15 10 16.6	66.2	2	17.37
9690	Lalande 43106	8.0	0 3.58	60.8	2	3.346	− 22 16 26.3	55.5	3	17.37
9691	O. Arg. N. 23362	8.0	22 0 6.20	67.3	2	+ 2.191	+ 52 49 50.9	69.0	4	+ 17.37
9692	O. Arg. S. 21909	7.8	0 11.81	67.9	3	3.359	− 23 17 44.7	69.7	2	17.38
9693	B. A. C. 7702	5.5	0 13.63	66.7	2	3.535	− 34 43 27.9	66.1	3	17.38
9694	Weisse XXI, 1384.	8.0	0 19.45	61.9	3	3.199	− 10 45 35.0	58.5	4	17.38
9695	O. Arg. S. 21910	7.4	0 24.32	63.8	2	3.375	− 24 24 54.9	66.8	2	17.39
9696	ι Pegasi	5.0	22 0 29.89	65.6	2	+ 2.766	+ 24 39 44.9	67.7	2	+ 17.39
9697	Anonymous	9.5	0 31.01	65.7	1	2.190	+ 52 57 20.1	69.8	2	17.39
9698	O. Arg. S. 21912	7.8	0 33.78	68.7	2	3.295	− 18 30 53.3	64.9	1	17.39
9699	O. Arg. N. 23385	6.8	0 50.30	67.1	5	2.192	+ 52 56 34.1	66.5	4	17.41
9700	O. Arg. S. 21915	9.2	0 55.09	68.8	2	3.345	− 22 22 19.7	66.8	2	17.41
9701	Weisse XXI, 1398.	9.0*	22 1 4.50	47.6	2	+ 3.218	− 12 17 47.2	47.9	1	+ 17.41
9702	35 Aquarii	5.7	1 17.99	69.8	5	3.302	− 19 12 11.3	56.7	7	17.43
9703	Anonymous	7.8	1 22.87	67.2	2	3.633	− 40 18 29.1	67.8	1	17.43
9704	O. Arg. N. 23425	8.5	1 24.28	67.7	2	2.193	+ 53 2 43.3	69.8	1	17.43
9705	O. Arg. S. 21923	8.3	1 25.03	70.2	4	3.302	+ 19 10 6.1	68.9	2	17.43
9706	O. Arg. S. 21925	6.9	22 1 38.44	64.0	8	+ 3.371	− 24 20 39.3	66.8	2	+ 17.44
9707	O. Arg. N. 23438	7.8	1 38.63	67.2	2	2.213	+ 52 27 38.5	69.3	2	17.44
9708	Lacaille 9036	5.0	1 44.37	62.6	2	3.529	− 34 42 2.9	66.1	3	17.44
9709	Anonymous.	9.0	1 48.48	69.7	1	2.197	+ 53 0 30.5	69.8	1	17.45
9710	15 Piscis Australis	5.5*	1 55.70	50.8	2	3.504	− 33 14 3.1	50.8	6	17.45

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9711	B. A. C. 7715	6.4	22 2 0.74	63.0	6	+ 3.437	− 28 58 43.4	63.8	2	+ 17.46
9712	36 Aquarii	7.1	2 2.54	58.7	3	3.175	− 8 52 19.8	64.8	2	17.46
9713	Weisse XXII, 13	8.0	2 5.87	61.5	3	3.182	− 9 29 6.9	58.0	5	17.46
9714	O. Arg. N. 23452	6.0	2 14.94	65.7	4	2.212	+ 52 37 27.5	65.1	3	17.47
9715	Anonymous.	6.5	2 37.61	65.7	2	3.627	− 40 13 50.6	68.7	2	17.48
9716	O. Arg. S. 21944	8.8	22 2 41.62	67.2	2	+ 3.367	− 24 14 19.9	68.3	2	+ 17.49
9717	π^1 Pegasi	6.0	3 1.58	57.2	4	+ 2.656	+ 32 29 21.7	57.8	3	17.50
9718	B. A. C. 7732	7.5	3 2.18	66.1	4	− 1.693	+ 82 11 38.8	66.8	2	17.50
9719	Lacaille 9045	7.7	3 6.54	65.7	5	+ 3.596	− 38 44 2.9	69.8	6	17.50
9720	e^2 Aquarii	6.0*	3 8.16	47.6	22	3.214	− 12 15 5.9	47.7	9	17.50
9721	Anonymous	8.3	22 3 8.27	68.8	1	+ 2.585	+ 36 43 39.4	47.8	1	+ 17.50
9722	B. A. C. 7735	7.3	3 9.61	69.7	1	− 1.689	+ 82 11 42.7	66.8	2	17.51
9723	B. A. C. 7724	7.0*	3 15.93	59.2	2	+ 3.334	− 21 55 6.5	55.5	3	17.51
9724	Lacaille 9046	6.2	3 26.10	63.2	2	3.539	− 35 39 9.4	59.5	3	17.52
9725	B. A. C. 7729	7.0	3 30.84	62.0	14	3.416	− 27 50 18.9	63.8	2	17.52
9726	Lacaille 9047	7.0	22 3 41.75	63.3	5	+ 3.598	− 38 59 32.4	67.9	2	+ 17.53
9727	π^2 Pegasi	4.0*	3 46.34	45.7	4	2.658	+ 32 29 31.9	57.8	3	17.53
9728	O. Arg. S. 21962	9.0	3 56.64	67.2	2	3.404	− 27 6 43.3	67.8	1	17.54
9729	O. Arg. S. 21964	9.0	4 0.50	63.7	2	3.335	− 22 3 41.0	70.3	2	17.54
9730	Lacaille 9058	6.3	4 3.66	63.7	3	3.402	− 27 1 0.2	66.8	2	17.54
9731	Lacaille 9052	7.0	22 4 4.23	65.3	2	+ 3.633	− 40 53 27.3	69.8	2	+ 17.54
9732	Weisse XXII, 59	7.5	4 6.81	68.7	2	3.206	− 11 42 49.2	47.9	2	17.55
9733	O. Arg. S. 21966	9.0	4 38.55	64.2	4	3.292	− 18 49 3.2	54.8	3	17.57
9734	B. A. C. 7739	7.0	4 41.40	61.9	10	3.412	− 27 46 25.2	66.8	2	17.57
9735	Anonymous	9.0	4 43.64	47.8	1	3.212	− 12 17 10.6	58.3	2	17.57
9736	B. A. C. 7740	7.0*	22 4 48.95	47.7	5	+ 3.206	− 11 45 16.9	47.7	5	+ 17.58
9737	39 Aquarii	5.0	4 52.55	65.1	2	3.243	− 14 52 53.0	64.8	2	17.58
9738	Lalande 43288	8.3	4 54.09	60.1	3	3.290	− 18 43 0.5	55.3	4	17.58
9739	O. Arg. S. 21972	9.1	5 1.78	65.7	2	3.334	− 22 11 34.7	67.8	1	17.58
9740	O. Arg. S. 21975	6.0	5 3.65	64.7	2	3.400	− 27 1 0.1	66.8	2	17.59
9741	Lalande 43319	6.8	22 5 4.71	68.8	2	+ 2.611	+ 35 38 26.7	47.8	2	+ 17.59
9742	B. A. C. 7742	6.0	5 5.72	70.7	2	2.896	+ 15 21 7.2	68.7	2	17.59
9743	Lalande 43320	8.0	5 6.81	68.8	2	2.595	+ 36 36 17.7	55.1	3	17.59
9744	O. Arg. S. 21980	9.0	5 9.00	65.7	2	3.334	− 22 10 23.0	68.8	2	17.59
9745	O. Arg. S. 21983	8.0	5 10.32	67.2	2	3.402	− 27 11 8.3	55.8	2	17.59
9746	O. Arg. S. 21987	8.2	22 5 24.22	65.7	2	+ 3.332	− 22 5 46.6	57.2	2	+ 17.60
9747	B. A. C. 7744	6.0	5 26.36	48.7	1	3.133	− 5 24 34.1	67.8	2	17.60
9748	B. A. C. 7745	6.2	5 52.06	62.8	7	3.382	− 25 52 20.1	64.8	2	17.62
9749	ζ Cephei	4.0*	6 0.00	65.8	2	2.070	+ 57 30 42.5	61.0	5	17.63
9750	O. Arg. S. 22002	7.0	6 21.74	65.7	2	3.330	− 22 6 12.3	57.2	2	17.64

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9751	λ Piscis Australis	6.1	22 6 22.18	58.9	8	+ 3.417	− 28 27 34.0	67.3	2	+ 17.64
9752	Weisse XXI, 105	9.0*	6 26.73	47.6	2	3.210	− 12 16 50.3	47.6	2	17.64
9753	B. A. C. 7752	7.0*	6 34.00	54.4	3	3.129	− 5 8 33.8	54.1	6	17.65
9754	B. A. C. 7753	5.2	6 36.35	68.7	2	2.645	+ 33 54 56.3	47.8	3	17.65
9755	Weisse XXII, 113.	9.0	6 41.84	65.7	5	3.062	+ 0 55 2.2	65.7	3	17.65
9756	B. A. C. 7754	6.0*	22 6 45.74	58.7	2	+ 2.127	+ 56 8 37.8	53.7	2	+ 17.66
9757	O. Arg. S. 22013	6.2	6 57.02	68.7	2	3.363	− 24 41 50.4	56.8	5	17.66
9758	Weisse XXII, 118.	7.2	7 3.31	68.7	2	3.251	− 15 47 26.8	63.8	2	17.67
9759	Anonymous	7.8	7 15.49	66.8	2	3.385	− 26 20 28.7	68.2	2	17.68
9760	Weisse XXII, 129.	9.0	7 16.67	67.3	2	3.058	+ 1 17 21.4	68.8	2	17.68
9761	B. A. C. 7759	6.0*	22 7 24.28	59.8	2	+ 1.976	+ 60 4 2.0	53.7	2	+ 17.69
9762	Piazzi XXII, 33	6.5	7 34.76	65.9	2	2.885	+ 16 30 1.0	67.8	2	17.69
9763	B. A. C. 7765	5.0*	7 52.35	51.9	7	2.563	+ 39 1 17.8	50.5	14	17.70
9764	Anonymous	8.3	7 52.77	69.0	4	3.473	− 32 33 22.7	67.8	2	17.70
9765	O. Arg. S. 22022	8.2	7 56.39	65.7	2	3.325	− 21 58 16.8	68.3	2	17.71
9766	O. Arg. S. 22024	8.6	22 8 17.78	70.7	2	+ 3.325	− 21 59 22.8	69.5	3	+ 17.72
9767	Weisse XXII, 153.	8.6	8 26.82	65.7	3	3.058	+ 1 15 11.5	65.7	3	17.73
9768	Weisse XXII, 155.	8.4	8 28.96	66.1	3	3.069	+ 0 16 44.7	68.3	2	17.73
9769	B. A. C. 7768	5.5	8 45.04	64.7	2	3.384	− 26 35 37.3	67.8	2	17.74
9770	Weisse XXII, 167.	9.0	9 0.52	69.7	2	3.208	− 12 21 38.3	69.3	2	17.75
9771	Weisse XXII, 175.	8.0	22 9 16.91	69.7	2	+ 3.208	− 12 20 39.5	69.3	2	+ 17.76
9772	42 Aquarii	6.0*	9 18.02	59.2	2	3.221	− 13 31 41.1	55.7	10	17.76
9773	B. A. C. 7772	6.0	9 20.65	45.6	1	3.097	− 2 17 31.5	72.7	2	17.76
9774	B. A. C. 7775	6.0	9 25.73	68.8	2	1.882	+ 62 28 5.6	53.7	2	17.77
9775	θ Aquarii	4.5*	9 26.64	61.4	129	3.164	− 8 28 44.5	59.0	24	17.77
9776	Lacaille 9088	6.6	22 9 34.71	66.3	2	+ 3.466	− 32 27 51.1	66.8	3	+ 17.77
9777	44 Aquarii	5.5	9 47.77	68.7	2	3.138	− 6 5 5.2	54.8	3	17.78
9778	1 Lacertæ	5.0	9 52.17	46.1	11	2.605	+ 37 3 10.7	46.3	11	17.78
9779	ε Cephei	5.5	9 53.43	66.3	2	2.144	+ 56 20 47.0	59.8	4	17.79
9780	O. Arg. S. 22049	8.5	9 53.47	68.7	2	3.311	− 21 10 1.8	55.8	1	17.79
9781	Lacaille 9091	7.1	22 10 3.67	62.8	3	+ 3.542	− 37 17 35.1	65.8	2	+ 17.79
9782	O. Arg. S. 22051	8.0	10 16.60	68.7	2	3.311	− 21 11 28.4	55.8	1	17.79
9783	Lacaille 9093	7.4	10 26.12	63.8	2	3.333	− 22 59 47.9	63.8	2	17.81
9784	O. Arg. S. 22060	8.2	10 50.21	68.7	2	3.310	− 21 11 37.3	55.8	2	17.82
9785	Lacaille 9097	6.7	11 24.68	63.8	4	3.409	− 28 54 32.6	66.8	2	17.85
9786	45 Aquarii	6.0	22 11 29.84	45.6	2	+ 3.224	− 14 0 15.1	67.8	2	+ 17.85
9787	O. Arg. S. 22070	8.0	11 40.05	68.8	2	3.350	− 24 30 9.9	56.7	4	17.86
9788	Weisse (2) XXII, 271.	7.0	11 45.22	68.7	2	2.591	+ 38 19 35.4	47.8	2	17.86
9789	Weisse XXII, 223.	8.4	11 46.61	65.8	2	3.163	− 8 29 52.0	66.8	2	17.86
9790	Anonymous	6.2	12 37.98	68.7	2	3.498	− 35 13 3.5	55.8	3	17.89

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9791	Weisse (2) XXII, 291 .	8.5	22 12 47.83	69.6	4	+ 2.617	+ 37 3 47.0	68.8	2	+ 17.90
9792	Weisse (2) XXII, 292 .	6.5	12 48.17	69.4	5	2.617	+ 37 4 3.0	62.1	3	17.90
9793	ρ Aquarii	5.5*	12 49.79	61.9	35	3.162	− 8 31 21.7	65.9	4	17.90
9794	Anonymous . . .	9.1	13 18.45	67.2	2	3.319	− 22 20 55.8	68.8	2	17.92
9795	30 Pegasi	4.5	13 24.99	46.4	3	3.019	+ 5 5 16.5	71.1	3	17.93
9796	O. Arg. S. 22087 . .	8.6	22 13 26.04	66.7	3	+ 3.318	− 22 20 10.0	68.3	2	+ 17.93
9797	O. Arg. S. 22089 . .	7.6	13 42.49	68.7	2	3.410	− 29 28 33.1	56.0	4	17.94
9798	Anonymous . . .	6.8	13 50.93	68.8	2	3.494	− 35 13 30.9	55.8	3	17.94
9799	47 Aquarii	6.4	13 52.82	65.7	2	3.317	− 22 17 54.4	72.8	2	17.94
9800	B. A. C. 7793 . . .	7.0*	14 3.94	59.6	2	3.145	− 6 56 47.0	54.9	2	17.95
9801	Lacaille 9109 . . .	7.3	22 14 5.93	62.6	6	+ 3.364	− 26 4 8.4	66.8	2	+ 17.95
9802	Lalande 43630 . . .	6.8	14 18.87	66.5	3	2.630	+ 36 35 44.9	57.8	6	17.96
9803	γ Aquarii	3.0*	14 25.39	57.4	30	3.094	− 2 5 29.2	60.3	7	17.97
9804	Weisse XXII, 281. .	8.0	14 26.76	59.7	1	3.144	− 6 53 4.7	67.4	1	17.97
9805	31 Pegasi	4.5*	14 37.63	58.7	2	2.951	+ 11 30 3.0	54.2	5	17.97
9806	Weisse XXII, 288 . .	8.0*	22 14 45.81	48.6	2	+ 3.193	− 11 33 6.5	48.6	3	+ 17.98
9807	32 Pegasi	5.0	14 51.64	66.8	3	2.762	+ 27 37 34.7	58.9	6	17.98
9808	O. Arg. S. 22102 . .	8.5	14 53.60	67.3	2	3.353	− 25 23 49.4	67.8	2	17.98
9809	Anonymous . . .	8.4	14 58.05	68.8	2	2.633	+ 36 34 31.5	55.1	3	17.99
9810	2 Lacertæ	5.0	15 15.01	58.7	2	2.465	+ 45 49 56.9	53.7	4	18.00
9811	Lacaille 9113 . . .	7.7	22 15 21.24	63.2	5	+ 3.366	− 26 32 38.8	64.4	3	+ 18.00
9812	Weisse XXII, 300 . .	9.0	15 22.23	69.8	3	3.197	− 11 56 39.3	69.8	2	18.00
9813	Weisse XXII, 303 . .	9.4	15 23.11	64.4	3	3.048	+ 2 19 1.8	69.0	4	18.00
9814	49 Aquarii	5.5	15 42.34	64.3	2	3.352	− 25 28 7.9	54.8	3	18.01
9815	B. A. C. 7803 . . .	6.0*	16 3.64	59.2	3	2.525	+ 43 2 27.2	53.8	3	18.03
9816	O. Arg. S. 22117 . .	7.3	22 16 4.63	68.7	2	+ 3.301	− 21 19 18.9	63.8	2	+ 18.03
9817	Lacaille 9120 . . .	7.5	16 15.88	68.7	2	3.371	− 27 4 46.8	65.7	2	18.04
9818	O. Arg. S. 22121 . .	8.2	16 18.43	68.8	2	3.401	− 29 22 51.2	56.2	2	18.04
9819	Lacaille 9119 . . .	6.4	16 21.12	63.4	3	3.559	− 39 50 4.4	65.8	2	18.04
9820	Anonymous . . .	8.4	16 27.36	65.8	2	3.543	− 38 55 5.3	66.9	2	18.04
9821	O. Arg. S. 22123 . .	7.8	22 16 34.00	65.7	2	+ 3.311	− 22 18 11.6	68.4	2	+ 18.05
9822	Lalande 43717 . . .	6.0	16 38.11	68.8	2	2.649	+ 35 57 2.6	48.7	1	18.05
9823	Weisse XXII, 331. .	7.5	16 40.62	66.4	3	3.195	− 11 53 36.0	67.5	3	18.05
9824	Lacaille 9126 . . .	7.7	16 49.10	62.3	4	3.332	− 24 4 31.1	58.7	5	18.06
9825	51 Aquarii	5.2	16 49.20	68.8	2	3.128	− 5 32 38.9	57.7	4	18.06
9826	33 Pegasi	6.5*	22 16 55.42	59.4	3	+ 2.859	+ 20 8 31.1	63.2	4	+ 18.06
9827	Lacaille 9127 . . .	6.5	16 55.96	62.3	4	3.375	− 27 34 0.8	68.8	2	18.06
9828	50 Aquarii	6.0*	16 56.90	58.8	2	3.220	− 14 14 16.7	53.7	3	18.06
9829	Weisse XXII, 346 . .	7.8	17 4.67	66.4	3	3.194	− 11 51 52.2	66.8	2	18.07
9830	Lalande 43719 . . .	7.7	17 15.27	68.8	2	3.213	− 13 39 53.5	55.7	2	18.07

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9831	Weisse XXII, 360	9.0	22 17 22.08	65.7	3	+ 3.040	+ 3 6 48.9	67.8	2	+ 18.08
9832	B. A. C. 7809	7.0*	17 22.44	67.1	3	3.091	− 1 53 46.1	66.8	2	18.08
9833	Weisse XXII, 363	8.6	17 38.55	68.8	2	3.213	− 13 42 40.3	55.7	2	18.09
9834	Lalande 43751	6.0	17 42.97	69.7	2	2.623	+ 37 51 39.9	47.7	1	18.09
9835	Anonymous	8.1	17 47.09	68.8	2	2.613	+ 38 30 46.8	48.6	1	18.09
9836	B. A. C. 7812	5.5*	22 17 50.63	59.4	2	+ 2.199	+ 56 34 39.5	53.8	2	+ 18.10
9837	Anonymous	9.5	17 54.69	67.7	2	3.041	+ 3 5 50.3	69.3	2	18.10
9838	O. Arg. S. 22132	8.2	17 55.97	65.7	2	3.308	− 22 18 29.2	68.3	2	18.10
9839	O. Arg. S. 22133	8.5	18 1.26	69.3	2	3.397	− 29 25 46.9	55.7	3	18.10
9840	β Lacertæ	5.5	18 3.65	57.3	5	2.348	+ 51 31 42.6	57.8	3	18.10
9841	π Aquarii	4.8	22 18 7.58	66.2	39	+ 3.065	+ 0 40 5.7	57.4	7	+ 18.10
9842	Lacaille 9130	7.0	18 15.45	65.7	2	3.401	− 29 47 29.1	66.8	2	18.10
9843	Lacaille 9131	6.8	18 18.51	63.3	4	3.387	− 28 43 19.7	67.3	2	18.11
9844	O. Arg. S. 22142	9.0	18 20.05	65.3	2	3.323	− 23 38 5.3	56.7	3	18.11
9845	B. A. C. 7817	6.0*	18 25.81	61.9	2	3.332	− 24 23 33.8	57.3	2	18.12
9846	O. Arg. S. 22146	8.0	22 18 28.45	68.9	2	+ 3.270	− 19 3 51.7	64.8	2	+ 18.12
9847	Anonymous	8.4	18 32.96	68.7	2	3.391	− 29 3 35.7	72.8	2	18.12
9848	53 Aquarii, (1st *)	6.8*	18 57.71	60.5	6	3.251	− 17 27 5.2	59.9	3	18.14
9849	53 Aquarii, (2d *)	6.7*	18 58.23	60.8	5	3.251	− 17 27 10.4	59.9	3	18.14
9850	Weisse XXII, 398	6.3	19 15.30	68.7	3	3.192	− 11 56 19.3	66.8	2	18.15
9851	Anonymous	8.9	22 19 30.32	68.8	2	+ 2.620	+ 38 30 52.0	48.8	1	+ 18.16
9852	Lacaille 9135	7.0	19 50.45	62.8	6	3.362	− 27 7 50.8	65.8	2	18.17
9853	Anonymous	6.5	19 59.94	63.7	2	3.543	− 39 48 4.6	67.8	2	18.18
9854	O. Arg. S. 22165	8.2	20 21.10	67.3	2	3.370	− 27 55 10.2	68.8	2	18.19
9855	B. A. C. 7826	5.2	20 26.00	62.0	6	3.543	− 39 50 22.5	67.8	2	18.19
9856	Anonymous	6.5	22 20 32.87	68.8	2	+ 2.653	+ 36 43 56.9	46.8	2	+ 18.20
9857	Anonymous	7.1	20 40.59	68.8	2	3.458	− 34 29 6.2	58.8	2	18.20
9858	35 Pegasi	5.5	20 46.32	65.4	4	3.033	+ 3 59 41.5	65.4	3	18.21
9859	δ^1 Gruis	4.5	20 53.24	67.3	2	3.617	− 44 12 39.3	68.3	2	18.21
9860	Lalande 43871	7.3	20 57.17	68.8	2	2.619	+ 38 57 32.4	48.8	2	18.21
9861	Lacaille 9139	7.0	22 20 59.07	64.0	7	+ 3.504	− 37 41 3.8	68.8	2	+ 18.21
9862	Anonymous	9.1	21 5.12	64.7	4	3.236	− 16 22 46.0	69.5	6	18.22
9863	B. A. C. 7829	6.0*	21 6.00	64.9	2	1.992	+ 62 37 1.1	68.3	2	18.22
9864	Lacaille 9142	7.4	21 6.67	63.7	2	3.307	− 22 47 3.8	65.2	2	18.22
9865	Anonymous	6.8	21 30.92	68.8	2	3.456	− 34 33 58.1	55.8	3	18.23
9866	Anonymous	8.2	22 21 32.39	66.3	2	+ 3.386	− 29 26 20.6	61.2	4	+ 18.23
9867	Lacaille 9144	6.9	21 33.90	62.6	8	3.385	− 29 22 23.9	60.8	4	18.23
9868	O. Arg. S. 22177	8.6	21 33.94	65.7	2	3.366	− 27 52 20.0	67.8	1	18.23
9869	ζ Aquarii, (1st *)	4.7*	21 37.34	62.4	8	3.079	− 0 44 5.4	66.8	2	18.24
9870	ζ Aquarii, (2d *)	5.0*	21 37.42	63.0	5	3.079	− 0 44 9.2	65.8	3	18.24

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9871	Weisse XXII, 449, (1st *)	8.0	22 21 38.57	70.5	3	+ 3.177	− 10 38 59.4	69.8	3	+ 18.24
9872	Weisse XXII, 449, (2d *)	8.6	21 39.54	70.3	4	3.177	− 10 39 33.5	71.8	3	18.24
9873	O. Arg. S. 22181	6.8	21 55.58	63.6	5	3.365	− 27 49 17.7	68.4	2	18.25
9874	Anonymous	8.0	22 18.29	59.7	1	3.406	− 31 9 14.7	68.8	2	18.26
9875	B. A. C. 7835	6.5*	22 32.07	59.0	3	3.206	− 13 37 49.5	53.8	3	18.27
9876	Weisse XXII, 467.	8.0	22 22 34.70	59.9	4	+ 3.161	− 9 7 59.7	57.3	8	+ 18.27
9877	56 Aquarii	6.5	22 46.90	61.0	4	3.223	− 15 18 0.2	58.6	10	18.28
9878	37 Pegasi	6.0	22 53.28	45.7	2	3.036	+ 3 43 18.2	68.8	2	18.28
9879	Lacaille 9159	7.0	23 5.23	63.4	3	3.412	− 31 44 26.8	68.8	2	18.29
9880	σ Aquarii	5.2	23 14.11	61.3	18	3.182	− 11 23 33.7	53.7	11	18.29
9881	O. Arg. S. 22196	8.0*	22 23 27.32	59.8	3	+ 3.221	− 15 16 57.4	54.8	3	+ 18.30
9882	O. Arg. S. 22197	7.2	23 31.38	64.7	2	3.312	− 23 42 45.9	56.7	3	18.31
9883	β Piscis Australis	5.6	23 32.14	63.8	4	3.428	− 33 3 45.4	68.8	2	18.31
9884	Anonymous	8.0	23 32.53	63.8	2	3.428	− 33 4 15.6	68.8	2	18.31
9885	Anonymous	8.3	23 34.90	68.8	2	3.448	− 34 33 52.9	62.8	2	18.31
9886	Lacaille 9163	6.2	22 23 41.76	63.2	5	+ 3.468	− 36 0 28.0	68.3	2	+ 18.31
9887	Anonymous	. .	23 51.40	65.3	2	3.010	+ 6 31 22.9	70.7	1	18.32
9888	O. Arg. S. 22199	8.8	23 53.32	65.9	2	+ 3.308	− 23 23 24.2	59.6	7	18.32
9889	B. A. C. 7851	5.5*	23 53.41	62.9	6	− 3.697	+ 85 24 5.3	64.3	10	18.32
9890	B. A. C. 7846	6.0*	23 53.69	64.3	6	+ 2.336	+ 53 31 48.1	53.8	2	18.32
9891	Schjellerup 9211	8.9	22 24 6.37	68.7	2	+ 3.008	+ 6 41 38.5	66.8	2	+ 18.33
9892	58 Aquarii	5.2	24 15.90	62.2	4	3.184	− 11 37 18.1	68.8	2	18.33
9893	O. Arg. S. 22204	9.0	24 45.23	67.3	2	3.364	− 28 25 47.9	68.8	2	18.35
9894	Weisse XXII, 518.	8.4	25 2.57	66.4	3	3.009	+ 6 41 8.0	67.8	2	18.36
9895	Lacaille 9167	6.4	25 15.26	63.4	3	3.460	− 35 51 26.3	65.8	2	18.37
9896	α Lacertæ	5.0	22 25 31.75	58.8	2	+ 2.443	+ 49 33 49.2	59.5	5	+ 18.38
9897	Lacaille 9169	6.7	25 41.42	62.2	8	3.386	− 30 23 6.8	66.8	2	18.38
9898	Anonymous	8.0	25 46.74	68.8	2	3.441	− 34 35 45.0	55.8	2	18.38
9899	39 Pegasi	6.0*	25 49.53	45.8	4	2.883	+ 19 30 36.0	67.8	1	18.39
9900	Anonymous	9.1	25 57.15	69.4	6	3.358	− 28 10 23.1	68.3	2	18.39
9901	Anonymous	7.2	22 26 7.90	64.3	2	+ 3.479	− 37 23 27.0	72.9	2	+ 18.40
9902	Lacaille 9172	7.8	26 9.38	63.8	2	3.416	− 32 51 46.4	68.8	2	18.40
9903	O. Arg. S. 22223	8.3	26 14.91	68.7	2	3.296	− 22 49 25.5	57.1	3	18.40
9904	B. A. C. 7858	6.4	26 15.30	58.8	2	2.640	+ 39 3 38.1	53.8	3	18.40
9905	Lacaille 9175	7.1	26 27.01	62.2	2	3.449	− 35 23 46.8	55.8	2	18.41
9906	O. Arg. S. 22230	7.5	22 26 41.21	68.8	2	+ 3.300	− 23 19 25.8	56.8	4	+ 18.42
9907	Anonymous	8.5	26 40.72	69.4	3	3.355	− 28 6 47.3	69.3	2	18.42
9908	B. A. C. 7861	7.0*	26 44.09	50.7	1	3.168	− 10 19 45.6	50.7	1	18.42
9909	60 Aquarii	5.5	26 50.01	46.6	3	3.093	− 2 17 38.0	68.9	2	18.42
9910	O. Arg. S. 22237	8.2	27 5.39	65.2	6	3.270	− 20 34 53.4	67.4	2	18.43

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9911	Anonymous . . .	7.5	22 27 7.16	68.7	2	+ 2.669	+ 37 24 27.2	47.8	1	+ 18.43
9912	O. Arg. S. 22239 . .	7.8	27 7.62	68.8	2	3.252	− 18 51 20.4	61.8	2	18.43
9913	O. Arg. S. 22224 . .	8.4	27 17.37	69.6	4	3.354	− 28 11 39.5	69.9	1	18.44
9914	Anonymous . . .	9.5	27 17.51	65.7	1	3.355	− 28 17 11.1	68.9	1	18.44
9915	B. A. C. 7866 . . .	5.5	27 54.00	61.7	5	3.313	− 24 42 49.5	55.4	6	18.46
9916	Anonymous . . .	7.5	22 27 55.54	64.2	2	+ 3.387	− 31 3 31.7	68.8	2	+ 18.46
9917	η Aquarii	4.3*	28 9.70	62.8	85	3.080	− 0 50 16.5	60.6	17	18.47
9918	σ¹ Gruis	6.5	28 17.87	66.2	4	3.530	− 41 18 14.6	67.2	5	18.47
9919	B. A. C. 7872 . . .	6.4	28 41.99	62.8	6	3.401	− 32 23 9.3	64.8	2	18.49
9920	Piazzi XXII, 154 . .	7.3	28 45.51	62.7	5	3.400	− 32 21 55.1	64.8	2	18.49
9921	σ² Gruis	6.2	22 28 47.71	65.4	3	+ 3.527	− 41 18 47.4	67.2	5	+ 18.49
9922	O. Arg. S. 22265 . .	7.8	28 59.10	68.8	2	3.249	− 18 51 45.3	61.7	2	18.50
9923	Weisse XXI, 601 . .	8.5*	29 9.30	61.9	2	3.004	+ 7 32 56.3	66.4	2	18.50
9924	Weisse XXII, 602 . .	8.5	29 15.46	64.9	6	3.172	− 11 0 47.8	66.8	2	18.50
9925	Anonymous . . .	8.0	29 33.47	64.3	2	3.038	+ 3 47 10.3	68.8	2	18.51
9926	8 Lacertæ, (1st *). . .	7.0*	22 29 38.64	59.7	3	+ 2.658	+ 38 54 16.6	48.7	15	+ 18.52
9927	8 Lacertæ, (2d *). . .	6.2*	29 38.82	59.7	2	2.657	+ 38 54 39.2	46.4	35	18.52
9928	Anonymous . . .	7.0	29 38.82	68.7	2	3.196	− 13 37 19.9	55.7	2	18.52
9929	Lalande 44195 . . .	6.0	29 46.66	68.8	2	2.715	+ 34 51 23.6	46.8	1	18.52
9930	B. A. C. 7881 . . .	5.5*	29 47.72	66.0	2	1.089	+ 75 30 15.4	66.8	2	18.52
9931	Anonymous . . .	6.5	22 29 48.00	68.8	2	+ 2.699	+ 36 2 18.3	46.8	1	+ 18.52
9932	Weisse XXII, 619 . .	8.5	29 50.99	64.9	6	3.172	− 10 59 39.8	67.3	2	18.52
9933	O. Arg. S. 22282 . .	8.5*	29 56.	. . .	.	3.284	− 22 31 17.4	66.3	2	18.52
9934	Weisse (2) XXII, 672 .	7.0*	30 5.	. . .	.	2.686	+ 37 7 4.6	46.8	3	18.53
9935	Lacaille 9190 . . .	7.0	30 5.29	62.8	2	3.419	− 34 11 39.8	65.9	2	18.53
9936	O. Arg. S. 22288 . .	7.8	22 30 20.19	67.8	3	+ 3.345	− 28 10 12.1	68.3	2	+ 18.54
9937	Anonymous . . .	7.1	30 26.35	68.8	2	3.434	− 35 25 58.2	62.8	2	18.54
9938	Lacaille 9195 . . .	7.8	30 28.08	63.7	2	3.325	− 26 22 53.1	68.3	2	18.55
9939	κ Aquarii	5.2	30 30.28	60.2	18	3.116	− 4 56 55.4	67.8	5	18.55
9940	Wash. Mural Z. 66, 23 .	8.2	30 36.63	65.5	4	3.338	− 27 35 44.8	65.7	3	18.55
9941	Lacaille 9194 . . .	6.5	22 30 50.13	66.3	2	+ 3.496	− 39 52 53.5	68.3	2	+ 18.56
9942	Lacaille 9196 . . .	6.5	30 50.77	63.6	1	3.486	− 39 12 11.1	68.9	2	18.56
9943	Lacaille 9197 . . .	6.4	30 56.24	63.4	4	3.411	− 33 48 31.6	65.3	2	18.56
9944	Lacaille 9199 . . .	6.2	30 57.00	62.7	3	3.358	− 29 28 27.2	55.8	2	18.56
9945	Weisse XXII, 645 . .	8.5	30 59.37	61.9	2	2.995	+ 8 38 4.7	68.8	2	18.56
9946	Weisse XXII, 641 . .	6.5	22 31 1.34	61.6	4	+ 3.149	− 8 37 25.6	57.6	5	+ 18.56
9947	Weisse XXII, 640 . .	8.5	31 1.82	59.8	3	3.206	− 14 47 3.3	54.8	3	18.56
9948	Anonymous . . .	8.0	31 2.16	68.9	1	3.352	− 28 59 53.5	67.8	2	18.57
9949	Weisse XXII, 644 . .	8.0	31 6.47	59.8	3	3.206	− 14 47 37.5	55.7	6	18.57
9950	O. Arg. S. 22304 . .	8.6	31 11.49	67.3	2	3.344	− 28 17 41.6	67.8	2	18.57

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9951	Weisse XXII, 658 . .	7.5	22 31 27.10	65.4	2	+ 2.996	+ 8 31 54.3	68.9	2	+ 18.58
9952	9 Lacertæ	5.0	31 37.72	69.2	2	2.455	+ 50 49 23.9	57.7	4	18.58
9953	Piazzi XXII, 169 . .	6.5	31 44.	. .	.	3.039	+ 3 48 11.7	61.8	2	18.59
9954	Lalande 44272 . . .	8.0	31 50.64	61.9	2	3.005	+ 7 38 47.5	67.8	2	18.59
9955	B. A. C. 7891 . . .	7.1	31 56.16	63.8	2	3.350	− 29 3 8.2	67.8	3	18.59
9956	O. Arg. S. 22316 . .	7.8	22 31 58.46	63.8	2	+ 3.350	− 29 4 29.0	68.5	3	+ 18.59
9957	Lalande 44279 . . .	8.6	31 59.16	61.9	2	3.005	+ 7 39 39.7	67.8	2	18.60
9958	Weisse XXII, 675 . .	8.5*	32 10.61	61.8	3	3.145	− 8 19 53.7	57.2	7	18.60
9959	31 Cephei	5.5	32 18.71	69.3	2	1.447	+ 72 55 0.7	57.8	4	18.60
9960	B. A. C. 7895 . . .	6.0	32 33.00	61.5	6	3.376	− 31 22 48.5	66.8	2	18.61
9961	Lalande 44319 . . .	6.2	22 32 44.85	68.8	2	+ 2.702	+ 36 38 52.3	51.1	3	+ 18.62
9962	ε Piscis Australis . .	4.0	32 54.28	63.6	7	3.333	− 27 46 20.4	65.4	4	18.63
9963	10 Lacertæ	5.0	32 58.95	68.8	2	2.680	+ 38 19 21.7	47.2	8	18.63
9964	Weisse (2) XXII, 764 .	6.2	33 11.58	68.8	2	2.704	+ 36 37 32.9	51.1	6	18.63
9965	Lalande 44346 . . .	6.5	33 15.87	68.8	2	2.686	+ 38 1 14.5	48.8	1	18.64
9966	Anonymous . . .	7.6	22 33 16.75	68.8	2	+ 2.704	+ 36 40 9.2	47.8	1	+ 18.64
9967	Lacaille 9208 . . .	7.1	33 24.36	63.8	3	3.294	− 24 14 56.4	66.9	2	18.64
9968	Lacaille 9209 . . .	7.0	33 39.11	63.7	2	3.313	− 26 4 49.9	67.3	2	18.65
9969	30 Cephei	5.0*	33 41.35	61.8	2	2.113	+ 62 51 26.3	59.8	4	18.65
9970	B. A. C. 7907 . . .	6.0*	34 12.21	58.8	3	1.291	+ 74 38 38.6	53.7	3	18.67
9971	ζ Pegasi	3.4*	22 34 28.78	52.2	216	+ 2.985	+ 10 6 6.0	52.4	92	+ 18.68
9972	19 Piscis Australis . .	5.5	34 34.31	68.7	2	3.354	− 30 5 29.0	57.2	2	18.68
9973	Lalande 44373 . . .	7.8	34 37.70	64.4	3	3.165	− 10 51 22.2	66.2	2	18.68
9974	Anonymous . . .	8.1	34 46.72	67.2	2	2.413	+ 53 36 46.8	69.3	2	18.68
9975	Anonymous . . .	7.8	35 2.15	67.9	4	3.264	− 21 40 34.3	61.4	6	18.69
9976	ο Pegasi	5.0*	22 35 11.25	45.7	1	+ 2.809	+ 28 34 39.1	57.8	3	+ 18.69
9977	12 Lacertæ	5.0	35 12.85	65.7	2	2.674	+ 39 29 42.8	66.8	2	18.70
9978	Anonymous . . .	8.5	35 14.45	68.8	2	3.344	− 29 22 51.7	55.8	2	18.70
9979	ρ Gruis	4.7	35 21.94	63.8	3	3.509	− 42 8 36.5	67.9	2	18.70
9980	Lacaille 9221 . . .	6.5	35 25.07	63.8	5	3.271	− 22 23 23.8	68.3	2	18.71
9981	Anonymous . . .	8.4	22 35 29.09	68.8	2	+ 3.355	− 30 23 52.2	55.8	2	+ 18.71
9982	65 Aquarii	7.0	35 39.13	64.4	3	3.164	− 10 50 5.7	66.8	2	18.71
9983	O. Arg. N. 24533 . .	8.0	35 53.44	65.7	4	2.420	+ 53 39 21.2	65.1	3	18.72
9984	B. A. C. 7920 . . .	7.0*	35 53.85	60.6	4	3.139	− 7 56 50.1	57.3	7	18.72
9985	η Pegasi	3.8	36 26.58	68.8	2	2.802	+ 29 29 23.1	57.8	3	18.74
9986	Anonymous . . .	7.8	22 36 30.10	68.7	2	+ 2.711	+ 37 7 41.9	47.7	2	+ 18.74
9987	Lalande 44466 . . .	6.0	36 34.22	68.7	2	2.712	+ 37 4 15.0	47.7	2	18.74
9988	O. Arg. N. 24553 . .	6.8	36 41.69	65.7	2	2.429	+ 53 31 24.8	68.8	1	18.75
9989	Weisse XXII, 772 . .	7.0	36 42.90	58.8	2	3.046	+ 3 8 27.2	53.9	2	18.75
9930	O. Arg. N. 22374 . .	9.0	36 46.56	65.7	2	3.288	− 24 29 53.0	69.3	2	18.75

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9991	O. Arg. S. 22373 . .	9.1	22 36 46.97	65.5	5	+ 3.314	− 27 1 31.9	65.4	3	+ 18.75
9992	O. Arg. S. 22378 . .	9.0	36 59.94	68.8	2	3.260	− 21 40 53.4	63.8	5	18.75
9993	Anonymous . . .	8.5	37 11.07	68.8	2	3.068	+ 0 25 35.5	55.7	2	18.76
9994	O. Arg. S. 22383 . .	8.6	37 43.51	68.8	3	3.258	− 21 36 21.2	66.2	5	18.78
9995	20 Piscis Australis . .	6.3	37 51.19	62.5	7	3.300	− 25 58 17.9	66.8	2	18.78
9996	13 Lacertæ	6.0*	22 37 51.23	59.4	3	+ 2.663	+ 41 5 6.7	53.7	3	+ 18.78
9997	Anonymous . . .	8.6	37 54.73	64.3	2	3.192	− 14 18 21.2	54.8	2	18.78
9998	Anonymous . . .	. .	37 58. .	. .	.	3.257	− 21 32 5.3	69.7	1	18.78
9999	O. Arg. S. 22391 . .	9.4	38 2.10	65.7	2	3.286	− 24 35 23.4	68.3	2	18.79
10000	Anonymous . . .	9.0	38 26.82	68.8	3	3.256	− 21 34 47.4	69.7	2	18.80
10001	Lalande 44534 . . .	6.0	22 38 32.90	68.8	2	+ 2.702	+ 38 28 2.5	46.1	10	+ 18.80
10002	Weisse XXII, 815. .	9.0	38 47.86	60.7	2	3.190	− 14 15 41.9	54.8	4	18.81
10003	Lacaille 9244 . . .	7.0	39 2.67	62.8	4	3.383	− 33 55 7.2	65.9	2	18.82
10004	Lacaille 9242 . . .	6.8	39 2.87	63.8	3	3.494	+ 42 25 45.0	67.3	2	18.82
10005	Lacaille 9246 . . .	7.0	39 16.22	62.7	2	3.376	− 33 24 31.6	68.3	2	18.82
10006	Lacaille 9248 . . .	6.1	22 39 27.28	63.8	2	+ 3.393	− 34 53 59.5	69.4	2	+ 18.83
10007	ξ Pegasi	4.5	39 41.96	58.8	2	2.979	+ 11 27 18.0	67.4	2	18.84
10008	λ Pegasi	4.5	39 47.31	45.7	3	2.879	+ 22 49 47.3	68.4	2	18.84
10009	B. A. C. 7944 . . .	6.2	39 48.76	62.8	2	3.442	− 38 57 21.9	65.9	2	18.84
10010	B. A. C. 7948 . . .	5.5*	39 58.07	59.3	3	2.633	+ 43 48 31.2	53.8	5	18.85
10011	g^2 Aquarii	6.1	22 40 1.61	65.7	6	+ 3.242	− 20 20 32.8	57.5	3	+ 18.85
10012	Anonymous . . .	8.6	40 6.30	69.6	3	2.346	+ 57 50 31.2	70.9	2	18.85
10013	Anonymous . . .	8.6	40 6.37	69.6	3	2.344	+ 57 53 27.1	70.9	2	18.85
10014	Lacaille 9253 . . .	7.0	40 7.00	63.3	2	3.435	− 38 29 41.7	66.8	2	18.85
10015	B. A. C. 7950 . . .	6.5*	40 13.91	60.2	2	2.608	+ 45 28 45.1	59.0	5	18.85
10016	Lacaille 9256 . . .	6.4	22 40 14.80	62.8	6	+ 3.301	− 26 38 41.6	64.5	3	+ 18.85
10017	τ^1 Aquarii	5.8	40 16.51	67.8	3	3.192	− 14 47 35.3	68.4	2	18.85
10018	B. A. C. 7951, (1st *) .	7.2	40 36.60	69.2	2	3.112	− 4 57 18.9	69.8	2	18.86
10019	B. A. C. 7951, (2d *) .	7.2	40 36.86	66.4	3	3.112	− 4 57 17.1	69.8	2	18.86
10020	Weisse XXII, 850. .	8.4	40 38.82	69.2	2	3.111	− 4 57 58.3	68.8	2	18.87
10021	Lacaille 9261 . . .	7.0	22 40 46.10	63.8	4	+ 3.317	− 28 17 52.5	66.1	3	+ 18.87
10022	Anonymous . . .	8.7	41 5.67	68.8	2	3.326	− 29 23 41.8	55.8	2	18.88
10023	Anonymous . . .	7.8	41 30.70	68.8	2	3.334	− 30 16 52.1	66.3	2	18.90
10024	Lacaille 9269 . . .	6.5	41 40.97	66.8	2	3.270	− 23 49 51.0	68.4	2	18.90
10025	O. Arg. S. 22432 . .	9.2	41 40.99	67.3	2	3.244	− 20 59 57.0	68.8	2	18.90
10026	Weisse (2) XXII, 967 .	5.8	22 41 46.65	68.7	2	+ 2.739	+ 36 40 51.5	51.1	6	+ 18.90
10027	B. A. C. 7953 . . .	6.5	41 49.98	59.8	3	2.363	+ 57 44 42.7	59.3	4	18.90
10028	Rumker 10641 . . .	8.8	41 52.14	64.8	2	3.129	− 7 14 59.9	70.3	2	18.90
10029	O. Arg. N. 24689 . .	9.0	41 58.	. .	.	2.363	+ 57 48 32.0	69.4	2	18.90
10030	Anonymous . . .	9.2	42 2.08	67.3	2	3.186	− 14 18 55.8	68.8	2	18.91

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10031	Lacaille 9271	5.8	22 42 10.47	69.1	3	+ 3.367	− 33 32 38.0	65.7	4	+ 18.91
10032	Anonymous	6.0	42 10.50	61.6	1	3.368	− 33 35	. .	.	18.91
10033	τ^2 Aquarii	4.2	42 10.59	60.7	17	3.186	− 14 19 49.6	58.0	18	18.91
10034	Lacaille 9270	7.1	42 11.49	63.7	2	3.476	− 42 13 19.9	68.8	2	18.91
10035	O. Arg. S. 22436	7.6	42 23.50	65.7	3	3.243	− 21 1 27.4	68.8	2	18.92
10036	Anonymous	9.0	22 42 47.45	65.3	2	+ 3.121	− 6 18 22.2	69.3	2	+ 18.91
10037	Weisse XXII, 897	9.0	42 58.32	66.8	3	3.121	− 6 20 33.5	68.9	2	18.93
10038	Lalande 44661	7.0	42 58.68	68.8	2	3.188	− 14 47 55.8	55.7	2	18.93
10039	B. A. C. 7957	5.0	43 3.28	60.8	2	3.441	− 39 53 50.9	70.8	3	18.94
10040	Weisse XXII, 900	8.3	43 14.04	59.9	4	3.131	− 7 38 59.5	57.2	6	18.94
10041	μ Pegasi	6.5	22 43 14.79	49.6	10	+ 2.878	+ 23 51 46.9	68.3	2	+ 18.94
10042	21 Piscis Australis	6.4	43 37.21	62.1	6	3.327	− 30 16 37.2	57.5	9	18.95
10043	Weisse (2) XXII, 1012	7.8	43 39.24	68.8	2	2.719	+ 38 57 1.7	70.8	2	18.95
10044	Lacaille 9283	7.0	43 41.50	67.3	2	3.271	− 24 30 24.3	67.1	3	18.95
10045	Lacaille 9284	7.1	44 11.20	62.8	2	3.432	− 39 41 37.0	65.9	2	18.97
10046	O. Arg. S. 22450	9.4	22 44 21.34	65.7	2	+ 3.272	− 24 46 8.7	70.8	2	+ 18.97
10047	Lacaille 9286	6.8	44 27.64	68.9	1	3.437	− 40 11 34.4	69.8	1	18.98
10048	ι Cephei	5.0	44 42.36	66.9	3	2.127	+ 65 27 51.4	64.5	8	18.98
10049	γ Piscis Australis	5.2	44 44.00	62.2	4	3.359	− 33 37 0.1	58.7	2	18.98
10050	Lacaille 9290	7.3	44 59.18	63.1	3	3.319	− 29 55 24.9	65.5	3	18.99
10051	λ Aquarii	4.5*	22 45 18.54	62.1	65	+ 3.135	− 8 19 24.9	55.1	8	+ 19.00
10052	Anonymous	7.3	45 24.55	68.9	2	2.726	+ 38 58 18.2	70.8	2	19.00
10053	Lacaille 9292	6.2	45 32.53	67.3	4	3.432	− 40 9 49.2	69.1	4	19.01
10054	O. Arg. S. 22466	7.0	45 47.69	67.2	2	3.267	− 24 40 14.4	67.8	2	19.01
10055	Weisse XXII, 951	9.0	45 55.62	60.9	2	3.117	− 6 4 36.6	68.4	2	19.02
10056	Weisse XXII, 957	9.0	22 46 9.43	60.8	3	+ 3.117	− 6 5 15.3	68.4	2	+ 19.02
10057	Weisse XXII, 962	8.7	46 21.28	60.4	3	3.123	− 6 51 7.9	57.6	5	19.03
10058	Lacaille 9296	7.0	46 41.85	62.4	2	3.276	− 25 43 35.0	66.8	2	19.04
10059	75 Aquarii	7.0	46 43.88	60.2	4	3.168	− 12 55 57.4	56.8	4	19.04
10060	B. A. C. 7978	6.0	46 47.84	59.2	2	2.727	+ 39 25 27.5	53.8	3	19.04
10061	Weisse XXII, 976	7.6	22 47 8.99	67.3	2	+ 3.154	− 11 2 32.7	67.8	2	+ 19.05
10062	δ Aquarii	3.0*	47 13.00	63.5	3	3.196	− 16 33 51.6	62.6	4	19.05
10063	78 Aquarii	6.0	47 16.59	67.4	6	3.130	− 7 56 52.3	68.8	2	19.05
10064	Lacaille 9299	6.6	47 20.69	63.8	3	3.250	− 23 6 20.9	65.8	2	19.06
10065	Lacaille 9298	6.0	47 22.81	61.7	4	3.387	− 37 8 1.0	66.8	2	19.06
10066	B. A. C. 7983	6.0*	22 47 24.70	58.8	2	+ 2.670	+ 44 0 18.7	53.7	3	+ 19.06
10067	O. Arg. S. 22487	7.6	47 35.11	65.7	2	3.263	− 24 42 49.2	67.8	2	19.06
10068	1 Piscium	5.7	47 49.72	63.2	2	+ 3.070	+ 0 19 11.0	68.4	2	19.07
10069	B. A. C. 7990	5.5	47 55.02	66.5	3	− 0.033	+ 82 24 38.8	64.0	6	19.07
10070	B. A. C. 7986	5.5	47 55.28	64.8	2	+ 3.114	− 5 43 58.1	67.3	2	19.07

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			h. m. s.			"	° ′ "			"
10071	Lalande 44823 . . .	6.8	22 47 59.33	62.1	4	+ 3.230	− 20 53 3.6	57.8	6	+ 19.07
10072	Weisse XXII, 995 . .	6.5	48 5.11	65.9	2	3.119	− 6 26 5.0	65.3	2	19.08
10073	Weisse XXII, 994 . .	8.8	48 6.05	65.8	2	3.151	− 10 51 27.5	68.3	2	19.08
10074	Lacaille 9301 . . .	6.4	48 7.29	63.2	3	3.334	− 32 22 41.1	64.8	2	19.08
10075	δ Piscis Australis . .	5.7	48 11.03	66.3	2	3.343	− 33 17 12.0	68.8	2	19.08
10076	Lalande 44848 . . .	6.5	22 48 11.83	68.7	2	+ 2.781	+ 35 14 18.5	47.8	2	+ 19.08
10077	Anonymous . . .	8.2	48 20.10	66.2	2	3.387	− 37 25 25.9	66.9	2	19.08
10078	Lacaille 9307 . . .	6.6	48 36.33	62.8	6	3.331	− 32 18 20.1	64.8	2	19.09
10079	O. Arg. S. 22499 . .	8.4	48 40.84	65.7	2	3.259	− 24 35 45.5	68.3	2	19.09
10080	Lalande 44862, (1st *) .	8.0	49 9.76	68.7	2	2.781	+ 35 36 2.1	47.8	1	19.11
10081	Lalande 44862, (2d *) .	5.5	22 49 13.32	68.7	2	+ 2.781	+ 35 36 17.4	47.8	2	+ 19.11
10082	Weisse XXII, 1017 .	7.6	49 28.78	65.8	1	3.151	− 11 0 33.1	67.8	2	19.11
10083	Lalande 44860 . . .	7.5	49 35.87	60.7	1	3.228	− 21 5 20.8	70.8	2	19.12
10084	Rumker 10753 . . .	7.8	49 40.70	68.8	2	2.459	+ 56 37 46.5	53.8	2	19.12
10085	Weisse XXII, 1026 .	8.0	49 42.49	67.3	2	3.071	+ 0 8 31.4	68.4	2	19.12
10086	O. Arg. S. 22508 . .	8.2	22 49 44.49	65.7	2	+ 3.257	− 24 35 8.8	68.8	3	+ 19.12
10087	α Piscis Australis . .	1.3*	49 54.22	52.8	203	3.308	− 30 21 46.9	52.0	159	19.13
10088	Lacaille 9313 . . .	7.0	50 0.19	66.2	2	3.394	− 38 40 56.9	69.9	2	19.13
10089	16 Lacertæ	6.0*	50 0.55	64.3	2	2.724	+ 40 51 26.6	53.7	3	19.13
10090	B. A. C. 7993 . . .	6.5	50 2.27	64.8	2	3.111	− 5 33 25.9	67.9	2	19.13
10091	Lalande 44877 . . .	7.5	22 50 6.53	62.4	3	+ 3.226	− 21 1 20.7	61.9	8	+ 19.13
10092	Lacaille 9315, (1st *) .	9.0	50 9.60	67.5	5	3.276	− 26 54 47.7	67.8	1	19.13
10093	Lacaille 9315, (2d *) .	6.8	50 9.86	67.5	5	3.275	− 26 50 42.4	62.7	2	19.13
10094	B. A. C. 7998 . . .	6.1	50 46.67	64.1	3	3.364	− 36 16 3.5	67.9	2	19.15
10095	Weisse XXII, 1049 .	8.5	50 53.02	59.9	2	3.117	− 6 26 1.7	57.2	5	19.15
10096	Lalande 44918 . . .	6.0	22 51 8.92	68.8	1	+ 2.756	+ 38 38 29.3	70.9	2	+ 19.16
10097	Anonymous . . .	. .	51 10.	. . .	.	3.272	− 26 50 36.4	69.8	2	19.16
10098	Anonymous . . .	. .	51 10.	. . .	.	3.272	− 26 50 44.6	69.8	2	19.16
10099	Anonymous . . .	. .	51 10.	. . .	.	3.273	− 26 54 51.2	69.8	1	19.16
10100	Lalande 44922 . . .	5.8	51 13.09	68.8	2	2.757	+ 38 33 38.9	63.1	3	19.16
10101	Weisse XXII, 1057 .	8.5	22 51 19.92	59.9	2	+ 3.116	− 6 25 19.4	57.0	4	+ 19.17
10102	Weisse XXII, 1068 .	7.9	51 41.50	68.7	2	3.134	− 8 57 41.4	67.5	3	19.17
10103	B. A. C. 8002 . . .	6.0	51 55.87	63.2	3	3.300	− 30 12 42.6	70.8	2	19.18
10104	Weisse XXII, 1082 .	6.0	52 11.59	65.4	2	2.996	+ 10 58 54.9	61.9	2	19.18
10105	2 Piscium	5.5	52 16.93	67.3	2	3.071	+ 0 12 58.5	68.4	2	19.19
10106	Anonymous . . .	8.0	22 52 17.05	68.8	2	+ 2.993	+ 11 26 58.4	65.4	2	+ 19.19
10107	Weisse XXII, 1087 .	9.0	52 26.19	66.1	3	3.107	− 5 6 41.3	69.3	2	19.19
10108	Weisse XXII, 1088 .	8.2	52 26.80	64.0	5	3.107	− 5 6 43.1	70.6	4	19.19
10109	Lacaille 9326 . . .	7.3	52 28.71	67.2	3	3.420	− 41 54 2.5	66.8	2	19.19
10110	B. A. C. 8007 . . .	6.8	52 30.65	63.8	4	3.260	− 25 54 39.5	64.8	2	19.19

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			h. m. s.			"	° ′ "			"
10111	Lacaille 9330	6.8	22 52 42.31	63.8	2	+ 3.268	− 26 53 52.2	64.8	3	+ 19.20
10112	Lacaille 9331	6.5	52 48.47	63.6	3	3.264	− 26 22 31.3	65.9	2	19.20
10113	O. Arg. S. 22544	8.1	52 49.23	63.8	2	3.268	− 26 52 57.2	69.4	2	19.20
10114	O. Arg. S. 22545	7.2	52 52.77	68.7	2	3.238	− 23 16 35.2	67.3	2	19.20
10115	B. A. C. 8010	5.6	53 1.30	48.7	1	3.137	− 9 37 45.4	67.9	2	19.20
10116	Weisse XXII, 1108	8.5	22 53 17.31	68.8	2	+ 2.994	+ 11 29 24.9	65.4	2	+ 19.21
10117	Anonymous	9.0	53 18.59	66.8	2	3.125	− 7 49 11.3	67.9	2	19.21
10118	O. Arg. S. 22554	7.6	53 25.67	68.7	2	3.194	− 17 37 52.4	66.3	2	19.22
10119	Lacaille 9333	6.0	53 40.31	62.4	4	3.289	− 29 36 15.9	62.8	2	19.22
10120	Lacaille 9336	6.0	53 50.94	66.4	2	3.238	− 23 32 27.5	65.2	2	19.23
10121	Lacaille 9338	6.5	22 54 1.92	63.7	2	+ 3.234	− 23 10 6.7	63.1	3	+ 19.23
10122	81 Aquarii	5.5	54 6.95	61.9	9	3.124	− 7 48 42.2	57.8	4	19.23
10123	Anonymous	10.0	54 23.69	61.9	2	3.217	− 20 57 40.4	58.5	4	19.24
10124	Lalande 45037	7.0	54 24.15	68.8	2	2.778	+ 37 57 27.7	48.8	1	19.24
10125	Weisse XXII, 1136	7.1	54 29.10	67.8	3	3.123	− 7 42 39.2	67.8	2	19.24
10126	Lalande 45028	7.9	22 54 34.02	65.8	7	+ 3.102	− 4 35 32.1	65.7	3	+ 19.24
10127	Anonymous	7.8	54 38.30	67.3	2	3.116	− 6 42 58.8	67.9	2	19.25
10128	Lacaille 9343	6.4	54 46.21	61.2	3	3.356	− 37 10 20.5	66.8	2	19.25
10129	Anonymous	8.6	54 52.16	65.8	4	3.102	− 4 36 6.0	69.3	2	19.25
10130	Weisse XXII, 1149	8.0	55 2.87	62.1	4	3.152	− 12 3 48.3	58.6	6	19.26
10131	Weisse XXII, 1150	8.3	22 55 3.18	64.4	2	+ 3.152	− 12 3 41.1	63.3	2	+ 19.26
10132	Weisse XXII, 1156	8.0	55 12.06	59.4	4	3.151	− 12 1 1.5	55.6	4	19.26
10133	Weisse XXII, 1159	9.0	55 12.24	61.9	2	2.994	+ 11 47 7.2	61.8	2	19.26
10134	Lalande 45049	6.0	55 15.40	59.8	2	3.220	− 21 37 4.6	55.3	4	19.26
10135	82 Aquarii	6.0*	55 16.37	59.8	3	3.120	− 7 19 30.1	68.8	4	19.26
10136	Rumker 10800	9.0	22 55 17.82	64.8	2	+ 3.098	− 3 57 27.7	68.8	2	+ 19.26
10137	B. A. C. 8026	5.5*	55 22.30	62.8	2	− 0.245	+ 83 35 49.2	64.0	3	19.26
10138	Anonymous	9.0	55 27.96	67.3	2	+ 3.128	− 8 34 36.7	68.8	2	19.27
10139	ο Andromedæ	4.0	55 29.13	58.1	3	2.742	+ 41 34 30.4	69.3	2	19.27
10140	Lalande 45078	7.5	55 32.73	68.8	2	2.795	+ 36 43 33.3	47.7	1	19.27
10141	B. A. C. 8025	5.2	22 55 44.30	68.7	2	+ 3.336	− 35 30 20.6	57.6	4	+ 19.27
10142	Lacaille 9351	6.2	55 49.09	69.4	3	3.400	− 41 34 13.3	69.9	3	19.27
10143	Lacaille 9357	6.8	56 2.63	63.3	4	3.264	− 27 34 1.5	66.3	2	19.28
10144	Lacaille 9356	6.6	56 4.53	62.2	6	3.295	− 31 11 54.4	65.9	2	19.28
10145	2 Andromedæ	5.5*	56 10.03	58.8	2	2.741	+ 42 0 19.3	53.7	3	19.28
10146	Anonymous	9.0	22 56 36.81	67.3	2	+ 3.112	− 6 11 46.5	67.8	2	+ 19.29
10147	O. Arg. S. 22587	7.0	56 40.55	68.7	3	3.227	− 22 59 12.7	57.9	2	19.30
10148	β Piscium	4.5	56 45.08	64.0	5	3.053	+ 3 4 1.6	69.4	2	19.30
10149	Lacaille 9352	7.0	56 51.93	67.7	2	3.343	− 36 39 16.0	69.8	2	19.30
10150	β Pegasi	3.0	56 59.20	45.7	6	2.884	+ 27 19 28.9	64.2	3	19.30

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			h. m. s.			″	° ″ ′			″
10151	Weisse XXII, 1203 .	8.0*	22 57 6.95	62.0	4	+ 3.119	− 7 26 30.1	61.8	2	+ 19.31
10152	Weisse XXII, 1204 .	7.5	57 9.28	68.8	2	3.155	− 12 55 57.7	65.3	2	19.31
10153	Lacaille 9359 . . .	6.8	57 15.34	64.3	4	3.263	− 27 53 22.1	72.9	2	19.31
10154	Anonymous. . . .	8.2	57 22.86	67.3	2	3.111	− 6 14 20.6	70.8	2	19.31
10155	Anonymous. . . .	9.0	57 25.03	60.8	4	3.099	− 4 14 52.2	70.4	2	19.31
10156	Lacaille 9361 . . .	8.7	22 57 43.54	64.4	3	+ 3.240	− 25 6 17.5	68.4	2	+ 19.32
10157	*α* Pegasi	2.0	57 47.32	53.8	206	2.980	+ 14 27 10.3	50.5	92	19.32
10158	Lalande 45137 . . .	6.4	57 48.04	64.3	4	3.187	− 17 49 56.6	67.8	2	19.32
10159	h^1 Aquarii	6.0	57 51.67	63.0	5	3.125	− 8 26 55.1	68.3	2	19.32
10160	Anonymous. . . .	9.2	57 55.46	68.9	2	2.791	+ 38 10 12.9	69.9	1	19.32
10161	h^2 Aquarii	6.8	22 58 1.31	67.3	2	+ 3.126	− 8 30 33.9	68.3	2	+ 19.33
10162	Weisse XXII, 1220 .	6.5	58 7.75	65.7	2	3.069	+ 0 33 12.5	58.0	4	19.33
10163	Weisse XXII, 1221 .	8.0	58 11.49	63.8	2	3.122	− 7 55 3.7	53.7	2	19.33
10164	B. A. C. 8039 . . .	5.5	58 13.66	65.8	2	2.255	+ 66 27 16.4	66.8	2	19.33
10165	Weisse XXII, 1223 .	8.7	58 13.74	65.7	5	3.103	− 5 0	. .	.	19.33
10166	Weisse XXII, 1228 .	8.1	22 58 18.09	68.8	2	+ 3.066	+ 1 0 41.6	56.4	3	+ 19.33
10167	Weisse XXII, 1232 .	8.0	58 34.46	59.9	2	3.142	− 11 11 32.1	56.0	5	19.34
10168	Anonymous . . .	9.1	58 35.86	67.3	2	3.125	− 8 31 1.5	70.4	2	19.34
10169	B. A. C. 8045 . . .	5.5	59 5.14	63.5	4	3.363	− 39 38 56.5	68.3	2	19.35
10170	c^1 Aquarii	4.0	59 9.30	62.8	5	3.232	− 24 29 56.1	64.3	2	19.35
10171	Lacaille 9373 . . .	6.8	22 59 20.20	63.0	5	+ 3.281	− 30 48 14.1	67.7	2	+ 19.36
10172	Weisse XXII, 1248 .	8.9	59 26.88	65.7	6	3.102	− 4 57 18.4	65.7	3	19.36
10173	Anonymous . . .	7.1	59 35.07	68.7	2	3.322	− 35 37 20.9	65.9	2	19.36
10174	O. Arg. N. 25122 . .	8.0	59 42.33	65.4	2	2.270	+ 66 33 34.7	66.8	2	19.37
10175	h^4 Aquarii	6.5	59 54.89	70.2	3	3.124	− 8 26 54.3	69.3	2	19.37
10176	56 Pegasi	5.0	23 0 17.78	57.8	2	+ 2.914	+ 24 42 49.2	67.9	2	+ 19.38
10177	Weisse XXII, 1272 .	9.0	0 40.40	60.3	2	3.105	− 5 31 59.4	58.3	5	19.39
10178	1 Cassiopeæ	6.0*	0 42.25	58.8	2	2.510	+ 58 39 49.2	53.8	3	19.39
10179	B. A. C. 8053 . . .	6.0*	0 46.22	63.2	2	3.266	− 29 34 46.1	62.8	2	19.39
10180	B. A. C. 8056 . . .	6.5*	0 53.98	58.8	2	2.727	+ 45 18 43.0	53.9	2	19.39
10181	Weisse XXII, 1276 .	8.7	23 1 0.84	63.6	4	+ 3.147	− 12 21 18.9	66.8	2	+ 19.40
10182	Lacaille 9379 . . .	7.1	1 21.12	63.8	2	3.241	− 26 35 12.5	65.3	2	19.40
10183	Weisse XXII, 1283 .	9.0*	1 24.86	60.3	2	3.105	− 5 32 11.0	58.2	5	19.40
10184	A Piscium	5.5*	1 30.70	60.2	4	3.064	+ 1 21 58.3	56.2	4	19.41
10185	c^2 Aquarii	4.2	1 58.61	67.7	3	3.207	− 21 55 53.1	65.8	2	19.42
10186	Weisse XXIII, 9 . .	8.3	23 2 6.66	64.8	2	+ 3.151	− 13 22 38.0	54.9	2	+ 19.42
10187	B. A. C. 8064 . . .	6.4	2 10.42	63.8	3	3.256	− 28 50 48.3	63.7	2	19.42
10188	B. A. C. 8065 . . .	7.5	2 13.38	48.7	1	3.064	+ 1 23 8.7	67.9	2	19.42
10189	Weisse XXIII, 12 . .	9.0	2 19.06	61.4	2	3.148	− 12 48 14.5	67.9	2	19.42
10190	B. A. C. 8066 . . .	5.8	2 21.24	68.7	2	3.365	− 41 20 51.3	62.7	2	19.43

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			h. m. s.			"	° ′ ″			"
10191	Lalande 45323 . . .	7.0	23 2 21.73	68.8	2	+ 2.811	+ 38 9 28.8	55.4	3	+ 19.43
10192	Weisse XXIII, 14 . .	8.7	2 25.21	61.7	3	3.148	− 12 50 41.8	60.2	6	19.43
10193	ι Gruis	4.8	2 25.35	66.6	3	3.416	− 46 0 20.0	68.3	2	19.43
10194	c³ Aquarii	4.2	2 25.96	62.4	4	3.215	− 23 12 54.8	67.7	4	19.43
10195	Lacaille 9385 . . .	6.6	2 36.51	67.8	3	3.358	− 40 47 30.2	68.4	2	19.43
10196	Anonymous . . .	9.5	23 2 53.88	63.9	2	+ 3.193	− 20 13 14.4	68.9	3	+ 19.43
10197	58 Pegasi	5.5	2 58.44	66.2	3	3.020	+ 9 3 48.4	68.8	2	19.44
10198	Lalande 45326 . . .	7.0	2 59.26	67.3	2	3.156	− 14 24 14.5	67.9	2	19.44
10199	Lacaille 9388 . . .	6.0	3 12.02	62.9	5	3.264	− 30 16 54.2	65.9	2	19.44
10200	Weisse (2) XXIII, 34 .	7.5	3 20.46	68.7	2	2.833	+ 36 6 13.8	46.8	1	19.45
10201	Weisse (2) XXIII, 35 .	7.1	23 3 24.03	68.7	2	+ 2.834	+ 36 5 23.6	46.8	2	+ 19.45
10202	π Cephei	5.0*	3 27.14	61.9	4	1.884	+ 74 37 50.5	67.8	1	19.45
10203	O. Arg. S. 22656 . .	7.0	3 40.04	63.5	3	3.243	− 27 40 22.3	64.8	3	19.45
10204	O. Arg. S. 22657 . .	7.0	3 41.70	63.8	2	3.242	− 27 38 55.7	65.8	2	19.45
10205	Anonymous . . .	. .	3 49.74	68.8	1	2.817	+ 38 10 28.8	69.9	1	19.46
10206	6 Andromedæ . . .	6.5*	23 3 59.68	59.0	3	+ 2.773	+ 42 47 34.9	53.7	3	+ 19.46
10207	Weisse XXIII, 45 . .	8.2	4 2.81	64.9	2	3.105	− 5 51 29.3	67.4	2	19.46
10208	Weisse XXIII, 47 . .	7.8	4 5.09	65.8	2	3.058	+ 2 23 37.8	66.8	3	19.46
10209	Weisse XXIII, 48 . .	7.5*	4 7.18	59.8	3	3.048	+ 4 14 42.0	58.7	4	19.46
10210	59 Pegasi	5.5*	4 40.15	54.5	5	3.027	+ 7 57 38.2	54.8	2	19.47
10211	Anonymous . . .	7.9	23 4 41.30	70.1	3	+ 2.830	+ 37 8 8.5	47.8	2	+ 19.47
10212	Weisse XXIII, 61 . .	8.6	4 46.48	65.3	2	3.027	+ 8 2 33.7	68.3	2	19.48
10213	O. Arg. S. 22666 . .	8.9	4 59.93	60.4	9	3.176	− 18 6 52.6	66.8	2	19.48
10214	60 Pegasi	6.0*	5 1.83	51.5	5	2.916	+ 26 5 30.6	53.8	3	19.48
10215	O. Arg. S. 22670 . .	9.0	5 11.07	64.0	9	3.175	− 18 4 55.6	66.8	2	19.49
10216	Anonymous . . .	7.6	23 5 43.80	64.3	2	+ 3.259	− 30 48 56.5	68.3	2	+ 19.50
10217	O. Arg. S. 22682 . .	8.4	6 6.77	66.3	2	3.174	− 18 7 48.7	66.8	1	19.50
10218	7 Andromedæ . . .	5.0*	6 8.82	61.7	2	2.718	+ 48 38 30.6	59.5	5	19.50
10219	Weisse XXIII, 85 . .	9.0*	6 11.79	60.3	2	3.131	− 10 41 30.0	54.8	2	19.51
10220	Weisse XXIII, 88 . .	9.1	6 15.41	62.4	5	3.111	− 7 5 8.6	63.8	3	19.51
10221	Weisse XXIII, 95 . .	8.5	23 6 26.19	67.3	2	+ 3.097	− 4 34 28.2	68.8	2	+ 19.51
10222	Weisse XXIII, 98 . .	9.7	6 28.28	62.4	2	3.110	− 7 3 35.3	69.4	2	19.51
10223	O. Arg. S. 22687 . .	8.8	6 34.92	68.7	2	3.209	− 23 55 56.6	64.9	2	19.51
10224	Anonymous . . .	7.1	6 42.29	65.6	10	3.187	− 20 27 27.2	68.8	2	19.52
10225	Weisse XXIII, 111 .	6.0	6 53.38	64.9	2	3.049	+ 4 14 10.4	58.0	5	19.52
10226	B. A. C. 8084 . . .	7.0*	23 6 54.22	60.2	2	+ 3.090	− 3 23 44.1	54.7	3	+ 19.52
10227	O. Arg. S. 22688 . .	7.1	6 54.61	68.5	2	3.170	− 17 40 13.7	65.9	2	19.52
10228	Weisse XXIII, 112 .	8.4	6 55.74	67.3	2	3.058	+ 2 32 58.1	68.3	2	19.52
10229	O. Arg. S. 22691 . .	8.9	6 56.33	66.4	2	3.172	− 18 8 18.2	69.8	3	19.52
10230	φ Aquarii	4.8	7 4.23	58.4	26	3.108	− 6 48 10.9	58.4	13	19.52

Number.	Name of Star.	Magnitude.	Mean Right Ascension, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.	Mean Declination, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.
			h. m. s.			"	° ′ "			"
10231	Lalande 45473 . . .	8.6	23 7 7.81	62.4	5	+ 3.181	− 19 38 7.8	60.9	4	+ 19.52
10232	B. A. C. 8088 . . .	5.2	7 11.94	67.9	3	3.346	− 41 51 49.8	57.5	4	19.53
10233	Anonymous . . .	7.1	7 12.42	65.9	2	3.328	− 39 56 22.4	65.9	2	19.53
10234	Lacaille 9411 . . .	6.8	7 50.60	62.8	4	3.217	− 25 36 49.8	63.9	2	19.54
10235	Weisse XXIII, 136 .	8.1	8 6.60	66.6	3	3.100	− 5 17 41.5	67.9	2	19.54
10236	B. A. C. 8091 . . .	7.0*	23 8 7.92	58.8	2	+ 2.917	+ 27 18 33.6	53.8	2	+ 19.54
10237	Lacaille 9414 . . .	6.4	8 10.15	63.3	4	3.249	− 30 36 34.4	67.8	2	19.55
10238	O. Arg. S. 22711 . .	8.2	8 13.29	69.3	2	3.194	− 22 5 18.6	66.8	2	19.55
10239	O. Arg. S. 22712 . .	9.0*	8 15.17	69.8	1	3.199	− 23 1 27.0	69.8	2	19.55
10240	Anonymous . . .	8.0	8 21.38	65.8	2	3.323	− 40 1 51.9	67.4	2	19.55
10241	B. A. C. 8094 . . .	7.0	23 8 21.51	59.2	2	+ 3.094	− 4 15 30.5	53.8	2	+ 19.55
10242	Weisse XXIII, 142 .	8.7	8 26.50	68.8	3	3.106	− 6 27 32.9	55.8	2	19.55
10243	Weisse XXIII, 143 .	9.0*	8 28.04	64.7	2	3.134	− 11 48 22.8	55.5	3	19.55
10244	Piazzi XXIII, 21 . .	7.0	8 28.84	65.3	2	3.069	+ 0 32 50.5	59.0	4	19.55
10245	ψ^1 Aquarii	5.5*	8 33.04	48.3	11	3.124	− 9 50 58.8	65.9	2	19.55
10246	Lacaille 9415 . . .	7.8	23 8 33.18	68.9	2	+ 3.334	− 41 25 36.5	70.3	4	+ 19.56
10247	61 Pegasi	6.0*	8 56.29	45.7	2	2.918	+ 27 29 6.5	54.8	2	19.56
10248	Lacaille 9425 . . .	6.0	9 2.87	65.8	2	3.203	− 23 59 15.1	66.4	2	19.56
10249	Lacaille 9424 . . .	5.8	9 5.82	68.9	2	3.337	− 41 57 29.5	68.4	2	19.56
10250	Lacaille 9426 . . .	6.8	9 7.88	63.8	3	3.238	− 29 26 49.2	62.7	2	19.56
10251	O. Arg. S. 22721 . .	7.0	23 9 10.33	68.9	1	+ 3.191	− 21 56 48.0	69.9	2	+ 19.56
10252	Anonymous . . .	8.0	9 17.02	66.3	2	3.246	− 30 40 13.9	66.8	2	19.57
10253	Lalande 45545 . . .	8.2	9 17.64	68.7	2	3.158	− 16 19 30.9	64.8	2	19.57
10254	O. Arg. S. 22723 . .	6.5	9 24.06	68.8	2	3.190	− 21 57 53.1	64.4	2	19.57
10255	O. Arg. S. 22727 . .	6.9	9 35.25	68.8	2	3.176	− 19 38 11.4	67.3	2	19.57
10256	Lacaille 9429 . . .	6.0	23 9 37.25	69.3	2	+ 3.235	− 29 11 53.5	62.7	2	+ 19.57
10257	B. A. C. 8104 . . .	6.0*	9 39.42	59.8	2	2.090	+ 73 28 7.5	53.9	2	19.57
10258	Weisse XXIII, 177 .	9.0	9 52.81	62.3	4	3.053	+ 3 41 54.2	57.8	3	19.58
10259	γ Piscium	4.5	9 54.62	62.6	89	3.059	+ 2 31 4.8	60.7	14	19.58
10260	Weisse XXIII, 183 .	9.0	10 11.01	62.2	4	3.053	+ 3 41 14.4	57.8	2	19.58
10261	Lalande 45588 . . .	7.8	23 10 14.96	68.9	2	+ 2.853	+ 37 11 51.7	47.6	1	+ 19.58
10262	Weisse XXIII, 185 .	7.0	10 21.46	59.4	2	3.136	− 12 28 37.4	54.8	2	19.59
10263	Weisse XXIII, 188 .	8.0	10 25.21	63.8	2	3.141	− 13 33 29.5	67.4	2	19.59
10264	Lacaille 9432 . . .	6.0	10 25.56	67.8	2	3.327	− 41 35 6.1	66.8	3	19.59
10265	Anonymous . . .	8.0	10 31.49	68.8	2	3.104	− 6 19 50.2	56.1	3	19.59
10266	ψ^2 Aquarii	5.0*	23 10 37.58	51.6	10	+ 3.122	− 9 56 45.6	60.3	4	+ 19.59
10267	O. Arg. S. 22743 . .	6.0	11 6.54	68.8	2	3.173	− 19 36 23.7	67.3	2	19.60
10268	γ Sculptoris	5.0	11 15.17	63.3	2	3.257	− 33 17 39.1	66.3	2	19.60
10269	Lacaille 9437 . . .	6.8	11 22.38	66.4	2	3.243	− 31 18 58.5	63.8	2	19.61
10270	Lacaille 9436 . . .	6.9	11 22.54	64.0	5	3.231	− 29 30 19.0	62.7	2	19.61

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10271	Weisse XXIII, 222	8.0	23 11 30.12	68.8	2	+ 3.104	− 6 23 35.8	62.3	2	+ 19.61
10272	Lacaille 9439	6.2	11 32.94	68.7	2	3.229	− 29 9 9.5	62.7	2	19.61
10273	Weisse XXIII, 227	7.2	11 39.69	66.3	2	3.060	+ 2 29 5.5	67.3	2	19.61
10274	ψ^3 Aquarii	5.0*	11 40.60	50.6	17	3.123	− 10 22 31.8	52.2	11	19.61
10275	Lacaille 9440	6.6	11 45.12	63.6	5	3.306	− 39 55 21.1	65.9	2	19.61
10276	Lacaille 9443	8.5	23 12 3.30	67.3	2	+ 3.329	− 42 43 38.2	70.3	2	+ 19.62
10277	Lalande 45648	7.8	12 4.77	68.7	2	3.169	− 19 19 12.4	61.9	2	19.62
10278	Lacaille 9444	6.6	12 8.08	63.9	2	3.262	− 34 28 19.5	68.8	2	19.62
10279	96 Aquarii	5.0	12 8.33	61.2	4	3.101	− 5 53 19.9	67.9	2	19.62
10280	Anonymous	7.5	12 9.78	69.4	7	3.298	− 39 12 31.3	67.4	2	19.62
10281	Weisse XXIII, 242	8.8	23 12 32.81	67.3	2	+ 3.083	− 2 20 22.3	68.8	2	+ 19.63
10282	Lacaille 9447	7.1	12 36.82	63.2	3	3.192	− 23 35 15.7	64.8	2	19.63
10283	Lacaille 9445	7.5	12 40.82	69.7	2	3.336	− 43 54 53.7	67.8	2	19.63
10284	Weisse XXIII, 246	8.5	12 51.72	67.3	2	3.083	− 2 22 11.6	69.2	3	19.63
10285	*o* Cephei	5.5*	12 53.61	65.6	2	2.418	+ 67 20 45.9	64.8	6	19.63
10286	Anonymous	7.8	23 12 58.88	69.3	6	+ 3.295	− 39 15 39.1	64.3	2	+ 19.63
10287	B. A. C. 8123	7.0*	13 0.27	58.7	3	3.094	− 4 40 50.3	53.8	2	19.64
10288	O. Arg. S. 22766	8.3	13 3.07	65.5	4	3.175	− 20 47 32.7	67.8	2	19.64
10289	Anonymous	7.8	13 12.38	69.3	2	3.260	− 34 39 50.8	67.4	2	19.64
10290	*b* Piscium	5.1	13 12.72	61.8	9	3.050	+ 4 37 4.4	58.5	6	19.64
10291	Anonymous	9.0	23 13 19.64	67.3	4	+ 3.116	− 9 18 56.6	67.8	2	+ 19.64
10292	B. A. C. 8129	7.0*	13 27.80	60.7	2	3.104	− 6 40 18.2	60.4	4	19.64
10293	Anonymous	7.5	13 33.76	68.8	2	3.166	− 19 19 13.5	62.8	1	19.65
10294	Lalande 45704	8.0	13 34.23	62.9	7	3.166	− 19 18 32.4	60.1	4	19.65
10295	τ Pegasi	5.0	13 42.68	46.4	4	2.958	+ 22 58 27.3	68.9	2	19.65
10296	B. A. C. 8132	6.4	23 13 47.49	63.6	5	+ 3.213	− 27 45 8.6	63.3	2	+ 19.65
10297	O. Arg. S. 22779	7.0	13 56.15	68.8	2	3.200	− 25 38 23.3	66.4	2	19.65
10298	12 Andromedæ	6.0*	14 8.24	66.3	2	2.869	+ 37 25 6.3	66.4	2	19.66
10299	B. A. C. 8134	6.5*	14 8.50	65.7	1	3.097	− 5 26 15.6	68.4	2	19.66
10300	64 Pegasi	5.5	15 5.26	58.7	2	2.915	+ 31 2 47.6	72.8	2	19.67
10301	Lalande 45758	7.8	23 15 11.24	67.7	2	+ 3.077	− 1 10 21.7	68.9	3	+ 19.67
10302	97 Aquarii	7.0	15 18.68	67.2	2	3.145	− 15 48 24.5	67.3	2	19.68
10303	Lacaille 9453	7.1	15 24.82	63.8	4	3.188	− 24 13 0.4	65.8	3	19.68
10304	Anonymous	8.0	15 34.88	69.9	1	2.486	+ 66 17 25.7	69.9	1	19.68
10305	b^1 Aquarii	4.5	15 36.90	60.8	3	3.170	− 20 51 53.2	67.8	2	19.68
10306	B. A. C. 8145	7.3	23 15 38.86	59.9	2	+ 3.307	− 42 22 12.1	66.8	2	+ 19.68
10307	O. Arg. S. 22798	7.7	15 39.89	63.4	2	3.187	− 24 9 30.4	65.8	2	19.68
10308	Weisse XXIII, 309	8.0	15 43.82	58.8	4	3.124	− 11 32 31.7	55.5	3	19.68
10309	O. Arg. S. 22800	7.0	15 47.87	66.8	2	3.194	− 25 22 54.6	67.3	2	19.68
10310	B. A. C. 8150	5.8	16 3.81	68.8	2	3.317	− 43 53 36.3	62.8	2	19.69

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10311	Lacaille 9458	6.9	23 16 14.09	65.3	2	+ 3.230	− 31 52 45.7	65.9	2	+ 19.69
10312	Anonymous	8.5	16 16.24	68.8	3	3.244	− 34 8 38.3	64.8	2	19.69
10313	B. A. C. 8154, (1st *)	8.0*	16 29.64	61.9	3	3.113	− 9 13 37.7	65.9	2	19.70
10314	B. A. C. 8154, (2d *)	7.5*	16 30.13	61.9	2	3.113	− 9 13 36.6	65.9	2	19.70
10315	Lalande 45804	8.0*	16 31.69	59.8	3	3.157	− 18 33 26.5	58.4	4	19.70
10316	B. A. C. 8155	6.9	23 16 41.23	64.6	5	+ 3.176	− 22 32 20.5	62.7	2	+ 19.70
10317	Lacaille 9461	6.8	16 51.76	62.7	2	3.267	− 37 58 8.6	67.8	2	19.70
10318	Anonymous	8.2	16 56.23	68.9	2	2.885	+ 36 53 9.7	47.8	2	19.70
10319	O. Arg. S. 22817	9.0	17 3.70	64.0	4	3.153	− 18 5 15.6	66.8	2	19.70
10320	Weisse XXIII, 340	6.3	17 14.48	68.8	3	3.048	+ 5 25 6.8	61.8	2	19.71
10321	Weisse XXIII, 342	7.0	23 17 21.43	68.8	2	+ 3.012	+ 13 42 42.3	61.8	2	+ 19.71
10322	B. A. C. 8158	6.0*	17 46.92	59.2	2	2.698	+ 56 46 2.6	53.7	2	19.72
10323	Radcliffe 6064	8.0	17 50.57	67.7	2	2.730	+ 54 25 4.2	67.8	1	19.72
10324	Lalande 45838	8.8	17 51.11	60.8	2	3.156	− 18 51 50.5	58.4	4	19.72
10325	Weisse (2) XXIII, 363	7.0	17 55.92	68.9	2	2.897	+ 35 35 37.5	46.8	2	19.72
10326	Lacaille 9468	7.5	23 17 58.18	62.8	4	+ 3.217	− 30 46 32.2	65.3	2	+ 19.72
10327	67 Pegasi	6.0	17 59.94	68.8	2	2.922	+ 31 36 58.3	64.7	3	19.72
10328	Weisse XXIII, 359	8.8	18 14.48	69.7	2	3.050	+ 5 16 20.3	58.4	4	19.72
10329	υ Pegasi	5.0	18 23.73	62.0	4	2.971	+ 22 38 1.7	60.0	7	19.73
10330	Radcliffe 6067	7.8	18 29.61	65.6	5	2.737	+ 54 19 2.3	66.3	4	19.73
10331	4 Cassiopeæ	5.0*	23 18 38.21	45.8	17	+ 2.630	+ 61 30 52.4	67.9	2	+ 19.73
10332	Lacaille 9473	6.6	18 45.01	63.3	4	3.200	− 28 11 40.8	62.7	2	19.73
10333	B. A. C. 8167	6.3	19 12.39	66.8	5	3.170	− 22 30 36.9	65.3	2	19.74
10334	Weisse XXIII, 377	8.5	19 20.28	60.8	2	3.117	− 10 48 13.2	54.8	2	19.74
10335	Rumker 11173	8.4	19 33.42	67.2	5	2.745	+ 54 20 16.4	67.9	1	19.74
10336	Lacaille 9479	7.5	23 19 37.92	63.8	2	+ 3.174	− 23 29 34.5	63.8	2	+ 19.75
10337	Lalande 45892	6.8	19 38.18	68.9	2	3.139	− 16 0 59.4	66.4	2	19.75
10338	Weisse XXIII, 386	9.2	19 38.90	65.8	3	3.068	+ 0 55 49.1	65.8	3	19.75
10339	Anonymous.	. .	19 42.93	46.4	1	2.543	+ 66 9 6.3	46.2	1	19.75
10340	Anonymous	8.0	19 44.	. .	.	2.541	+ 66 13 56.7	69.1	1	19.75
10341	κ Piscium	4.8	23 19 45.35	61.7	63	+ 3.070	+ 0 29 22.9	58.7	23	+ 19.75
10342	Anonymous	7.0	19 45.51	46.4	1	2.543	+ 66 9 36.3	69.8	1	19.75
10343	Anonymous	7.8	20 3.78	65.7	1	2.752	+ 54 4	. .	.	19.75
10344	9 Piscium	6.0	20 4.51	54.6	6	3.071	+ 0 21 14.8	60.3	4	19.75
10345	Lacaille 9482	7.0	20 6.59	68.8	2	3.195	− 28 2 58.4	66.4	2	19.75
10346	Anonymous	8.1	23 20 8.10	68.5	4	+ 2.751	+ 54 12 15.2	67.8	2	+ 19.75
10347	Anonymous	6.8	20 9.71	68.9	2	3.230	− 34 23 39.8	64.9	3	19.75
10348	Anonymous	7.8	20 11.33	65.7	1	2.753	+ 54 4	. .	.	19.75
10349	13 Andromedæ	5.8	20 23.04	69.4	2	2.864	+ 42 8 28.0	57.7	3	19.76
10350	Radcliffe 6079	7.8	20 23.09	69.4	3	2.753	+ 54 12 16.1	67.8	2	19.76

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			h. m. s.			"	° ' "			"
10351	Anonymous . . .	7.8	23 20 23.18	65.7	1	+ 2.755	+ 54 4	. .	.	+ 19.76
10352	B. A. C. 8173 . . .	6.0*	20 24.26	58.8	2	2.443	+ 69 54 53.5	53.8	2	19.76
10353	B. A. C. 8172 . . .	7.0	20 29.24	63.3	4	3.241	— 36 18 54.0	65.3	2	19.76
10354	O. Arg. S. 22851 . .	6.6	20 37.85	68.9	2	3.138	— 16 4 7.7	64.4	2	19.76
10355	Radcliffe 6081 . . .	8.0	20 39.51	66.4	10	2.758	+ 54 5 43.0	66.6	5	19.76
10356	Anonymous . . .	8.8	23 20 39.56	70.2	5	+ 2.757	+ 54 1 54.9	68.1	3	+ 19.76
10357	69 Pegasi	6.5	20 43.37	62.4	3	2.969	+ 24 23 56.1	69.3	2	19.76
10358	B. A. C. 8175 . . .	6.0	20 47.91	68.9	3	3.121	— 12 13 10.6	54.8	2	19.76
10359	θ Piscium	5.0*	20 51.94	66.4	21	3.050	+ 5 36 37.9	63.5	15	19.76
10360	Rumker 11206 . . .	8.2	20 59.35	69.7	2	2.755	+ 54 25 51.0	68.8	2	19.77
10361	Anonymous . . .	8.0	23 20 59.55	70.9	2	+ 3.236	— 35 52 41.7	66.8	1	+ 19.77
10362	Lacaille 9489 . . .	6.5	21 1.31	63.7	3	3.183	— 26 11 25.3	63.9	4	19.77
10363	Santini 1633. . . .	. .	21 8.64	61.8	4	3.051	+ 5 18 19.0	57.5	6	19.77
10364	Weisse XXIII, 419 .	8.0	21 20.88	65.8	2	3.052	+ 5 2 16.2	66.8	2	19.77
10365	Weisse XXIII, 423 .	9.0	21 36.70	64.4	2	3.115	— 10 52 17.4	56.1	3	19.78
10366	Weisse (2) XXIII, 457.	7.2	23 21 51.68	69.4	2	+ 2.894	+ 38 50 56.9	46.6	1	+ 19.78
10367	Anonymous . . .	9.5	21 58.59	69.8	1	3.050	+ 5 36 16.1	69.9	1	19.78
10368	Anonymous . . .	8.0	21 58.63	68.0	5	2.768	+ 54 2 40.0	68.1	3	19.78
10369	Anonymous . . .	8.0	22 1.70	67.3	2	2.769	+ 54 8 47.3	67.8	3	19.78
10370	11 Piscium	5.5	22 15.83	58.8	2	3.082	— 2 33 39.6	72.8	3	19.78
10371	B. A. C. 8184 . . .	6.0	23 22 17.81	64.1	8	+ 3.092	— 5 17 41.7	61.3	8	+ 19.79
10372	12 Piscium	6.0	22 19.63	45.7	2	3.079	— 1 48 19.7	68.9	3	19.79
10373	Santini 1635. . . .	8.2	22 24.70	61.3	2	3.052	+ 5 19 56.1	57.1	3	19.79
10374	Weisse XXIII, 443 .	8.4	22 25.17	65.4	2	3.071	+ 0 20 0.0	60.8	4	19.79
10375	Anonymous . . .	8.0	22 41.34	69.7	3	2.770	+ 54 21 57.0	68.8	2	19.79
10376	Weisse XXIII, 449 .	8.0	23 22 45.90	65.4	2	+ 3.071	+ 0 23 33.8	60.8	4	+ 19.79
10377	Weisse XXIII, 452 .	9.0	22 48.36	68.7	2	3.045	+ 7 2 54.4	61.8	2	19.79
10378	Lacaille 9497 . . .	7.1	22 54.00	63.8	3	3.162	— 22 39 19.8	62.8	3	19.79
10379	Lacaille 9496 . . .	7.2	23 3.02	63.0	5	3.238	— 37 43 45.5	67.8	2	19.80
10380	Anonymous . . .	7.1	23 6.83	68.8	2	3.246	— 39 6 0.5	64.8	2	19.80
10381	Weisse XXIII, 458 .	8.5	23 23 14.60	61.1	4	+ 3.051	+ 5 39 16.5	58.8	4	+ 19.80
10382	Lacaille 9499 . . .	7.2	23 16.95	63.8	3	3.171	— 24 58 7.4	62.7	2	19.80
10383	Lacaille 9500 . . .	7.2	23 26.98	63.3	4	3.226	— 35 52 40.7	67.8	1	19.80
10384	B. A. C. 8187 . . .	7.0*	23 29.03	59.3	2	2.309	+ 74 27 15.6	53.8	2	19.80
10385	Weisse XXIII, 463 .	8.6	23 36.22	59.4	4	3.113	— 10 55 39.0	55.5	3	19.80
10386	Lalande 46047 . . .	6.0	23 23 49.90	68.8	2	+ 2.908	+ 37 53 24.5	48.8	2	+ 19.81
10387	Weisse XXIII, 473 .	6.8	23 56.51	68.8	2	3.066	+ 1 35 36.7	66.7	2	19.81
10388	Weisse XXIII, 476 .	8.0	24 12.62	68.9	2	3.090	— 5 1 22.0	58.1	3	19.81
10389	Lacaille 9507 . . .	5.7	24 17.92	67.3	2	3.262	— 42 31 31.6	68.4	2	19.81
10390	b^3 Aquarii	6.5	24 21.38	65.3	2	3.156	— 22 8 29.7	58.4	3	19.81

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			h. m. s.			″	° ′ ″			″
10391	14 Andromedæ	6.0*	23 24 25.05	68.9	2	+ 2.908	+ 38 28 2.6	47.4	2	+ 19.81
10392	B. A. C. 8196	7.0	24 28.28	65.2	2	3.156	− 22 1 16.3	62.8	3	19.82
10393	Lacaille 9508	6.7	24 33.00	64.2	3	3.175	− 26 31 2.6	63.8	2	19.82
10394	Anonymous.	7.2	24 48.26	65.3	2	3.157	− 22 34 32.2	65.5	3	19.82
10395	Santini 1636.	6.9	25 5.69	61.0	5	3.050	+ 6 18 53.0	57.8	5	19.82
10396	Lalande 46097	7.5	23 25 7.04	69.3	2	+ 2.916	+ 37 32 6.1	47.8	2	+ 19.82
10397	β Sculptoris	4.4	25 27.18	63.5	3	3.232	− 38 35 31.2	65.9	2	19.83
10398	Anonymous	6.2	25 31.83	68.9	2	2.936	+ 34 10 49.6	47.8	1	19.83
10399	O. Arg. S. 22897	8.4	25 45.88	64.3	3	3.148	− 20 51 34.2	67.3	2	19.83
10400	b^4 Aquarii	5.5	25 56.82	63.3	2	3.151	− 21 41 16.7	67.8	2	19.84
10401	Lacaille 9516	6.8	23 26 0.30	63.5	4	+ 3.196	− 32 3 44.7	66.4	2	+ 19.84
10402	71 Pegasi	5.5*	26 27.72	45.7	7	2.994	+ 21 43 35.0	67.9	2	19.84
10403	B. A. C. 8204	7.0*	26 34.10	58.8	2	2.500	+ 71 13 45.2	53.8	2	19.84
10404	Lacaille 9519	6.6	26 37.96	65.2	3	3.165	− 25 37 59.7	62.8	2	19.84
10405	Weisse XXIII, 534	9.2	26 44.26	60.3	2	3.054	+ 5 11 28.2	55.8	3	19.85
10406	14 Piscium	5.7	23 26 57.16	56.5	4	+ 3.079	− 2 1 13.1	67.8	2	+ 19.85
10407	Anonymous	7.8	27 9.63	68.8	2	3.227	− 39 2 23.3	64.8	2	19.85
10408	O. Arg. S. 22911	8.5	27 17.69	64.8	4	3.133	− 17 46 14.4	68.8	3	19.85
10409	Weisse XXIII, 528	9.0	27 26.49	63.4	5	3.021	+ 15 11 42.7	61.9	2	19.85
10410	Lacaille 9524	6.9	27 26.87	63.2	2	3.209	− 35 51 23.3	65.3	2	19.85
10411	Lalande 46188	6.0	23 27 47.66	68.8	2	+ 2.931	+ 37 1 20.8	48.7	1	+ 19.86
10412	B. A. C. 8213	5.8	27 49.85	63.2	19	− 0.017	+ 86 32 6.5	64.2	13	19.86
10413	Weisse XXIII, 539	9.0	27 50.92	65.4	2	+ 3.022	+ 15 6 8.8	67.3	2	19.86
10414	Lacaille 9527	6.6	28 16.70	64.0	4	3.171	− 28 15 30.8	62.7	2	19.86
10415	Rumker 11367	8.1	28 17.84	68.8	2	3.098	− 7 55 31.4	57.9	2	19.86
10416	B. A. C. 8214	6.0	23 28 18.66	65.4	2	+ 3.099	− 8 14 20.9	67.8	2	+ 19.86
10417	15 Piscium	6.5	28 19.10	45.7	2	3.070	+ 0 33 24.6	67.9	2	19.86
10418	Lacaille 9528	6.7	28 36.67	63.8	3	3.184	− 31 25 11.1	68.4	2	19.87
10419	B. A. C. 8217	6.0*	28 55.46	58.8	2	2.551	+ 70 52 7.4	53.8	2	19.87
10420	Weisse XXIII, 592	8.0	29 4.52	59.5	3	3.097	− 7 53 25.9	57.9	2	19.87
10421	16 Piscium	6.0*	23 29 14.66	60.8	2	+ 3.068	+ 1 19 30.9	58.8	2	+ 19.88
10422	Lacaille 9532	7.4	29 19.83	64.8	2	3.159	− 26 0 49.4	63.4	2	19.88
10423	Anonymous	6.7	29 29.25	65.8	3	3.209	− 37 34 29.6	69.3	2	19.88
10424	Weisse XXIII, 602	9.0	29 40.28	58.8	2	3.056	+ 5 8 34.1	54.3	7	19.88
10425	Lacaille 9534	6.2	29 40.90	63.0	5	3.185	− 32 38 43.8	63.3	2	19.88
10426	Weisse XXIII, 609	8.5	23 29 59.62	64.6	5	+ 3.078	− 1 53 22.0	68.9	3	+ 19.88
10427	Weisse XXIII, 613	9.0	30 5.24	62.5	4	3.078	− 1 49 27.7	65.8	4	19.89
10428	Lacaille 9539	7.0	30 31.03	64.9	2	3.154	− 25 39 0.6	62.8	2	19.89
10429	Weisse (2) XXIII, 658.	6.5	30 32.15	68.8	3	2.952	+ 35 2 29.2	59.9	3	19.89
10430	Lacaille 9540	7.7	30 33.61	65.8	2	3.228	− 42 20 28.4	67.8	3	19.89

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10431	B. A. C. 8223 . . .	6.0*	23 30 42.08	59.1	3	+ 2.909	+ 43 39 17.3	53.7	2	+ 19.89
10432	B. A. C. 8225 . . .	6.0	30 46.27	65.4	2	3.120	− 15 51 57.6	66.4	2	19.89
10433	Lamont 9262 . . .	10.0*	31 0.68	61.9	2	3.077	− 1 36 4.2	65.9	2	19.90
10434	Lamont 9263 . . .	9.5*	31 5.14	61.8	4	3.077	− 1 38 37.6	65.9	2	19.90
10435	ι Andromedæ . . .	5.0	31 16.78	65.2	2	2.919	+ 42 29 33.9	62.9	2	19.90
10436	Lacaille 9542 . . .	7.0	23 31 26.51	67.8	3	+ 3.223	− 42 15 1.2	67.8	3	+ 19.90
10437	Lamont 9269 . . .	7.3	32 16.37	61.9	3	3.077	− 1 45 11.0	67.4	2	19.91
10438	Lacaille 9548 . . .	7.5	32 22.74	67.3	2	3.141	− 23 18 27.0	63.8	2	19.91
10439	Lacaille 9547 . . .	6.6	32 26.82	63.0	5	3.178	− 33 30 26.7	65.8	2	19.91
10440	ι Piscium	4.6	32 44.99	57.0	175	3.058	+ 4 52 6.2	55.1	57	19.91
10441	Lacaille 9550 . . .	6.8	23 33 5.57	65.9	2	+ 3.152	− 26 58 19.2	62.8	2	+ 19.92
10442	Lacaille 9551 . . .	8.7	33 15.13	62.9	3	3.172	− 32 41 22.1	63.3	2	19.92
10443	μ Sculptoris	4.0	33 16.93	62.9	2	3.172	− 32 50 47.2	65.8	2	19.92
10444	Weisse XXIII, 678 .	8.6	33 19.65	68.7	2	3.078	− 2 8 9.2	62.9	2	19.92
10445	Weisse XXIII, 679 .	7.0	33 23.17	65.4	2	3.053	+ 7 3 49.1	69.9	3	19.92
10446	Weisse XXIII, 683 .	7.7	23 33 31.40	65.4	2	+ 3.053	+ 7 6 37.8	60.8	3	+ 19.92
10447	Weisse XXIII, 685 .	8.5	33 34.48	60.9	3	3.053	+ 7 9 51.1	58.7	2	19.92
10448	Lacaille 9554 . . .	7.5	33 35.80	67.3	2	3.195	− 38 38 34.2	68.4	2	19.92
10449	γ Cephei	3.0	33 38.09	52.5	51	2.415	+ 76 51 1.6	49.3	126	19.92
10450	Weisse (2) XXIII, 734	5.5	33 41.48	68.8	2	2.961	+ 35 56 38.5	46.8	2	19.92
10451	Lacaille 9555 . . .	6.3	23 33 48.30	66.4	2	+ 3.143	− 24 56 8.8	62.7	2	+ 19.93
10452	A^1 Aquarii	6.1	34 18.60	65.4	2	3.123	− 18 48 2.0	66.3	2	19.93
10453	O. Arg. S. 22993 . .	7.9	34 28.73	65.0	4	3.128	− 20 32 1.2	67.3	2	19.93
10454	B. A. C. 8241 . . .	6.2	34 30.07	68.8	2	3.211	− 43 2 37.1	62.7	2	19.93
10455	Weisse XXIII, 705 .	8.5	34 33.38	63.8	2	3.053	+ 7 25 41.3	60.9	3	19.93
10456	Santini 1649 . . .	6.3	23 34 48.85	59.5	6	+ 3.055	+ 6 28 33.4	59.6	9	+ 19.94
10457	λ Piscium	5.0*	34 54.26	57.2	13	3.069	+ 1 0 35.2	56.1	5	19.94
10458	B. A. C. 8247 . . .	7.5*	35 26.54	60.3	2	3.026	+ 17 53 28.4	59.0	5	19.94
10459	ω^2 Aquarii	5.5	35 27.60	68.8	2	3.111	− 15 19 7.5	53.8	2	19.94
10460	Lacaille 9568 . . .	6.9	35 42.38	63.0	6	3.153	− 29 49 11.6	63.8	2	19.94
10461	Lacaille 9567 . . .	6.6	23 35 43.91	62.5	4	+ 3.181	− 37 33 43.5	66.4	2	+ 19.94
10462	Lacaille 9570 . . .	6.5	36 1.25	63.4	3	3.166	− 33 51 28.3	62.7	2	19.95
10463	Weisse XXIII, 730 .	7.5	36 8.07	68.7	2	3.076	− 1 29 2.3	61.8	2	19.95
10464	77 Pegasi	5.5*	36 14.99	46.3	2	3.049	+ 9 33 16.7	67.9	2	19.95
10465	Anonymous . . .	7.8	36 15.32	68.8	2	2.971	+ 36 9 38.3	47.9	2	19.95
10466	B. A. C. 8252 . . .	7.0*	23 36 17.38	59.2	2	+ 2.893	+ 52 22 33.0	53.7	2	+ 19.95
10467	Lacaille 9576 . . .	6.7	36 31.09	64.5	3	3.165	− 34 12 15.7	67.2	3	19.95
10468	Lacaille 9578 . . .	7.0	36 46.84	67.3	2	3.191	− 41 27 46.7	67.8	2	19.95
10469	Lalande 46496, (1st *) .	8.0	36 48.21	68.8	2	3.057	+ 6 28 25.5	60.4	2	19.95
10470	Lalande 46496, (2d *) .	. .	36 48.28	68.8	1	3.057	+ 6 28 25.5	60.4	2	19.95

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10471	Weisse XXIII, 749	9.5	23 36 59.07	61.3	4	+ 3.053	+ 8 10 0.6	61.9	2	+ 19.96
10472	O. Arg. S. 23022	6.0	37 11.48	64.2	5	3.140	− 27 1 21.6	63.0	4	19.96
10473	B. A. C. 8257	8.0	37 40.35	58.8	2	3.057	+ 6 24 56.0	60.4	5	19.96
10474	Weisse XXIII, 767	6.9	37 49.51	68.8	4	3.075	− 1 26 14.4	68.8	4	19.96
10475	Lacaille 9583	7.5	38 37.79	62.9	3	3.172	− 38 45 10.8	62.7	2	19.97
10476	i^2 Aquarii	6.0	23 38 44.43	61.4	2	+ 3.116	− 19 27 24.5	65.9	2	+ 19.97
10477	Weisse XXIII, 783	8.1	38 49.88	61.8	6	3.073	− 0 30 47.9	61.8	2	19.97
10478	B. A. C. 8260	7.7	39 7.08	64.8	2	3.183	− 42 19 40.0	67.4	2	19.97
10479	19 Piscium	5.0	39 14.38	54.1	10	3.066	+ 2 42 36.3	67.8	2	19.97
10480	Weisse XXIII, 803	8.8	39 52.49	59.5	3	3.063	+ 4 28 22.1	55.5	3	19.98
10481	Lacaille 9597	7.0	23 40 9.94	63.5	3	+ 3.165	− 38 56 2.8	67.7	5	+ 19.98
10482	Weisse XXIII, 809	8.5	40 11.76	66.3	2	3.077	− 2 17 7.1	67.8	2	19.98
10483	τ Cassiopeæ	5.0	40 13.82	66.5	3	2.889	+ 57 52 19.9	62.0	12	19.98
10484	Lalande 46609	7.2	40 27.45	65.7	4	3.082	− 5 14 21.9	65.6	3	19.98
10485	Weisse XXIII, 817	7.0*	40 31.67	60.8	4	3.075	− 1 32 19.2	58.8	8	19.98
10486	B. A. C. 8269	7.0	23 40 35.63	66.1	3	+ 3.065	+ 3 27 8.8	53.9	2	+ 19.98
10487	B. A. C. 8270	7.0	40 39.87	66.4	3	3.065	+ 3 23 55.7	67.9	2	19.98
10488	20 Piscium	4.5	40 44.67	55.9	8	3.079	− 3 32 22.4	67.9	2	19.99
10489	O. Arg. S. 23052	7.2	40 56.26	68.7	2	3.107	− 17 28 30.1	65.9	2	19.99
10490	Weisse XXIII, 828	9.0	40 58.59	61.6	5	3.054	+ 9 22 11.8	65.6	6	19.99
10491	Weisse XXIII, 830	8.5	23 41 1.67	61.3	2	+ 3.075	− 1 33 7.5	56.8	4	+ 19.99
10492	O. Arg. S. 23054	7.7	41 2.69	62.9	2	3.132	− 28 40 21.7	68.3	2	19.99
10493	B. A. C. 8272	6.3	41 3.27	66.2	3	3.058	+ 7 28 8.2	58.8	4	19.99
10494	Weisse XXIII, 831	7.0	41 5.89	58.8	2	3.060	+ 6 23 11.3	60.4	4	19.99
10495	Lalande 46632	7.6	41 9.78	68.8	2	3.058	+ 7 24 38.3	56.1	3	19.99
10496	Groombridge 4142	7.0	23 41 20.21	69.7	2	+ 2.858	+ 63 2 23.8	68.2	3	+ 19.99
10497	B. A. C. 8274	5.5	41 20.73	57.3	2	3.086	− 7 9 27.5	68.4	2	19.99
10498	Weisse XXIII, 845	9.5	41 31.18	65.7	2	3.072	+ 0 13 41.4	69.1	3	19.99
10499	Weisse XXIII, 848	8.0	41 33.89	65.6	3	3.082	− 5 12 47.4	65.6	3	19.99
10500	δ Sculptoris	4.6	41 37.70	62.0	36	3.131	− 28 54 16.3	58.7	12	19.99
10501	B. A. C. 8280	7.0*	23 42 3.03	61.7	1	+ 2.897	+ 59 12 1.8	53.8	2	+ 19.99
10502	Lacaille 9605	6.5	42 3.71	62.8	4	3.129	− 28 37 50.4	64.8	2	19.99
10503	Lacaille 9606	7.0	42 11.05	63.9	2	3.115	− 22 23 30.4	68.6	3	20.00
10504	Anonymous	8.0	42 15.04	68.8	2	3.137	− 32 10 53.1	60.4	3	20.00
10505	21 Piscium	6.0	42 17.39	58.3	12	3.072	+ 0 17 55.5	68.3	2	20.00
10506	Lacaille 9609	6.5	23 42 34.03	68.8	2	+ 3.167	− 43 4 44.4	62.7	2	+ 20.00
10507	Lacaille 9610	6.4	42 34.12	64.4	3	3.122	− 26 6 31.9	63.5	3	20.00
10508	79 Pegasi	6.0*	42 34.53	46.8	1	3.018	+ 28 3 46.7	53.7	3	20.00
10509	Lacaille 9611	7.0	42 56.36	63.3	4	3.130	− 30 10 50.1	63.4	3	20.00
10510	Weisse XXIII, 870	8.8	42 59.12	60.3	2	3.061	+ 6 16 9.6	60.4	2	20.00

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10511	B. A. C. 8285 . . .	6.0	23 43 1.26	48.7	1	+ 3.091	− 10 45 19.4	67.9	2	+ 20.00
10512	B. A. C. 8287 . . .	7.0	43 19.54	62.6	3	3.109	− 21 0 38.3	58.7	7	20.00
10513	(* 26) Washington . .	9.5	43 20.00	61.8	2	3.060	+ 7 20 12.8	60.0	3	20.00
10514	O. Arg. S. 23082 . .	7.0	43 32.86	68.8	2	3.105	− 19 4 9.4	64.9	2	20.00
10515	O. Arg. N. 26080 . .	7.0	43 35.44	69.7	2	2.884	+ 62 57 54.2	67.9	2	20.00
10516	108 Aquarii	4.8	23 44 7.30	68.8	2	+ 3.105	− 19 41 12.8	66.9	2	+ 20.01
10517	O. Arg. N. 26093 . .	7.0	44 9.68	69.7	2	2.889	+ 63 12 21.9	67.9	2	20.01
10518	Lacaille 9619 . . .	7.0	44 11.14	63.7	2	3.132	− 33 12 35.2	68.8	2	20.01
10519	Weisse XXIII, 895 .	8.2	44 33.84	65.8	3	3.082	− 6 27 24.9	65.8	3	20.01
10520	Lacaille 9625 . . .	6.8	44 37.85	62.8	4	3.132	− 33 54 1.4	62.7	2	20.01
10521	Anonymous . . .	9.5	23 44 44.28	69.7	2	+ 3.128	− 32 9 4.2	71.4	2	+ 20.01
10522	22 Piscium	6.0	44 47.84	45.7	3	3.069	+ 2 9 7.8	69.3	2	20.01
10523	O. Arg. S. 23096 . .	7.6	45 5.85	68.8	2	3.102	− 18 48 14.2	64.9	2	20.01
10524	B. A. C. 8296 . . .	7.0	45 17.54	46.8	1	3.039	+ 20 53 36.7	69.8	1	20.01
10525	Lalande 46769 . . .	6.5	45 26.27	66.8	2	3.102	− 19 20 25.5	66.9	2	20.02
10526	Lacaille 9630 . . .	6.6	23 45 26.44	62.9	2	+ 3.113	− 25 45 54.7	66.9	2	+ 20.02
10527	82 Pegasi	6.0	45 28.80	59.8	3	3.057	+ 10 10 8.1	59.0	3	20.02
10528	Weisse XXIII, 916 .	9.5	45 32.40	61.7	6	3.074	− 1 35 11.9	58.4	4	20.02
10529	Anonymous . . .	7.4	45 40.76	69.3	4	3.015	+ 34 7 52.7	47.9	1	20.02
10530	Anonymous . . .	7.8	45 42.27	68.9	2	3.026	+ 28 49 50.1	69.9	1	20.02
10531	25 Piscium	6.5	23 45 54.62	55.3	5	+ 3.070	+ 1 18 43.4	69.0	1	+ 20.02
10532	Weisse XXIII, 932 .	8.5	45 58.76	58.8	2	3.064	+ 5 55 14.4	60.9	3	20.02
10533	Weisse XXIII, 934 .	8.5	46 2.65	59.9	2	3.066	+ 4 22 44.2	55.9	4	20.02
10534	B. A. C. 8304 . . .	6.6	46 6.25	64.2	3	3.110	− 25 0 27.3	67.8	2	20.02
10535	Lalande 46811 . . .	6.5	46 8.06	68.8	2	3.017	+ 34 16 31.3	47.8	1	20.02
10536	Weisse XXIII, 936 .	9.2	23 46 13.03	65.8	2	+ 3.080	− 5 49 29.1	65.8	3	+ 20.02
10537	Lacaille 9636 . . .	6.8	46 28.83	63.0	4	3.118	− 30 10 31.8	63.4	3	20.02
10538	Lacaille 9637 . . .	6.9	46 42.77	63.8	3	3.119	− 31 8 5.5	67.8	2	20.02
10539	Lalande 46836 . . .	6.2	46 59.47	68.8	2	3.012	+ 38 30 9.8	47.5	3	20.02
10540	Anonymous . . .	9.0	47 3.50	67.3	2	3.080	− 5 43 37.1	69.8	2	20.02
10541	B. A. C. 8308, (1st *) .	7.8	23 47 6.33	63.9	2	+ 3.112	− 27 49 19.4	65.3	2	+ 20.02
10542	B. A. C. 8308, (2d *) .	7.0	47 6.97	63.9	2	3.112	− 27 49 20.3	66.2	3	20.02
10543	O. Arg. S. 23120 . .	9.0	47 25.54	64.7	6	3.104	− 23 48 40.1	67.9	2	20.03
10544	B. A. C. 8311 . . .	6.5*	47 36.72	69.7	2	3.073	− 0 40 9.3	68.4	2	20.03
10545	ρ Cassiopeæ	5.0	47 38.92	59.0	3	2.962	+ 56 43 13.5	53.7	3	20.03
10546	(59 *) Washington . .	8.5	23 47 41.08	59.3	2	+ 3.073	− 1 3 33.8	58.0	5	+ 20.03
10547	Weisse (2) XXIII, 994.	8.5	47 43.31	68.8	2	3.018	+ 36 48 56.0	47.9	1	20.03
10548	Lacaille 9641 . . .	7.3	47 49.52	62.8	2	3.128	− 38 8 34.3	65.9	2	20.03
10549	26 Piscium	6.0*	47 58.16	56.8	6	3.064	+ 6 17 33.9	66.4	2	20.03
10550	Lalande 46873 . . .	7.7	47 58.88	68.9	2	3.019	+ 37 17 28.9	47.7	1	20.03

Number.	Name of Star.	Magnitude.	Mean Right Ascension, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.	Mean Declination, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.
			h. m. s.			"	° ′ ″			"
10551	B. A. C. 8313	6.0	23 48 1.85	63.2	3	+ 3.117	− 32 42 3.3	61.0	4	+ 20.03
10552	Lacaille 9644	6.5	48 1.96	63.2	3	3.117	− 32 39 49.5	64.8	2	20.03
10553	B. A. C. 8314	6.5	48 3.58	62.5	6	2.835	+ 73 37 52.9	63.6	14	20.03
10554	O. Arg. S. 23124	7.0	48 13.03	68.8	2	3.095	− 18 36 29.1	66.4	2	20.03
10555	Lacaille 9647	7.5	48 25.00	65.7	2	3.126	− 38 50 47.1	67.9	2	20.03
10556	B. A. C. 8315	7.0	23 48 28.24	59.4	4	+ 3.063	+ 7 26 40.4	56.7	10	+ 20.03
10557	B. A. C. 8317	6.5*	48 33.72	59.2	2	2.971	+ 56 38 0.1	53.8	2	20.03
10558	O. Arg. S. 23126	9.4	48 34.68	65.1	4	3.101	− 23 45 6.9	67.9	2	20.03
10559	Anonymous	9.0	48 36.34	65.7	3	3.068	+ 3 18 56.0	65.7	2	20.03
10560	Lacaille 9650	7.0*	48 53.00	62.9	2	3.126	− 39 49 29.6	62.7	2	20.03
10561	Lacaille 9652	6.5	23 48 54.24	63.8	4	+ 3.099	− 22 46 18.4	63.8	2	+ 20.03
10562	Weisse XXIII, 994	9.0	49 7.62	60.8	2	3.068	+ 3 50 54.0	55.9	2	20.03
10563	Lacaille 9655	6.1	49 16.88	66.9	2	3.102	− 25 31 1.3	67.8	2	20.03
10564	O. Arg. S. 23135	7.8	49 17.79	68.8	2	3.108	− 30 17 17.9	63.8	2	20.03
10565	Weisse XXIII, 1002	8.5	49 22.06	64.8	2	3.072	+ 0 28 17.8	68.8	2	20.03
10566	Lacaille 9657	7.6	23 49 25.68	68.9	2	+ 3.129	− 42 58 24.2	62.7	2	+ 20.03
10567	Weisse XXIII, 1006	7.2	49 37.15	60.6	4	3.068	+ 3 56 43.7	55.5	3	20.04
10568	Lacaille 9659	6.0	49 54.55	66.4	2	3.102	− 27 24 12.7	65.8	2	20.04
10569	Lacaille 9662	7.0	50 14.49	61.8	3	3.116	− 37 29 3.6	69.8	3	20.04
10570	Lacaille 9663	6.4	50 23.89	63.4	6	3.110	− 33 58 8.9	55.8	2	20.04
10571	Weisse XXIII, 1030	7.0	23 50 36.68	60.2	3	+ 3.062	+ 10 41 41.8	62.0	4	+ 20.04
10572	ψ Pegasi	5.5*	50 37.85	59.8	2	3.047	+ 24 21 47.2	53.8	3	20.04
10573	Weisse XXIII, 1032	9.0	50 37.93	60.3	3	3.068	+ 4 37 31.6	56.2	3	20.04
10574	Lacaille 9665	6.8	50 44.60	68.8	2	3.117	− 39 44 3.0	62.7	2	20.04
10575	Weisse XXIII, 1039	9.0	50 54.64	60.8	2	3.073	− 0 54 25.7	61.8	2	20.04
10576	Weisse XXIII, 1040	8.6	23 50 54.85	68.8	2	+ 3.062	+ 10 47 18.6	68.4	2	+ 20.04
10577	O. Arg. S. 23156	8.2	50 56.13	68.8	2	3.094	− 22 40 48.9	65.8	2	20.04
10578	ι Ceti	5.5	51 8.96	66.5	2	3.087	− 16 37 35.3	60.3	4	20.04
10579	Weisse XXIII, 1045	8.2	51 12.71	68.9	2	3.068	+ 4 52 12.9	55.9	2	20.04
10580	Lacaille 9670	7.0	51 28.12	62.8	2	3.112	− 39 0 18.0	68.3	2	20.04
10581	Anonymous	8.5	23 51 28.33	63.7	2	+ 3.101	− 30 16 48.0	69.0	1	+ 20.04
10582	27 Piscium	5.0*	51 30.35	50.1	11	3.076	− 4 19 56.8	50.9	6	20.04
10583	Anonymous	9.0	51 30.79	66.9	2	3.091	− 20 48 17.5	69.2	3	20.04
10584	σ Cassiopeæ	5.5*	51 55.26	61.9	2	3.005	+ 54 58 33.0	65.9	2	20.04
10585	Lacaille 9673	6.0	51 55.39	68.9	2	3.116	− 43 1 3.5	62.7	2	20.04
10586	Weisse, XXIII, 1058	8.4	23 52 0.25	68.8	2	+ 3.069	+ 3 56 40.2	54.9	2	+ 20.04
10587	ω Piscium	4.7	52 7.46	63.7	87	3.067	+ 6 5 17.9	60.4	28	20.04
10588	O. Arg. S. 23166	7.2	52 11.98	65.3	2	3.089	− 20 48 13.9	67.8	2	20.04
10589	B. A. C. 8332	5.7	52 15.65	63.8	3	3.098	− 30 15 51.2	62.7	2	20.04
10590	Lacaille 9674, (1st *)	7.8	52 17.65	68.9	2	3.095	− 27 18 12.1	65.4	2	20.04

Number.	Name of Star.	Magnitude.	Mean Right Ascension, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.	Mean Declination, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.
			h. m. s.			"	° ' "			"
10591	Lacaille 9674, (2d *)	8.0	23 52 17.70	68.9	2	+ 3.095	− 27 18 12.1	65.4	2	+ 20.04
10592	Anonymous	9.0	52 25.29	65.9	1	3.067	+ 6 6 31.3	69.9	1	20.05
10593	Lacaille 9680	6.8	52 32.18	68.9	2	3.093	− 25 25 27.6	63.3	2	20.05
10594	Weisse XXIII, 1075	9.0	52 49.99	61.9	3	3.072	+ 0 18 34.9	60.1	5	20.05
10595	Lalande 47049	6.0	52 53.19	68.9	2	3.040	+ 38 4 46.5	47.6	2	20.05
10596	O. Arg. S. 23176	8.4	23 52 55.17	68.8	2	+ 3.086	− 18 47 31.7	64.9	3	+ 20.05
10597	B. A. C. 8336	7.3	53 2.46	62.0	11	2.502	+ 85 55 37.2	56.1	4	20.05
10598	Weisse (2) XXIII, 1107	6.5	53 4.64	69.7	2	3.041	+ 37 31 30.8	47.8	4	20.05
10599	Anonymous	8.5	53 20.65	68.8	2	3.091	− 26 24 5.5	65.9	2	20.05
10600	Weisse XXIII, 1090	8.5	53 24.18	63.0	1	3.072	+ 0 17 10.9	60.1	5	20.05
10601	O. Arg. S. 23181	8.4	23 53 30.13	66.4	2	+ 3.088	− 23 26 48.7	67.4	2	+ 20.05
10602	O. Arg. S. 23182	7.8	53 32.79	68.8	2	3.093	− 28 41 12.9	56.3	2	20.05
10603	B. A. C. 8338	6.5	53 36.60	69.7	2	3.004	+ 61 23 53.8	53.8	2	20.05
10604	Weisse XXIII, 1099	8.4	53 49.67	65.7	6	3.076	− 5 42 19.1	65.7	3	20.05
10605	O. Arg. S. 23185	8.3	53 50.14	63.8	3	3.088	− 23 33 17.2	67.4	2	20.05
10606	Lacaille 9695	6.8	23 54 10.31	62.8	4	+ 3.091	− 29 30 16.4	65.9	2	+ 20.05
10607	Weisse XXIII, 1110	9.0	54 25.62	65.0	2	3.070	+ 4 16 31.7	54.8	2	20.05
10608	B. A. C. 8344	5.0*	54 29.57	64.3	2	3.015	+ 60 26 34.6	63.7	3	20.05
10609	29 Piscium	5.0	54 38.91	53.6	4	3.074	− 3 48 22.9	65.1	3	20.05
10610	30 Piscium	4.5*	54 46.76	64.2	2	3.076	− 6 47 31.4	57.8	4	20.05
10611	Lacaille 9699	6.7	23 54 47.51	62.9	5	+ 3.096	− 38 40 52.3	67.4	2	+ 20.05
10612	B. A. C. 8351	6.0	54 52.01	64.9	2	3.074	− 3 32 44.3	68.3	2	20.05
10613	85 Pegasi	5.5	54 52.35	69.3	2	3.057	+ 26 20 19.2	67.9	2	20.05
10614	Schjellerup 9964	9.0*	54 55.84	46.9	5	3.072	− 0 21 51.8	54.0	3	20.05
10615	ζ Sculptoris	5.0	55 8.90	63.5	4	3.089	− 30 30 1.4	63.8	2	20.05
10616	c^1 Piscium	7.2	23 55 14.05	61.4	7	+ 3.068	+ 8 10 38.8	58.4	7	+ 20.05
10617	c^2 Piscium	6.3	55 20.41	66.1	3	3.068	+ 7 42 29.9	66.3	2	20.05
10618	B. A. C. 8355	6.2	55 27.48	68.8	2	3.014	+ 65 19 10.5	53.8	2	20.05
10619	Weisse XXIII, 1142	8.7	55 35.21	60.2	3	3.070	+ 5 15 20.0	56.4	4	20.05
10620	O. Arg. S. 23204	6.5	55 45.97	65.4	4	3.081	− 20 49 41.3	64.9	2	29.05
10621	Lacaille 9701	6.2	23 55 49.71	70.8	1	+ 3.089	− 35 31 31.0	70.8	2	+ 20.05
10622	Anonymous	7.5	55 56.81	63.9	3	3.083	− 24 55 28.1	68.3	2	20.05
10623	Lacaille 9702	8.0	55 59.90	63.9	2	3.083	− 25 22 6.4	64.7	2	20.05
10624	Lamont 9388	8.6	56 28.70	65.9	2	3.072	+ 0 48 23.0	67.8	2	20.05
10625	2 Ceti	4.5	56 33.93	68.8	2	3.079	− 18 6 56.4	57.8	3	20.05
10626	Lacaille 9705	6.7	23 57 1.76	63.2	3	+ 3.082	− 30 54 52.6	65.9	2	+ 20.05
10627	B. A. C. 8360	5.8	57 9.21	68.8	2	3.077	− 17 18 22.5	59.9	5	20.05
10628	Lacaille 9706	6.2	57 10.09	62.8	6	3.082	− 30 2 57.4	63.9	1	20.05
10629	Lacaille 9707	7.0	57 12.87	62.8	6	3.082	− 30 9 41.2	64.7	3	20.05
10630	Lamont, 9392	8.2	57 19.62	65.7	5	3.072	+ 1 29 18.8	67.8	2	20.05

Number.	Name of Star.	Magnitude.	Mean Right Ascension, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.	Mean Declination, 1860.0.	Mean year.	No. of obs.	Annual Precession, 1860.
			h. m. s.			"	° ' "			"
10631	Weisse XXIII, 1178 .	8.2	23 57 31.48	59.4	2	+ 3.070	+ 5 44 41.5	53.8	2	+ 20.05
10632	Weisse XXIII, 1179 .	8.0	57 36.27	61.7	1	3.072	+ 0 45 30.4	61.9	4	20.05
10633	Weisse XXIII, 1180 .	9.0	57 40.16	62.5	3	3.071	+ 5 38 15.4	53.8	2	20.05
10634	Anonymous . . .	8.2	57 42.03	66.3	2	3.081	− 33 16 14.6	68.9	2	20.05
10635	Lacaille 9713 . . .	7.2	57 50.91	68.8	2	3.081	− 36 47 49.0	65.3	2	20.05
10636	Weisse XXIII, 1183 .	7.2	23 57 53.12	64.6	5	+ 3.072	− 1 16 49.7	69.9	4	+ 20.05
10637	Weisse XXIII, 1186 .	8.5	57 59.52	65.4	7	3.072	+ 1 37 10.0	68.4	2	20.05
10638	Lacaille 9714 . . .	6.8	58 1.44	65.2	3	3.080	− 33 14 46.4	66.2	3	20.05
10639	Lacaille 9715 . . .	6.2	58 10.01	68.9	2	3.081	− 39 38 16.6	63.4	3	20.05
10640	33 Piscium	5.0*	58 10.20	50.8	10	3.073	− 6 29 27.3	53.3	6	20.06
10641	Weisse XXIII, 1195 .	7.0	23 58 20.40	59.0	4	+ 3.074	− 10 23 38.5	58.9	2	+ 20.06
10642	Weisse XXIII, 1196 .	9.0	58 23.14	66.6	3	3.074	− 10 54 24.6	60.6	3	20.06
10643	Anonymous . . .	9.0	58 27.61	69.9	3	3.058	+ 57 32 24.1	68.9	2	20.06
10644	86 Pegasi	5.5	58 30.90	64.3	2	3.070	+ 12 37 0.8	54.8	2	20.06
10645	Weisse XXIII, 1201 .	8.5*	58 48.60	60.3	2	3.070	+ 12 5 42.4	60.0	5	20.06
10646	Weisse XXIII, 1205 .	8.5	23 58 57.74	61.0	2	+ 3.072	− 0 39 27.4	54.8	2	+ 20.06
10647	B. A. C. 8372 . . .	7.0	58 57.78	66.2	3	3.062	+ 57 39 21.2	58.9	3	20.06
10648	Lacaille 9722 . . .	7.0	59 5.21	64.2	3	3.076	− 33 35 46.5	68.8	2	20.06
10649	Weisse XXIII, 1208 .	8.0	59 6.95	60.4	3	3.073	− 11 33 29.0	61.9	4	20.06
10650	Weisse XXIII, 1209 .	7.0	59 8.62	65.0	5	3.072	− 2 0 57.0	68.4	2	20.06
10651	B. A. C. 8374 . . .	6.5	23 59 20.84	58.8	1	+ 3.070	+ 28 14 54.9	69.4	2	+ 20.06
10652	Weisse XXIII, 1212 .	8.0	59 20.93	60.5	6	3.072	+ 12 3 6.3	60.0	5	20.06
10653	Lacaille 9723 . . .	7.0*	59 28.	. .	.	3.074	− 36 51 46.9	65.3	2	20.06
10654	Lacaille 9724 . . .	7.0	59 39.98	64.6	4	3.073	− 23 53 8.1	67.4	2	20.06
10655	Weisse XXIII, 1217 .	9.0*	59 41.31	58.8	2	3.072	+ 12 3 17.7	63.4	2	20.06
10656	Weisse XXIII, 1218 .	9.0	23 59 41.42	60.9	1	+ 3.072	+ 1 4 52.6	56.4	2	+ 20.06
10657	B. A. C. 8375 . . .	6.8	59 46.	. .	.	3.073	− 39 39 27.2	63.4	3	20.06
10658	Weisse XXIII, 1222 .	7.8	59 53.86	62.0	7	3.072	+ 6 5 48.5	54.9	2	20.06

NOTES TO THE CATALOGUE.

Page.	Number.	Remarks.
12	450-451	Declination observed as one star.
15	574	This is the same star as number 580.
19	1132-1133	Declination observed as one star.
35	1385-1386	Do. do.
39	1532-1533	Probably the same star.
40	1557-1558-1559	Probably the same star.
43	1694	Declination differs 2′ from Argelander.
45	1763	Declination differs 1′ from Argelander.
45	1779-1780	Declination observed as one star.
46	1796	Differs 4^{s} in Right Ascension from Argelander.
53	2090	Declination differs 1′ from Argelander.
55	2170	This is an anonymous star; it is not O. Arg. S. 3680.
56	2219	Right Ascension differs 17^{s} from Weisse.
57	2263-2264	Declination observed as one star.
58	2298	Probably a mistake in setting the circle.
60	2365-2366	Declination observed as one star.
63	2481-2482	Do. do.
73	2888	Did not see it on a second examination.
73	2899	Right Ascension differs 3^{s} from Argelander.
78	3102	Mean year 62.7; number of observations, 2.
89	3538	Observation in Right Ascension observed with the Transit-Instrument.
89	3545	Do. do. do. do.
90	3558	Do. do. do. do.
90	3580	Do. do. do. do.
91	3591	Do. do. do. do.
91	3608	Do. do. do. do.
91	3619	Observed with the Equatorial
91	3620	Observed with the Transit-Instrument.
91	3622	Observation in Right Ascension observed with the Transit-Instrument.
91	3629	Observed with the Transit-Instrument.
92	3659	Do. do.
93	3690-3691	Declination observed as one star.
99	3925-3926	Probably same star; wrong setting.?
103	4102-4103	Right Ascension observed as one star.
109	4322	Declination differs 1′ from Argelander.
109	4328	Do. do.
117	4663-4664	Declination observed as one star.
117	4670	Probably no star in this place.
118	4691-4692	Declination observed as one star.

Notes to the Catalogue—Continued.

Page.	Number.	Remarks.
119	4717–4718	Declination observed as one star.
119	4744–4745	Do. do.
122	4837	Declination differs 2′ from Argelander.
135	5376–5377	Declination observed as one star.
149	5911–5912	Do. do.
161	6412–6413	Do. do.
166	6609	The remarkable variable star in Corona Borealis.
171	6796–6797	Declination observed as one star.
178	7090–7091	Do. do.
180	7160–7161	Do. do.
187	7431–7432	Do. do.
189	7543–7544	Do. do.
200	7896–7897	Do. do.
216	8628–8629	Do. do.
222	8858–8860	The Declinations of these stars should, probably, be transposed.
224	8938–8939	Declination observed as one star.
241	9596	Right Ascension 10^s less than B. A. C.
247	9833	Right Ascension differs 10^s from Weisse.
249	9913	Right Ascension differs 1^m from Argelander.
260	10366	The Declination differs 30″ from Weisse (2).
261	10413	The Right Ascension differs 50^s from Weisse.
262	10469–10470	Declination observed as one star.
265	10577	The Right Ascension differs 16^s from Argelander.
265	10590–10591	Declination observed as one star.

ERRATA.

Page.	Number.	Column.	For—	Read—
		Precession in Right Ascension	″	*s* throughout.
1	13	Right Ascension	$9^{s}.38$	$9^{s}.37$
1	16	Precession in Declination	20″.07	20″.06
2	66	Right Ascension	$1^{s}.79$	$1^{s}.78$
5	154	Right Ascension	$40^{s}.92$	$40^{s}.97$
6	211	Precession in Right Ascension	$3^{s}.120$	$3^{s}.024$
6	220	Right Ascension	$40^{s}.66$	$40^{s}.70$
7	243	Right Ascension	$39^{s}.49$	$39^{s}.55$
7	251	Declination	− 26° 48′ 51″.2	− 26° 51′ 51″.4
10	355	Right Ascension	$33^{s}.59$	$33^{s}.62$
10	373	Right Ascension	$45^{s}.96$	$45^{s}.95$
10	377	Right Ascension	$24^{s}.41$	$24^{s}.40$
12	467	Precession in Declination	19″.65	19″.64
15	574	Right Ascension	$0^{h}\ 59^{m}\ 25^{s}.16,\ 2^{s}.914$	$1^{h}\ 0^{m}\ 25.^{s}19,\ 2^{s}.911$
15	590	Precession in Declination	19″.33	19″.34
16	599	Right Ascension	$46^{s}.45$	$46^{s}.43$
16	607	Right Ascension	$6^{s}.82$	$6^{s}.81$
16	623	Right Ascension	$56^{s}.82$	$56^{s}.81$
16	625	Right Ascension	$6^{s}.55$	$6^{s}.54$
17	638	Precession in Declination	19″.15	19″.13
17	639	Precession in Declination	19″.14	19″.13
18	692	Precession in Declination	18″.85	18″.83
21	824	Precession in Declination	18″.19	18″.20
27	1046	Declination	− 26° 36′ 30″.0	− 26° 36′ 29″.6
27	1052	Precession in Declination	16″.83	16″.73
27	1054	Precession in Declination	16″.83	16″.73
31	1194	Declination	− 28° 32′ 28″.8	− 28° 32′ 58″.8
34	1329	Precession in Declination	14″.00	14″.06
37	1459	Precession in Declination	12″.50	12″.49
39	1512	Precession in Declination	11″.84	11″.83
42	1631	Precession in Declination	11″.54	11″.53
43	1710	Declination	− 22° 42′ 50″.6	− 22° 41′ 50″.6
45	1787	Declination	− 27° 46′ 34″.3	− 27° 47′ 34″,3
48	1905	Precession in Declination	8″.44	8″.43
49	1922	Declination	− 26° 25′ 8″.6	− 26° 35′ 8″.6
54	2142	Declination	− 26° 28′ 40″.1	− 26° 28′ 35″.1
59	2311	Precession in Declination	2″.70	2″.78
64	2517	Precession in Declination	+ 0″.13	+ 0″.14
66	2615	Precession in Declination	− 1″.34	− 1″.41
68	2676	Name of Star	O. Arg. S. 2343	O. Arg. S. 5343
68	2678	Name of Star	O. Arg. S. 2343	O. Arg. S. 5343
68	2707	Declination	− 27° 45′ 55″.9	− 26° 44′ 55″.9
69	2736	Declination	− 28° 40′ 58″.5	− 28° 39′ 58″.5
72	2853	Declination	− 30° 33′ 5″.3	− 30° 34′ 5″.3

Errata—Continued.

Page.	Number.	Column.	For—	Read—
81	3195	Precession in Declination	$8''.76$	$8''.74$
89	3532	Precession in Declination	$12''.35$	$12''.28$
89	3534	Precession in Declination	$12''.35$	$12''.28$
94	3716	Precession in Declination	$13''.03$	$13''.05$
99	3937	Precession in Right Ascension	$4^{s}.463$	$2^{s}.463$
102	4070	Precession in Declination	$16''.82$	$16''.42$
108	4279	Declination	$+30^\circ\ 30'\ 20''.8$	$-30^\circ\ 30'\ 20''.8$
108	4279	Precession in Declination	$17''.73$	$17''.77$
110	4378	Precession in Declination	$18''.36$	$18''.33$
112	4455	Precession in Declination	$18''.62$	$18''.67$
117	4670	Precession in Right Ascension	$3^{s}.760$	$3^{s}.076$
122	4858	Declination	$-38^\circ\ 38'\ 3''.5$	$-38^\circ\ 35'\ 3''.5$
128	5101	Precession in Declination	$20''.04$	$20''.05$
131	5192	Declination	$-29^\circ\ 18'\ 24''.6$	$-29^\circ\ 18'\ 34'',6$
137	5458	Declination	$-27^\circ\ 27'\ 19''.8$	$-27^\circ\ 27'\ 20''.7$
146	5793	Precession in Declination	$17''.60$	$17''.61$
153	6079	Mean year	62.5	66.5
154	6137	Name of Star	ζ^2 Libræ	ξ^2 Libræ
156	6207	Precession in Declination	$14''.26$	$14''.25$
158	6301	Precession in Declination	$13''.32$	$13''.34$
159	6335	Precession in Declination	$13''.09$	$13''.10$
165	6589	Mean year	63.5	53.5
167	6635	Precession in Right Ascension	$34^{s}.77$	$3^{s}.477$
176	7016	Precession in Declination	$6''.09$	$6''.11$
180	7167	Precession in Declination	$4''.37$	$4''.38$
180	7172	Precession in Declination	$4''.40$	$4''.30$
181	7194	Precession in Declination	$3''.98$	$4''.06$
184	7350	Precession in Declination	$2''.27$	$2''.36$
185	7379	Mean year	62.6	65.6
189	7539	Precession in Declination	$0''.86$	$0''.87$
190	7568	Name of Star	O. Arg. S. 17467	O. Arg. S. 17469
194	7730	Precession in Declination	$0''.73$	$0''.74$
195	7783	Precession in Declination	$1''.40$	$1''.39$
197	7854	Precession in Declination	$2''.18$	$2''.17$
204	8115	Precession in Right Ascension	$3^{s}.575$	$2^{s}.575$
205	8151	Declination	$-13^\circ\ 10'\ 15''.7$	$-13^\circ\ 10'\ 18''.2$
213	8480	Declination	$+\ 4^\circ\ 38'\ 34''.1$	$+\ 4^\circ\ 38'\ 48''.5$
217	8663	Precession in Declination	$9''.74$	$9''.73$
222	8853	Name of Star	17 Draconis	71 Draconis
223	8872	Right Ascension	$19^{m}\ 37^{s}.25,\ 3^{s}.338$	$20^{m}\ 37^{s}.26,\ 3^{s}.337$
223	8872	Declination	$-13^\circ\ 36'\ 53''.5,\ 11''.48$	$-13^\circ\ 36'\ 53''.8,\ 11''.55$
223	8875	Right Ascension	$19^{m}\ 38^{s}.74,\ 3^{s}.338$	$20^{m}\ 38^{s}.75,\ 3^{s}.337$
223	8875	Declination	$-13^\circ\ 36'\ 44''.1,\ 11''.48$	$-13^\circ\ 36'\ 44''.5,\ 11''.55$
224	8947	Precession in Declination	$12''.20$	$12''.19$
225	8952	Precession in Declination	$12''.24$	$12''.23$
226	9012	Precession in Right Ascension	$2^{s}.619$	$3^{s}.027$
228	9074	Precession in Right Ascension	$3^{s}.514$	$3^{s}.016$
231	9191	Declination	$-28^\circ\ 14'\ 43''.9$	$-28^\circ\ 16'\ 43''.9$

Errata—Continued.

Page.	Number.	Column.	For—	Read—
233	9282	Declination	+ 39° 24′ 42″.4	+ 59° 24′ 42″.4
233	9295	Name of Star	Weisse (2) XXI, 225	Anonymous
234	9323	Right Ascension	$16^{s}.76$	$16^{s}.59$
234	9323	Precession in Right Ascension	$2^{s}.763$	$2^{s}.780$
234	9323	Declination	+ 19° 14′ 57″.3	+ 18° 14′ 56″.4
235	9384	Declination	− 19° 45′ 23″.0	− 19° 45′ 22″.4
238	9510	Name of Star	Weisse (2) XXI, 733	Weisse (2) XXI, 933
242	9662	Declination	+ 36° 18′ 24″.1	+ 36° 18′ 34″.1
248	9880	Declination	− 11° 23′ 33″.7, 53.7, 11	− 11° 23′ 35″.0, 60.1, 10
256	10192	Mean year	60.2	59.5
266	10608	Mean year	63.7	53.7

APPENDIX IV.

MEMOIR

OF THE

FOUNDING AND PROGRESS

OF THE

UNITED STATES NAVAL OBSERVATORY.

BY

Professor J. E. NOURSE, U. S. N.

United States Naval Observatory,
Washington, December 20, 1872.

Sir: In accordance with your instructions that I should collate the facts bearing upon the founding and progress of the Observatory, I respectfully present the accompanying memoir as the result of a careful examination of official records, and of inquiry among those who have known the history of the Institution. My experience of the loss of time incurred in searching official documents has prompted me to cite volume and page of authorities for the benefit of those who may desire to look into the full records cited. In this connection it would be wrong for me not to acknowledge gratefully the very courteous assistance of Mr. G. S. Wagner, Librarian of the Senate, as well as that of the Librarian of Congress and his assistants.

Though fully conscious of the extreme disproportion between the work of the Observatory and this record of it, I trust that some useful purposes will be served by the memoir. The eminent names connected with the founding and location of the Institution—among which, besides those of the successive heads of the Navy Department, are those also of three Presidents of the United States—will elicit and secure attention; no less will the learned and eloquent advocacy of the Institution by one of these in the House of Representatives after his presidency.

The facts presented may seem to show a singular history as regards the earlier dates of the Observatory; but they will show just grounds for appreciating its labors, especially those of the years since the resumption of its full astronomical work in 1861.

It would have been pleasant to give the full lists of all who have been attached to the Institution; but as the design of the memoir was to deal with its *work*, space has not been found for its *personnel* at different dates; nor for much of tribute to its successful laborers. The official eulogies even of those who have fallen at their posts are omitted, their work being their memorial.

I am, sir, very respectfully, your obedient servant,

J. E. NOURSE,
Professor U. S. Navy.

Rear-Admiral B. F. Sands, U. S. N.,
Superintendent U. S. Naval Observatory, Washington, D. C.

ERRATA.

Page 33, line 1, "2222," "2224," should read 2422, 2424.

Page 35, foot-note 3, "other" volumes should read *later* volumes.

Page 36, line 3, the name of Professor Lawrence belongs to a later date.

Page 38, line 2, "1852" should read 1853.

Page 39, the heading on this page was designed to read, for a NEW MERIDIAN INSTRUMENT.

Page 40, 7th line from foot of the page, "Observations" should read *Expedition*. The first comma in the next line should follow the word "Superintendent."

Page 44, 9th line from the foot of the page, "Alaska" should read *Behring Straits*.

MEMOIR OF THE FOUNDING AND PROGRESS OF THE UNITED STATES NAVAL OBSERVATORY.

First Memorial and Proposals in Congress for a National Observatory.

Congressional action for instituting a National Observatory originated in the earliest movement for establishing a first meridian in the United States. Of this movement, the following memoranda are compiled from the records of Congress:

Report by Hon. Mr. Pitkin, House of Representatives, 1810.

In the House of Representatives, March 28, 1810, Mr. Pitkin, of Connecticut, chairman of a select committee on a memorial from Mr. William Lambert, of Virginia, reported:[1]

"That the memorialist, 'for the purpose of laying a foundation for the establishment of a first meridian for the United States, by which a further dependence on Great Britain or any other foreign nation for such meridian may be entirely removed, has made calculations to determine the longitude of the Capitol at the seat of Government from Greenwich Observatory, England, and that there is urgent necessity for establishing such a first meridian at Washington, from the confusion already existing in consequence of the assumption of different places within the United States as first meridians, on the published maps and charts in our country." The committee urge the establishment of a first meridian still more from a national point of view. They present Mr. Lambert's calculations founded on an occultation by the moon of η Pleiadum, Alcyone, observed near the President's House on the night of October 20, 1804,[2] from which he deduces the approximate longitude of the Capitol to be $76° 53' 6''.920$ west from Greenwich. Complimenting Mr. Lambert's astronomical ability, the committee recommend the authorizing of further observations by different methods, to determine a question of so much nicety and value. They report the following resolution:

"'That it is expedient to make provision by law authorizing the President of the United States to cause the longitude of the city of Washington from the Observatory at Greenwich to be ascertained with the greatest degree of accuracy, and, for that purpose, to procure the necessary astronomical instruments.'"

This report was laid upon the table, but on the 23d of January, 1811,[3] was referred to a second select committee, of which Josiah Quincy, of Massachusetts, and Dr. S. L. Mitchell, of New York, were members. This committee appears, however, to have been discharged at their own request, in order that the memorial might be referred to the Secretary of State.

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[1] Eleventh Congress, second session, House of Representatives, Report No. 277: American Miscellaneous State Papers, volume II, page 53; March 28, 1810.

[2] See notes of this observation in Astronomische Nachrichten, volume vi, p. 388, and vol. xviii, p. 76 *et al.*

[3] Journal of House of Representatives, January 23 and February 23, 1811.

July 3, 1812, the Hon. Secretary of State, Mr. Monroe, replied through the Speaker of the House:[1]

"The principal object of the submission of the papers to the Department of State seems to have been to obtain from it a report on the policy, in a national point of view, of establishing a first meridian in the United States at the seat of Government. * * * The Secretary of State has no hesitation to declare his accord with the committee in their opinion in favor of the establishment of a first meridian for the United States, and that it should be at the city of Washington, the seat of their Government. Scientific men agree that it would be of advantage to science if all nations would adopt the same first meridian. * * * After the discovery of America, which banished the idea of a most western limit, that of a general meridian lost ground, and latterly it has been completely abandoned. * * * Since the period alluded to, the establishment of a first meridian for themselves has become, by the usage of nations, an appendage, if not an attribute, of sovereignty.

"The establishment of a meridian by the United States is deserving their attention, until, at least, by common consent some particular meridian should be made a standard. In admitting the propriety of establishing a first meridian within the United States, it follows that it ought to be done with the greatest mathematical precision. It is known that the best mode yet discovered for establishing the meridian of a place is by observations of the heavenly bodies; and, that to produce the greatest accuracy in the result, such observations should be often repeated, at suitable opportunities, through a series of years, by means of the best instruments. For this purpose an Observatory would be of essential utility. It is only in such an Institution, to be founded by the public, that all the necessary implements are likely to be collected together; that systematic observations can be made for any great length of time; and that the public can be made secure of the results of the labors of scientific men. In favor of such an Institution, it is sufficient to remark that every nation which has established a first meridian has also established an Observatory."

Mr. Monroe's report was referred to a second select committee, including, from the new Congress, Mr. Calhoun, of South Carolina. On the 20th of January, 1813, Dr. S. L. Mitchell, reported:[2]

"That they had diligently weighed Mr. Lambert's memorial, and the letter of the Hon. Secretary of State; that, in their opinion, astronomical observatories are highly useful to a navigating and commercial people, already eminent for their progress in science and the arts, and who are laboring for the completion of their national dignity and splendor; and that the most ready way of obtaining the information they desired, from noting the phenomena of the heavens, is by the establishment of an Observatory. This may be erected at the city of Washington. By such an Institution, means may be adopted, not only to fix the first meridian, but to ascertain a great number of other astronomical facts and occurrences through the vigilance of a complete astronomer."

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[1] Journal of the House of Representatives, Twelfth Congress, volume 8, page 415; and American Miscellaneous State Papers, volume II, page 194.

[2] Report of the committee of the House of Representatives, and bill for a National Observatory, January 20, 1813: American Miscellaneous State papers, volume II, page 197, and Journal of the House of Representatives, 1813.

The bill accompanying this report was probably destroyed in the burning of the records of the Capitol in 1814. The report was read a second time and committed to a Committee of the Whole House for the 22d of the same month. Nothing, however, was again heard of it until the year 1815. The condition of the country and its military affairs probably absorbed the chief attention of the House, both in its open and its closed sessions.

In 1815, February 2d, Mr. Lambert's original memorial was again referred, with the several reports made and the letter of the Secretary of State, to a select committee, who reported through Mr. Nelson, of Virginia, on the 18th:[1] That the reasons detailed in the said reports appearing to be well founded, the committee had no hesitation in declaring their full assent to them. It was, also, the opinion of the committee that the plan proposed by the memorialist ought to be carried into complete effect, whenever attention to objects of a pressing nature and more immediate importance to the welfare of our country would permit, by the erection of a National Observatory, and by providing suitable instruments and apparatus, at the public expense, to enable skillful persons to determine the places of the moon, planets, and other heavenly bodies, with sufficient accuracy, by repeated and careful observations of the times of their transit over the meridian of the place. The report further recommended that the President of the United States be requested to cause such further observations to be made by competent persons as may be deemed most proper to determine the longitude of the Capitol with the greatest practicable degree of exactness, and that the results and data be laid before Congress at its next session. The Executive took no steps under this resolution, on the ground that it was not a joint resolution, but agreed to "by the House of Representatives *alone*."[2]

In November, 1818, a third memorial was presented by Mr. Nelson from Mr. Lambert, claiming "that the abstracts of astronomical calculations, to ascertain the longitude of the Capitol, for the establishment of a first meridian, according to the original plan of the city, are founded on the most accurate data that could be had at the respective times when the observations were made, and have been admitted by the American Philosophical Society of Philadelphia, into the last volume of their Transactions;"[3] that the memorialist does not ask that "an Observatory be erected and furnished with suitable instruments at the present time; but solicits the adoption of a concurrent resolution authorizing additional observations to test the accuracy of the results already obtained by such methods as may be best adapted to insure a correct determination of our longitude from Greenwich."

The memorial was referred to a select committee,[4] Mr. Nelson, chairman, who reported the joint resolution asked for, which, however, was not finally passed until March 3, 1821. Mr. Lambert was then appointed by the President, "to make astronomical observations by lunar occultations of fixed stars, solar eclipses, or any approved method adapted to ascertain the longitude of the Capitol from Greenwich."[5]

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[1] Report and bill for a National Observatory, No. 386, American State papers, Thirteenth Congress, third session and House Journal for 1815.

[2] Miscellaneous American State Papers, volume II, page 759.

[3] Philosophical Transactions, new series, volume I, page 102.

[4] Journals of the House of Representatives, 1819, 1820, 1821.

[5] American Miscellaneous State Papers, volume II, page 769.

In his report, submitted to Congress by President Monroe, January 8, 1822, Mr. Lambert refers to the loan of instruments for his work by one of the Departments, which instruments had been brought from Europe for the special purpose of surveying our sea-coasts, among which instruments were a transit-instrument, a circle of reflection, an astronomical clock, and a chronometer; and to his testing the accuracy of the time-pieces by a series of observations before any calculations were made. He submits extended abstracts of a series of observations of the moon's transit over the meridian, and of the eclipse of the sun, August 26, astronomical (27, civil) reckoning.[1] He gives, as the mean results by the different methods employed

Longitude of the Capitol, west from Greenwich, - - -	76° 55′ 30″.54
Longitude of the Capitol, west from Paris, - - - - -	79° 15′ 41″.69
Longitude of the President's House, west from Greenwich,	76° 57′ 5″.33

His report, which occupies more than twenty pages folio of the printed State Papers, closes with this statement:

"The legislative and executive authorities of the National Government will decide on the utility or inexpediency of erecting an Observatory and furnishing it with suitable instruments and apparatus. Without such an Institution, the right ascension, declination, longitude, and latitude of the moon, planets, &c., cannot be ascertained with sufficient accuracy; and any attempt to compute a nautical almanac or astronomical ephemeris for ourselves would be futile, if not preposterous. Until an Observatory be erected and furnished, we shall be compelled to rely upon the labors of scientific men for the elements necessary to be used in our astronomical calculations."[2] * * * *

A "supplementary Report" from Mr. Lambert, March 7, 1822, gives the longitude of the Capitol 76° 55′ 10″.05 west.

The President communicated, December 23, 1823, a second supplementary report[3] —occupying 140 closely printed pages of the Executive Documents—in which the memorialist states that he had transmitted copies of his calculations to various sections of the United States and of foreign countries, to induce an impartial investigation by competent persons of the accuracy of his work, and closes with the strongest re-affirmations of all previously submitted, in favor of establishing an Observatory. This report gave the longitude of the Capitol, 76° 55′ 30″.54.[4]

It was committed to the Joint Committee of the Library; and a report upon it was made by Hon. Mr. Smyth, February 25, 1824, but laid upon the table. No further trace of it can be found, since the files of the Joint Committee previous to 1851 were all destroyed by the fire in the Congressional Library in December of that year.

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[1] In order to be prepared for correct transit observations, a meridional line was drawn by means of concentric circles on a large platform, nineteen feet west of the original line, marked by Mr. Andrew Ellicott, astronomer under the commissioners for laying out the seat of Government, and its direction from one of the windows at the south wing was verified with minute exactness.

[2] Message of the President of the United States, December 23, 1823, Journal of the House of Representatives, Eighteenth Congress, first session.

[3] Journal of the House of Representatives, February 25, 1824.

[4] Mr. William Elliot, appointed by Mr. Lambert to make the transit observations, reports the longitude of the Capitol, 77° 1′ 48″ west.

A National Observatory recommended by President Adams, December 6, 1825.

In the first message of President Adams, he urged on Congress the establishment of a National University, in language which appears evidently to look for the location of the Institution on the grounds now belonging to the Observatory:[1]

"Among the first, perhaps the very first, instruments for the improvement of the condition of men is knowledge; and to the acquisition of much of the knowledge adapted to the wants, the comforts, and enjoyments of human life, public institutions and seminaries of learning are essential. So convinced of this was the first of my predecessors in this office, now first in the memory, as living he was first in the hearts, of our country, that once and again, in his addresses to the Congresses with whom he co-operated in the public service,[2] he earnestly recommended the establishment of seminaries of learning, to prepare for all the emergencies of peace and war, a National University and a Military Academy. With respect to the latter, had he lived to the present day, in turning his eyes to the Institution at West Point, he would have enjoyed the gratification of his most earnest wishes. But in surveying the city which has been honored with his name, he would have seen the spot of earth which he had destined and bequeathed to the use and benefit of his country as the site for a University, still barren and bare."

In a later part of the same message, Mr. Adams returns to the theme, then becoming his favorite, and which, at a later day, he elaborately advocated—in 1838, before President Van Buren, and in 1842, in his place in the House of Representatives:

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[1] President's message, first session, Nineteenth Congress.

[2] Washington's speeches to Congress in New York, January 8, 1790, and in Philadelphia in December 8, 1796:

* * "Knowledge is in every country the surest basis of public happiness. * * To the security of a free Constitution it contributes by teaching the people themselves to know and value their own rights, * * to discriminate the spirit of liberty from that of licentiousness, cherishing the first, avoiding the last, and uniting a speedy but temperate vigilance against encroachments, with an inviolable respect for the laws. Whether this desirable object will be best promoted by the institution of a National University, or by any other expedients, will be well worthy of a place in the deliberations of the Legislature."

"I have heretofore proposed to Congress the consideration of the expediency of establishing a National University. * * * The assembly to which I address myself is too enlightened not to be fully sensible how much a flourishing state of the arts and sciences contributes to national prosperity. * * Amongst the motives to such an institution, the assimilation of the principles, opinions, and manners of our countrymen by the common education of a portion of our youth from every quarter, well deserves attention. The more homogeneous our citizens can be made in these particulars, the greater will be our prospect of permanent union."

To the *first* of these communications the Senate replied in their answer to the Address:

* * "Literature and science are essential to the preservation of a free constitution; the measures of government should, therefore, be calculated to strengthen the confidence due to this important truth."

To the *second* recommendation by Washington, in 1796, the Senate replied:

"A National University may be converted to the most useful of purposes; the science of legislation being so essentially dependent on the endowments of the mind, the public interests must receive effectual aid from the general diffusion of knowledge."

The recommendations were discussed, advocated by Madison and others, and their consideration postponed, April 27, 1796.

The WILL of General Washington bears witness to his retaining, to the close of life, these same ideas of the benefits of a national scientific Institution. After expressing his life-long regrets that the youth of the United States should be sent abroad for the purpose of education, he says, "It has been my ardent desire to see a plan devised, on a liberal scale, which would have a tendency to spread systematic ideas throughout all parts of this rising empire, hereby to do away with local attachments and State prejudices. * * * My mind has not been able to contemplate any plan more likely to effect the measure than the establishment of a university, where the youth of our country may be able to free themselves from local prejudices and jealousies pregnant of mischievous consequences to our country."

"Connected with the establishment of a University,[1] or separate from it, might be undertaken the erection of an astronomical Observatory, with provision for the support of an astronomer, to be in constant attendance on the phenomena of the heavens, and for the periodical publications of his observations. It is with no feeling of pride as an American, that the remark may be made, that, on the comparatively small territorial surface of Europe, there are existing more than one hundred and thirty of these light-houses of the skies; while throughout the whole American hemisphere there is not one. If we reflect a moment upon the discoveries which in the last four centuries have been made in the physical constitution of the universe by means of these buildings and of observers stationed in them, shall we doubt of their usefulness to every nation? And while scarcely a year passes over our heads without bringing some new astronomical discovery to light, which we must fain receive at second hand from Europe, are we not cutting ourselves off from the means of returning light for light, while we have neither observatory nor observer upon our half of the globe, and the earth revolves in perpetual darkness to our unsearching eyes?"

This part of the message was referred to a select committee, of which Mr. C. F. Mercer, chairman, presented, March 18, 1826, an elaborate report from Major-General A. Macomb, Chief of Engineers, as the report of the committee.[2] The report was accompanied by "A bill to establish an Observatory in the District of Columbia." The following are a few extracts from General Macomb's report:

"ENGINEER DEPARTMENT,
"*Washington, March* 6, 1826.

"Hon. JAMES BARBOUR, *Secretary of War:*

"SIR: In obedience to your direction, I have considered the inquiries concerning the establishment of an Observatory, presented in the communication addressed to you on the 30th of January, by the Hon. C. F. Mercer, as chairman of the committee to whom was referred so much of the President's message, to the present Congress, as relates to that subject: 1st, in relation to the position; 2d, the probable cost of a suitable edifice; 3d, the expense of providing it with the necessary attendants, furniture, and instruments. * * * * With reference to these inquiries, I have the honor to state as follows:

1st. With regard to the position. The city of Washington offers many excellent positions, especially one on the reservation of the public square which lies between Mason's Island and the mouth of the Tiber, where the land is sufficiently elevated and where a sufficient line can be found to establish a meridian, taking one point north on the prolongation of a street over Rock Creek, and the other across the Potomac, on the lands of Mr. Custis, of Arlington.[3] * * *

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[1] Mr. Adams, in a report of a later date,* expressed his uncertainty whether Congress possesses, under the Constitution, the power to establish a National University. He seems to have had in mind that the proposition of Madison and Pinckney, to insert in the list of powers vested in Congress a power to establish a university, had failed in the Convention of 1787; chiefly, however, because Gouverneur Morris, in the Convention, urged that the provision was "unnecessary; saying "the exclusive power at the seat of Government will reach that object."†

[2] First session Nineteenth Congress, House of Representatives, report No. 124, March 18, 1826.

[3] In the introduction to the annual volumes issued by the Naval Observatory, for the years 1846, 1847, and 1848, the Superintendent states the difficulties in effecting this—which has not indeed been found necessary.

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* Report No. 581, Twenty-seventh Congress second session, page 28.

† Madison Papers, volume III, page 1577.

"The astronomer ought to be independent in the performance of his duties, but accountable for the results, for his industry, and the correctness of his observations and calculations. The results of his scientific labors should be given to the world, in order that they might be duly examined by astronomers of different countries, whose attention would naturally be attracted to works of this character, emanating from the metropolis of the United States. Foreign as well as domestic criticism would thus stimulate the astronomer to great vigilance and attention. It would be proper, therefore, that an annual report should be made to Congress, exhibiting the observations taken at the Observatory; and, as soon as circumstances would permit, a nautical almanac, or astronomical ephemeris, should be prepared and published for the use of the Navy and commercial marine. To save the astronomer all trouble in obtaining supplies of various kinds which would be required on account of the Observatory, in making expenditures, receiving communications, and with reference to other details connected with it; and, in order that communications and reports might be made to Congress in a regular manner, it would be proper that he should be made responsible to, and correspond and communicate with, some established department of the Government. * * * As an astronomer, with the requisite talents and qualifications, would be obliged to devote all his time and attention to the duties of his station, it is not to be expected that a fit person could be procured for this situation without the compensation of a liberal salary." * * *

In a communication submitted also by General Macomb with this letter to the Hon. Secretary of War, M. de Wallenstein, then an attaché of the Russian legation, thus speaks of the proposed location of the Observatory:

* * * * "Allow me to mention one of the important advantages which may be expected from an Observatory in this metropolis. The liberality with which the British government has provided for the creation of such an establishment on the Cape of Good Hope has been so much the more celebrated by the scientific world as this new observatory lies nearly under the same meridian as that of Abo. Astronomy must necessarily be benefited by it. Now, Washington lies more exactly on the same meridian with a great Capital for a southern hemisphere; with Lima, the difference of longitude being only thirty-five seconds in time, or 8′ 45″ in arc; and Peru which occupies a distinguished place in the history of astronomy, has, perhaps, already in its principal city, a regular Observatory."

Major Kearney's letter (accompanying also General Macomb's report) is chiefly occupied with the details of a plan for a building, referring to the form and the construction of the observatories at Greenwich, Wilna, Berlin, Petersburg, Dublin, and other places. It is followed by extracts from Francis Baily's Memoir on a new method of determining the longitude, in which a general account is given of the efforts then making for the promotion of astronomy.[1] In this memoir, Mr. Baily expresses an expectation that the American states recently constituted in the South will be as favorable to astronomy as the older state which first assumed its liberty in the North.

Mr. Mercer's report and bill were read the first and the second time, and committed to the Committee of the Whole House for the following Monday; but the House Journals show no further trace of them whatever.

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[1] Memoir of the Royal Astronomical Society, volume 2, page 25.

The biographer of Mr. Adams thus speaks of this and of the other special recommendations of his first message, among which were those for a Naval School, and one for another national object, which had been long his profound study when abroad, viz, the establishing of a uniform standard of weights and measures[1]:—

"Every one of these recommendations, though obviously associated with the progress of the nation, and independent of all party or personal influences, was treated with neglect, or suffered to lie unnoticed, or to be lost by indefinite postponement."

It is as creditable to Mr. Adams as it is interesting to the Observatory that he did not relax his labors for its institution, but yet more vigorously renewed them at later dates, in 1836, 1838, 1840, and 1842.

Official action following Mr. Mercer's report.

An examination of the messages of the several Presidents immediately succeeding Mr. Adams, and of the accompanying documents, reveals no special action, on the part of the Executive or of Congress relative to an Observatory, until the year 1830. On the 18th of March, 1830, Hon. Mr. Branch, Secretary of the Navy, replied to a letter of inquiry from Hon. Mr. Hoffman, chairman of the Committee on Naval Affairs, House of Representatives:

"As far as I have been able to obtain information on the subject, an astronomical Observatory would be a desirable establishment in the United States for the following reasons:—

"1st. In a national point of view, as it would furnish the means of making such observations as would enable astronomers to ascertain or calculate the positions of the heavenly bodies, at any time, without being dependent on other nations for the same; and would be, moreover, a fixed point to whose meridian (commonly called a first meridian when used for geographical purposes) terrestrial objects may, with certainty, be referred, as far as respects their longitudes.

"2d. It would, furthermore, be desirable in a scientific point of view, as it would present the means of comparing certain astronomical results, for the purpose of determining the figure of the earth, and improving theories relative to the motions of planetary bodies. * * * * It ought to have a certain and fixed location with respect to some other place, whose geographical position has been well established, as the observatories of Paris and Greenwich, &c. This, inasmuch as the ocean intervenes, (the measurement of which cannot be made with the precision necessary for such purposes,) must be effected by celestial observations, which, as is well known, can be made with greater accuracy and under greater advantages in an Observatory than elsewhere." * * * * *

In a letter of the same date to the Secretary of the Navy, from Commodore John Rodgers, president of the Board of Navy Commissioners, the Commissioners say:

"The principal object in establishing an Institution of this kind in the United States would not be to aid, essentially, the surveying of our coast, but to unite our enterprise and efforts with those of other enlightened countries; in advancing, generally, the service of astronomy, amending theories at present adopted of the heavenly phenomena, (all of which are still supposed to be susceptible of greater or less improvement,) and to furnish annually our naval and commercial interests with a correct ephemeris, upon the accuracy of which depend so much the safety of our commerce and the lives of our seamen."

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[1] American Miscellaneous State Papers, volume II, page 656. Report of J. Q. Adams, Secretary of State, on Weights and Measures, Sixteenth Congress, second session, No. 503, February 22, 1821.

In his report of December 5, 1835, Hon. Mr. Dickerson, Secretary of the Navy, says:

"A National Observatory, although not immediately necessary to the defense of our country, is remotely so; and, considered with reference to the bearing it would have upon our Navy, our commerce, and scientific pursuits, it assumes an importance worthy the consideration of Congress. It is hardly to be doubted that we shall, at some future period, make such an establishment, and I will venture to express an opinion that no time can be more propitious for such an undertaking than the present. It would not be attended with any great expense. It is necessary now to employ an officer of science to keep our maps and charts, to regulate our chronometers, and to preserve all mathematical and philosophical instruments required for the naval service; and buildings are necessary for these purposes. These duties would properly devolve upon the superintendent of an Observatory; and the buildings necessary to such an establishment would be amply sufficient for the preservation of our maps, charts, and instruments."

There is no record of an indorsement by the President of this proposition from the Secretary; nor can I find any further record of congressional action, leading directly to the establishment of an Observatory, until the years 1841–'42. The statement of the Secretary, in 1835, referring to the employment of an officer of science, to keep maps and charts, pointed to the previous action of the Navy Department, in establishing, in 1830, a bureau for the care of naval instruments and charts.

This action, under the Navy Commissioners, (authorized December 6, 1830,) is the first point of a distinct era in the history of this Institution. The brief record of it which follows will show that, after so many years of delay and apathy on the part of Congress as regards the establishment of an Observatory, it was left for a few officers of the Navy to originate and prosecute such measures as resulted in the creation of the present Institution. The record of their labors falling in at this place in point of time, will be now given, the congressional and executive action being next resumed. For the history of the events leading to the establishment of the depot, I cite largely from Lieutenant Gilliss's report of 1845.

ESTABLISHMENT OF THE DEPOT OF CHARTS AND INSTRUMENTS.

"Through the influence of Lieutenant L. M. Goldsborough, (now Rear-Admiral, United States Navy,) a bureau was established in this city in 1830, for the care of the instruments, charts, &c., of the Navy."[1] Under the orders of the Navy Commissioners,[2] by the sanction of the Secretary of the Navy, Lieutenant Goldsborough had collected and brought, from New York and other places, the chronometers, sextants, theodolites, and other instruments and the charts of the Navy, and had located them in Washington, in a building opposite the residence of the United States Attorney-General, Hon. William Wirt. A transit-instrument, at the price of forty guineas, was afterward added.

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[1] Report of Lieutenant J. M. Gilliss, February 7, 1845, Twenty-eighth Congress, second session, No. 114, Senate.

[2] Records of the Navy Commissioners, December 6, 1830. Files of the Navy Department.

The further interest manifested by the Navy Commissioners, in what was leading to an Observatory, appears in their letter to the Secretary,[1] on the subject of employing Messrs. Jenkins and Taylor to prepare an American nautical almanac. In this letter they say:

"As a matter of national pride and independence, it would be desirable to have an American nautical almanac adapted to a first meridian of our own. * * * * An almanac of this kind would be one of the first fruits of an Observatory, should Congress deem it expedient to establish one." For such an establishment, Commodore Charles Morris, one of the Commissioners, was a zealous advocate.

Lieutenant Gilliss further says:

"One of the duties of the officers connected with the Depot of Charts and Instruments was the careful rating of all chronometers belonging to the Navy, which was, for some months, effected by sextant and circle observations, but, between the summers of 1831 and 1833, with a thirty-inch transit-instrument, made in New York by Mr. R. Patten. The transit was mounted within a small circular building, upon a brick pier, having a base about twenty feet below the surface. To Lieutenant Goldsborough, therefore, is due the erection of the first astronomical instrument for the Navy at Washington.

"He was succeeded in the charge of the depot in 1833 by Lieutenant Wilkes, (now retired Rear-Admiral United States Navy,) who obtained permission from the Navy Commissioners, and removed the office from its location in the west end of Washington to Capitol Hill, to a site proposed originally by Mr. F. R. Hassler, in 1816, about 1,000 feet north, 5° west, from the dome of the Capitol, where it remained till July, 1842. Here Lieutenant Wilkes erected, at his own expense, an Observatory sixteen feet square, and mounted one of the five-foot transits, made by Troughton for the Coast Survey in 1815, which was loaned by Mr. Hassler for the purpose. It does not appear, however, that any regular series of observations was commenced until the departure of the Exploring Expedition in 1838; the principal use made of the transit being the determination of time.[2] This was a daily requisite, as the comparing-clock performed irregularly, and was not to be relied on more than twenty-four hours, nor was it possible to procure proper astronomical instruments exclusively for the depot.

"During the absence of Lieutenant Wilkes, in Europe, to purchase instruments for the Exploring Expedition, Lieutenant Hitchcock took charge of the depot, and Lieutenant Gilliss was ordered as his assistant, in November, 1836, and was left in charge in the following spring, on the appointment of Lieutenant Wilkes to the survey of George's Shoal. In the winter of 1837-'38, while Lieutenant Wilkes was surveying the entrance to Savannah River, Lieutenant Gilliss observed, at his request, all the culminations of the moon and stars tabulated with it which occurred before midnight; but the observations were never reduced. When Lieutenant Wilkes accepted the command of the Exploring Expedition in 1838, the importance of corresponding moon culminations, occultations, and eclipses, in determining differences of longitude between this observatory and the stations which the Expedition might occupy abroad, was suggested to the Department, and Mr. William C. Bond, at Boston, and Lieutenant Gilliss, were directed to continue such observations during its absence. Both the astronomical and the magnetical and meteorological observations were to be made under the following order from the Hon. Secretary of the Navy:[1]

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[1] Letter of Commodore John Rodgers for Navy Commissioners, to the Hon. Secretary of the Navy, December 10, 1831. Files of the Navy Department.

[2] From this depot of Naval Instruments and Charts, however, all United States vessels, on going to sea, were furnished from the first, with chronometers and other instruments and charts, as subsequently they were thus furnished from the United States Naval Observatory, until the organization of the Hydrographic Office in 1866. Chronometers are still necessarily retained in charge of the Observatory for trial and rating.

"NAVY DEPARTMENT, *August* 13, 1838.

"SIR: Mr. Bond, of Boston, has been employed to make a series of observations during the absence of the Exploring Expedition, and in connection with it. It is deemed proper that similar observations be made at the Depot of Charts and Instruments. You are, therefore, charged with the performance of this duty; and in conducting the same you will be governed by the inclosed, which is a copy of the instructions sent to Mr. Bond.

"I am, respectfully, &c.,

"J. K. PAULDING.

"Lieutenant J. M. GILLISS.

"*Instructions, &c., to be observed in making the series of observations during the absence of the Exploring Expedition, and in connection with it.*

"You will use every opportunity of taking observations of moon-culminating stars, confining yourself principally to those enumerated in the Nautical Almanac to be observed at Greenwich. As most of the stars are of the fifth and sixth magnitudes, you will, when opportunity offers, observe all those of the first and second magnitudes, particularly during the day, if any such offer. Although you will have a meridian-mark to refer to, [a mark placed on the parapet to the Capitol by Lieutenant Wilkes,] I should prefer your having resource to observations of high and low stars to prove your observations. * * * I would desire that your observations should be registered by a sidereal clock, in order to avoid any reduction for time equivalents. * * * If at any time you should not be able to make use of a sidereal clock, your observations ought, in all cases, to be corrected before the expiration of *twelve hours*, and marked in the column with its proper sign of application. You will lose no opportunity of making observations on any astronomical phenomenon, describing the place of its occurrence in the heavens. * * Your attention may be directed to any falling stars, particularly to those periodic ones in November. All eclipses you will, of course, be particular in observing, in order that, if any remarkable phenomenon should happen, we may have simultaneous observations of it. * * * The power of your telescope need not be over 240, and, generally, of 175 and 75; the lower power will be most suitable, as affording a clearer and flatter field. In noting any observations, you will be particular in mentioning the instrument and power used. In your journal, you will note the state of the heavens, whether clear or cloudy, and the state of the atmosphere, as respects barometer, thermometer, and hygrometer. * * The eclipses of Jupiter's satellites frequently offer; they will be generally observed by me, and, I think, had better claim some attention from you; also, I would direct your attention somewhat to the occultations of all large stars, and the difference of observations as respects the disappearance and re-appearance of the star with the moon's limb. All of these observations will be most desirable during the year 1840. Observations on the perturbations, dip, and intensity of the magnetic needle would be very desirable."

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[1] Orders of Secretary Paulding and instructions to Lieutenant Gilliss, and to Mr. W. C. Bond, of Dorchester, Mass.

Under these instructions, Lieutenant Gilliss himself made all the astronomical observations reported to the Secretary of the Navy, and published at Washington, July, 1846, except those of one day in 1838 and of two days in 1841. With these exceptions, there was not a visible culmination of the moon occuring, when the sun was less than one hour above the horizon, during the entire period from 1838 to 1842, nor an occultation after June 15, 1839, except that of 139 Tauri, which he did not personally observe.

His instructions had enabled him to obtain a portable 42-inch achromatic telescope, mounted parallactically; a variation transit, modified from Gambey's plan, so as to be used as a diurnal instrument in the bi-hourly observations; an 8-inch dip-circle; and a sidereal chronometer.[1] The observations commenced in September, 1838. The Transit was extremely deficient in optical power, and would not define stars smaller than the second magnitude when the sun was two hours above the horizon. The number of transits recorded exceeded 10,000, embracing the moon, planets, and about 1,100 stars. The average annual number of culminations of the moon observed was 110, and of lunar occultations about 20.[2]

MAGNETICAL AND METEOROLOGICAL OBSERVATIONS.

Recognizing the astronomical observations as of paramount importance to the objects of the Exploring Expedition, (as the instructions distinctly implied,) Lieutenant Gilliss "hoped that a continued series in magnetism and meteorology also, carefully made, might prove, in some degree, useful to the solution of the great physical problem then under investigation by order of European governments, even if these observations could not bring to their recommendation the refinements of observatories specially established to that end. At all events, the subjects were new to the officers who would necessarily take part in them, and the experience consequent on their labors could not fail to benefit the naval profession."

Appreciating the arguments presented, the Secretary of the Navy authorized the purchase of new magnetic and meteorological instruments, and ordered additional assistants for the work at the Depot,

The Magnetic and Meteorological observations were made during the same years with the astronomical observations before referred to, in a frame building ten feet long by six feet wide erected for them in a position fifty feet south of the little observatory and forty feet northwest of the house occupied as a Depot for the charts and instruments.

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[1] Two clocks, a sidereal and a mean-time, and a balance magnetometer, were subsequently obtained.

[2] Astronomical Observations made at Washington under order of the Secretary of the Navy dated August 13, 1838, printed by order of the Senate, 1846.

The record of the observations, together with a description of the declinometer, dip-circle, and magnetometer, and of the meteorological instruments used, forms the tenth volume of the Senate documents of 1844–'45.[1]

In making these astronomical and meteorological observations, Lieutenant Gilliss had the honor of being "the first in the United States who conducted a working Observatory, and the first who gave his whole time to practical astronomical work; it was he who first published a volume of observations, first prepared a catalogue of stars, and planned and carried into effect the construction of a working Observatory as contrasted with one intended chiefly for purposes of instruction. It was his privilege to be endowed with a wondrous acuteness of the perceptive powers of eye and ear. No one at all conversant with observations can examine the printed record without a vivid perception of this marked peculiarity."

In the long list of observers living and dead whose results were critically and searchingly tested by the so-called personal scale, he held the second place, by the testimony of Professor Peirce, who applied this test to the observations of 1838–'42.[2]

In 1845, after the establishment of the Observatory in its present location, Lieutenant Gilliss, in the close of his preface to the volume of these Astronomical Observations then issued, modestly says:

"It remains but for me to express my gratitude that the prosecution of these observations should have resulted in the foundation of a permanent Naval Observatory, and have obtained for me, though for a brief period, the privilege of association with many of the most distinguished astronomers of the present century."[3]

A Permanent Depot Recommended.

"As the observations progressed, the unsuitableness of the building, the defects of the Transit instrument, the want of space to erect a permanent circle, and the absolute necessity of rebuilding the observatory in use, became each day more urgent." At the earnest solicitation of Lieutenant Gilliss, the Commissioners of the Navy recommended an appropriation for a permanent establishment in December, 1841. Even this, however, was not accomplished without difficulty. But the interest of the honorable Secretary in advancing science, and more especially those branches of it in which the Navy is interested, induced him readily to appreciate its importance, and to bring the subject before Congress in his report to the President of December, 1841. He thus indorsed the recommendation of the Commissioners:

"Permit me to express my entire approval of the suggestion of the Commissioners, in relation to a suitable depot for the charts and instruments belonging to the Navy. These have been procured at great labor and expense, and are indispensable in the Naval service. The small expenditure which will be necessary to preserve them in a condition, always ready for use, is not worth a moment's consideration when compared with the great purposes they are designed to answer. They are a necessary part of a naval establishment worthy of the present and growing greatness of our country."[4]

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[1] Magnetic and Meteorological Observations made at Washington under orders of the Secretary of the Navy dated August 13, 1838.

[2] Annual of the National Academy of Sciences for 1866, pp. 58 and 64.

[3] Lieutenant Gilliss's Report, February 7, 1845, p. 65.

[4] Report of Hon. A. P. Upshur, Secretary of the Navy, December 4, 1841.

The suggestion of the Navy Commissioners here referred to is to be found in their report to the Secretary of the Navy of November 30, 1841:

"The Board beg leave to call your attention to the subject of a '*permanent depot*' for the charts and instruments. * * The utility of this, as a matter of economy only, is fully manifested. * * To this may be added the facilities which such an establishment presents to officers of the Navy for obtaining useful, valuable, and indeed necessary knowledge in some branches of their profession." This report contained an estimate for buildings not to exceed $50,000, which could be commenced the ensuing season if half that sum were appropriated.

Lieutenant Gilliss proceeds in his narrative:

"Much delay occured with the Naval committees in Congress. The Hon. Francis Mallory, to whom it was referred by the House committee, espoused the cause warmly, but the majority kept aloof from the Depot (although so near) until the entire winter had passed away. Finally, on the 15th March, 1842, I succeeded in persuading the only member of the committee who was skeptical to visit the observatory, and on that very day a unanimous report and bill were presented to the House of Representatives. Believing the chances of success would be greater if a bill could be passed by the Senate, by the advice of Mr. Mallory I waited on the Naval committee of the Senate; but my entreaties for a personal inspection of our wants were put off from time to time. The question was probably decided by an astronomical event." The attention of the committee was gained by the following incident:

At a meeting of the National Institute, at which the Hon. William C. Preston was present, Lieutenant Gilliss gave notice of having found Encke's comet with the 3½-foot achromatic, the comet being then near its perihelion. A few days subsequently he made what was intended to be a last visit to the chairman of the Senate committee, and found Mr. Preston with him. As soon as he began the conversation about the little observatory, Mr. Preston inquired whether he had not given the notice of the comet at the Institute, and immediately volunteered, "I will do all I can to help you." Within a week a bill was passed by the Senate.

It is hardly necessary to trace its progress in the House. A majority was known to be favorable, but its number on the calendar, and the opposition of one or two members, was likely to prevent action upon it; for its receiving the sanction of the House of Representatives at the last hour of the session of 1841–'42, the Navy is indebted to the untiring exertions of Dr. Mallory.

The bill, which without discussion passed Congress, authorized the Secretary of the Navy to contract for the building of a suitable house for a depot of charts and instruments of the Navy on a plan not exceeding in cost $25,000, the sum of $10,000 being appropriated for the year; the Institution to be located on any portion of unappropriated public land in the District of Columbia which the President might deem suitable.[1]

Taking the report of the Naval committee which accompanied this bill as the exponent of the will of Congress, the Secretary of the Navy directed Lieutenant Gilliss to visit the northern cities for the purpose of obtaining information respecting a plan, which, while it combined essentials, should not exceed in cost the appropriated sum.

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[1] Statutes at Large, vol. 5, p. 576. Bill approved August 31, 1842.

Professors Bache, Bartlett, Bond, Hassler, Paine, Patterson, and Walker were consulted, and the Department assigned G. F. De la Roche, esq., to draught plans under the direction of Lieutenant Gilliss.

THE OBSERVATORY OFFICIALLY RECOGNIZED.

The Observatory was now really established. It had become true, as remarked by Dr. Gould in his article entitled "U. S. Naval Observatory at Washington," in the National Almanac for 1864, that an Observatory under another name was established by act of that very Congress and at the very session in which they refused to pass Mr. Adams's bill for the same real object.

That the Secretary of the Navy was justified in this interpretation of the law appears to be clear enough by the following extracts from the accepted report of the committee taken, as Lieutenant Gilliss says, as the exponent of the will of Congress.

The committee say,[1] in reference to the value of a depot that "since its organization, the Navy has not only been furnished with better instruments and more recent charts, at a greatly less original cost than before, but greater care has been observed in their use, consequent upon the regulations of the Depot, making the masters of our public vessels directly responsible for each article delivered to them.

"Prior to that time, chronometers were purchased as the wants of a ship or the judgment of a commander dictated, without trial or examination, the only guarantee of its value being the word of the seller. Sextants which were rejected by experienced judges, and left as shop-keepers, too frequently found their way into the Navy, through the inability of navy-agents and store-keepers to discriminate between good and bad. A ship rarely went to sea without having the master's store-room half filled with wood compasses, from the prejudice that a light compass could only be obtained by making the bowl of that material. As a necessary consequence, the same set of instruments rarely went to sea two cruises. When the ship returned, they were tumbled into the Navy store, chronometers and all, where they remained till the fitting of a new ship would find them unworthy of further use. This no longer exists; Navy store-keepers are required to render a monthly report of every instrument in their charge; and, as before stated, masters are held directly accountable, so that, with a little additional repair at the end of each cruise, the same set lasts many years. The saving, from this cause alone, is more than the annual cost of the whole establishment."

In reference to ASTRONOMY, the committee say:

"In the summer of 1838, the honorable Secretary of the Navy directed the Superintendent to make a constant series of observations in astronomy, magnetism, and meteorology, ordering an additional number of assistants, and granting authority for the purchase of all necessary instruments.

"We are indebted to other nations for the data which enable our ships to cross the ocean. Not only has the Navy failed to contribute to the common stock from which all our navigators borrow, but our country has never yet published an observation of a celestial body which bore the impress 'by authority;' and it is believed that, until the observations before alluded to in this report, none have ever been directed by the Government which can be considered continuous.

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[1] Mr. Mallory's Report. Twenty-seventh Congress, second session, report No. 449, House of Representatives; March 15, 1842.

"That great errors exist in the tabulated places of the heavenly bodies, the labors of astronomers of the present day sufficiently prove. Indeed, all who were at all curious in such matters could not have failed to remark how great a difference there was between the observed and computed times of the last annular eclipse visible in the United States.

"Observatories, though not expensive, cannot prosper in our country until we can obtain rest from the pursuit of mercantile affairs, or their charge is undertaken by the Government, The duties are confining; if properly executed, arduous: and but few are qualified by experience or habits to undertake them. If officers can be found with taste for such duties, an Observatory will give more information to the world, under a military organization, in one year, than under any other direction in two.

"The subject of MAGNETISM is scarcely less important to the Navy than astronomy. Without a knowledge of the variation of the compass, none but coasting-craft dare venture beyond the precincts of a harbor; yet how few have more than a practical knowledge of the mode of determining its amount. The daily changes of the variation, its extraordinary fluctuations during auroras, the causes, amounts, and modes of correcting the local attraction of ships, and, indeed, the laws governing magnetized bodies generally, are mysteries with which a large portion of the officers have had neither means nor opportunities to become acquainted. Great complaints are made that chronometers perform badly; that ships have been influenced by currents, when, if the true cause could be ascertained, it would be found to consist in having steered a wrong course, no allowance being made for local attraction. There can be no doubt a large number of the wrecks of shipping occur solely from this cause.

"The magnetic observatories which were established by the European governments two years since, and which have a location in almost every part of the world, were earnestly recommended to us by the learned men of England. Active and extensive co-operation, they say, will be the only mode of setting at rest the conflicting theories of this most important branch of science."

"In regard to METEOROLOGY, if Professor Espy's theory is correct, the day is not distant when we shall be able to calculate the precise point where a storm is raging.

"Meteorological observations are more important at night than by day, because of their scarcity hitherto; and it is scarcely to be expected that amateurs can be found in sufficient numbers to make all the required observations. Night-watching in stormy weather finds few followers, and we can only hope to obtain the desired information, when those engaged in its pursuit have *duty* to compel a flagging inclination.

"Deeming an establishment of this description essential to the welfare of the Navy, the committee report the accompanying bill."

It passed, as has been shown, without discussion in either House. To secure its passage good influences had been kindly set at work, directly and indirectly, by the friends of the Observatory in scientific circles.

Dr. Gould, in the article quoted on a preceding page says, of the labors of Professors Bartlett, Kendall, and Walker, as especially bearing on the establishment of the Institution:

"It is to them we owe the first important series of astronomical observations made in the United States, and it is to these and to their publications, *particularly the able report on European observatories*, by Professor W. H. C. Bartlett, United States Army, presented to the Engineer Department on returning from Europe, 1840, that we are indebted for much of that public sentiment which, combined with other influences, at last brought about the establishment of the Naval Observatory. Mr. Adams led the way; Lieutenant Gilliss had, by his diligent, careful, and successful observations, secured the all-essential confidence and co-operation of the Navy Department and of the Naval committees; but in shaping and confirming that public sentiment through which favorable action by Congress became probable, the influence of the other astronomers bore no inconsiderable part."

It has been with much regret that, after diligent inquiry, I have found it impossible to obtain a copy of a second report made by Professor Bartlett with a plan for a National Observatory. The Secretary of War, Mr. Poinsett, makes special commendatory reference to it in his report of 1840.

Renewed efforts of Hon. J. Q. Adams.

The action in the House of Representatives taken by the committee upon the Smithsonian fund under the leadership of Mr. Adams, had a powerful influence in the House in passing Mr. Mallory's bill. As far back, indeed, as June, 1838, when news was received of Mr. Rush's success in obtaining the Smithsonian bequest of more than half a million of dollars, Mr. Adams had immediately waited upon President Van Buren, and in a conversation of two hours explained the views he entertained in regard to the application of that fund, entreating him to have a plan proposed to recommend to Congress for the foundation of the Institution.

"I suggested to him," said Mr. Adams, "the establishment of an Astronomical Observatory, with a salary for an astronomer, and an assistant for nightly observations, and periodical publications; annual courses of lectures upon the natural, moral, and political sciences; above all, no jobbing, no sinecure, no monkish stalls for lazy idlers. I urged the deep responsibility of a nation to the world and to all posterity worthily 'to fulfill the great object of the testator.' I only lamented my inability to communicate half the solicitude with which my heart is on this subject full, and the sluggishness with which I failed properly to pursue it."

"Mr. Van Buren," Mr. Adams added, "received all this with complacency and apparent concurrence of opinion, seemed favorably disposed to my views, and willing to do right, and asked me to name any person who, I thought, might be usefully consulted."[1]

To a letter addressed to him by the Secretary of State, by direction of the President, requesting him to communicate the result of his reflections on the Smithsonian Institution, Mr. Adams made the following reply:[2]

"Quincy, *October* 14, 1838.

"Sir: I have reserved for a separate letter what I proposed to say in recommending the establishment of an Astronomical Observatory, at Washington, as one and the first application of the annual income from the Smithsonian bequest; because, of all that I have to say, I deem it by far the most important; and because I have for many years believed that the national character of our country demanded of us the establishment of such an Institution as a debt of honor to the cause of science and to the world of civilized man. I have hailed with cheering hope this opportunity of removing the greatest obstacle which has hitherto disappointed the earnest wishes that I have entertained of witnessing before my departure for another world, now near at hand, the disappearance of a stain upon our good name, in the neglect to provide the means of increasing and diffusing knowledge among men, by a systematic and scientific series of observations on the phenomena of the numberless worlds suspended over our heads—the sublimest of the physical sciences, and that in which the field of future discovery is as unbounded as the universe itself. I allude to the continued and necessary expense of such an establishment."

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[1] Quincy's Memoirs, p. 191.

[2] Quoted by Mr. Adams in his report, No. 587, Twenty-seventh Congress, second session.

Mr. Adams then refers to the report made by C. F. Mercer (quoted in part on p. 10 of this Memoir) for much valuable information, and proceeds:

"But, as it is desirable that the principal building, the Observatory itself, should be, for the purposes of observation, *unsurpassed by any other edifice constructed for the same purposes,* I would devote one year's interest from the fund to the construction of the buildings; a second and a third, to constitute a fund, from the income of which the salaries of the astronomer, his assistants and attendants, should be paid; a fourth and fifth, for the necessary instruments and books; a sixth and seventh, for a fund, from the income of which the expense should be defrayed of publishing the ephemeris of observation, and a yearly nautical almanac." * * * * * * * * * *

"My principles for this disposal of funds are these:

"1st. That the most complete establishment of an Astronomical Observatory in the world should be founded by the United States of America; the whole expense of which, both its first cost and its perpetual maintenance, should be amply provided for, without costing one dollar either to the people or to the principal sum of the Smithsonian bequest.[1]

"2d. That, by providing from the income alone of the fund a supplementary fund from the interest of which all the salaries shall be paid, and all the annual expenses of publication shall be defrayed, the fund itself would, instead of being impaired, accumulate with the lapse of years. I do most fervently wish that this principle might be made the fundamental law, now and hereafter, so far as may be practicable, of all the appropriations of the Smithsonian bequest.

"3d. That by the establishment of an Observatory upon the largest and most liberal scale, and providing for the publication of a yearly nautical almanac, knowledge will be dispersed among men, the reputation of our country will rise to honor and reverence among the civilized nations of the earth, and our navigators and mariners on every ocean be no longer dependent on English or French observers or calculators for tables indispensable to conduct their path upon the deep."

In accordance with these views, Mr. Adams, in 1842, made a report to the House of Representatives, accompanying it with a bill,[1] providing for the appropriation of the Smithsonian fund of $508,318.46 received by the United States, by the following enactments: The whole sum to be preserved undiminished and unimpaired, the faith of the United States being pledged thereto by its permanent investment as "the Smithsonian fund;" the sum of $30,000, part of the accruing interest, to be appropriated toward the erection of an Observatory; the sum of $60,000 of accrued interest to constitute a fund for payment by its interest of the salary of an astronomer; the sum of $120,000 of accrued interest to be appropriated for payment by its interest for the salaries of assistant observers; $30,000 for the best and most perfect instruments; $10,000 for the purchase of a library of science and literature; and $1,800 a year for the publication of astronomical observations and a nautical almanac.

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[1] At a later date, Mr. Adams cordially assented to the different plan and basis on which the Smithsonian Institution has been established, the establishment of the Observatory having been secured.

In advocating the bill, the committee say:

"It is believed that no one science deserves or requires the immediate application of the accrued and accruing income of the fund so urgently as practical astronomy.

"The express object of an Observatory is the increase of knowledge by *new discovery*. The physical relations between the firmament of heaven and the globe allotted by the Creator of all to be the abode of man are discoverable only by the organ of the eye. Many of these relations are indispensable to the existence of human life, and, perhaps, of the earth itself. Who can conceive the idea of a world without a sun, but must connect with it the extinction of light and heat, of all animal life, of all vegetation and production; leaving the lifeless clod of matter to return to the primitive state of chaos, or to be consumed by elemental fire? The influence of the moon, of the planets—our next-door neighbors of the solar system—of the fixed stars, scattered over the blue expanse in multitudes exceeding the power of human computation and at distances of which Imagination herself can form no distinct conception; the influence of all these upon the globe which we inhabit, and upon the condition of man, its dying and deathless inhabitant, is great and mysterious, and, in the search for final causes, to a great degree inscrutable to his finite and limited faculties. The extent to which they are discoverable is, and must remain, unknown; but, to the vigilance of a sleepless eye, to the toil of a tireless hand, and to the meditations of a thinking, combining, and analyzing mind, secrets are successively revealed, not only of the deepest import to the welfare of man in his earthly career, but which seem to lift him from the earth to the threshold of his eternal abode; to lead him blindfold up to the council-chamber of Omnipotence, and there, stripping the bandage from his eyes, bid him look undazzled at the throne of God." * * * * * *

"It is to the successive *discoveries* of persevering astronomical observation through a period of fifty centuries that we are indebted for a fixed and permanent standard for the measurement of time. And by the same science has man acquired, so far as he possesses it, a standard for the measurement of space. A standard for the measurement of the dimensions and distances of the fixed stars from ourselves is yet to be found, and, if ever found, will be through the means of astronomical observation. The influence of all these discoveries upon the condition of man is, no doubt, infinitely diversified in relative importance; but all, even the minutest, contribute to the increase and diffusion of knowledge. There is no richer field of science opened to the exploration of man in search of knowledge than astronomical observation; nor is there, in the opinion of this committee, any duty more impressively incumbent upon all human governments than that of furnishing means and facilities and rewards to those who devote the labors of their lives to the indefatigable industry, the unceasing vigilance, and the bright intelligence indispensable to success in these pursuits.

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[1] Reports of Committees, vol. 3, Twenty-seventh Congress, second session, House of Representatives, report No. 587, bill 386; 1841–'42.

* * * * "It was an observation of Voltaire that if the whole human race could be assembled in one mass, from the creation of man to his time, in the graduation of genius among them all, Isaac Newton would stand at their head. But the discoveries of Newton were the results of calculations founded upon the *observations* of others—of Copernicus, of Tycho Brahe, of Kepler, of Flamsteed; and among their producing causes not the least was the erection and establishment of the Royal Observatory of Greenwich.

"The original purpose of this Institution, first commenced in 1676 under the patronage of Charles the Second, and the most glorious incident of his life, was for the finding out the so much desired longitudes of places for the perfecting the art of navigation; and the inscription still existing above the original door of the Observatory declares that it was built for the benefit of astronomy and navigation: so intimately connected together are the abstracted science and the practical art, that, without the help of the astronomer, the seaman could not urge his bark in safety one inch beyond the sight of the shore.

* * * "The discovery of the longitudes of places, the benefit of astronomy and navigation were thus the declared objects of the erecting of the Greenwich Observatory, and of the appointment of Flamsteed *Astronomical Observator*. And what were the first fruits of that Institution?

"1. An increased accuracy of observation by the attachment of telescopes to graduated instruments, and by the use of a clock to note the time at which stars and planets passed by their apparent diurnal motion across the middle of the field of view of the telescope.

"2. A catalogue of the places of 3,310 stars with a name affixed to each, the selection and nomenclature of which have served as a basis to every catalogue since that time. Nor is it an uninteresting incident in the progressive history of astronomical knowledge that when, one hundred years later, Herschel discovered that the star which bears his name was a planet, he found it a fixed star upon the catalogue of Flamsteed.

"3. Many of Flamsteed's observations of the moon, reduced as well as was practicable, were, at Newton's request, communicated to him, to aid in perfecting the theory deduced from the principle of universal gravitation. 'The time,' as has been well observed by the present Astronomer Royal, the Reverend George Biddell Airy, 'the time at which these observations were made was a most critical one—when the most accurate observations that had been made were needed for the support of the most extensive philosophical theory that man had invented.' * * * *

* * * * "From such small beginnings originated, and thus illustrious has been the career of the Royal Observatory of Greenwich. Originally attached to the Ord-

nance Department, it was, in 1816 or 1817, transferred to the Department of the Admiralty. The estimates for the annual expense of the Observatory are inserted under the 'scientific branch' of the Admiralty account in the parliamentary estimates, and are voted annually by Parliament."

Before closing the report, the committee further reminded Congress of the large increase in the number of observatories in Europe, and of the inauguration of the Pulkova Observatory on the 7th August of the preceding year, at a cost of 1,000,000 silver rubles, on a spot chosen by the Emperor Nicholas, for the best appointed Institution in the world. They appended to their report a very full letter from Reverend G. B. Airy, Astronomer Royal, which epitomizes the history of the Greenwich Observatory up to the date of April 10, 1839, and which also presents much miscellaneous information relating to other Observatories.

Of this report by the Committee the remark has been made by a competent judge that it is "well worth the perusal of every lover of the glorious science of astronomy, both for the richness of its information and the beauty of its eloquence." The persevering labors and deep personal interest of Mr. Adams in the object of establishing an Observatory are readily understood when his love for the study of astronomy is remembered in connection with his masterly scholarship in many other branches of learning and with his wide national views. His own journal in the year when he was laboring for the erection of a National Observatory records: "To make observations of the movements of the heavenly bodies has been for a great portion of my life a pleasure of gratified curiosity, of ever returning wonder, and of reverence for the Great Creator and Mover of these innumerable worlds." His oration in 1843, at the laying of the corner-stone of the Cincinnati Observatory, is "an outline of the history of astronomy." His studies had been the works of Newton, Schubert, Lalande, Biot, and Lacroix.

I find in the records of the House of Representatives of the same year that additional influences were brought to bear upon the bill for a Depot of Charts and Instruments. Among them was the following:

May 12, 1842, Hon. Mr. Boardman, from a select committee, reported on the memorials of P. S. Duponceau and other citizens of Philadelphia, New York, and Baltimore, praying Congress to take measures for the reduction of Astronomical Observations and for the precise determination of the longitude of the Capitol, in substance as follows:[1]

"The substantial interests and honor of the country require this; it is due to the cause of science and to that sublime branch of it which contemplates the relation of the earth to the heavens. It is incumbent on Congress to provide for the safety of our mariners and of the immense treasures which the enterprise of our merchants throws daily upon the waters. It is by celestial observations only that charts can be accurately projected. * * *

"In Europe the whole expense of *observatories* and instruments is borne by the government. The purposes and objects are there regarded as purely national and of sufficient importance to command constant and liberal appropriations. We are the second commercial nation in the world, and yet we have thus far done but little for the advancement of a science so deeply important to the interest of navigation. * *

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[1] Twenty-seventh Congress, second session, House of Representatives, Report No. 683, bill 410.

"After the example of the European nations, Congress has fixed upon the meridian of this Capitol as our prime meridian, and has, in some degree, determined its longitude from the European capitals by their action on the report of Mr. Lambert in 1822.[1]

"The memorialists state that through the accumulated astronomical observations since the adoption of that report, there is reason to suspect an error in his position of the Capitol; that this error is incorporated in all our maps; and that Mr. Lambert in his report had omitted to correct his results for the errors of Burg's lunar tables then in use, although Dr. Bowditch's Memoir would have enabled him to correct them; that the number of astronomical observations in possession of the Navy Department and of learned societies unreduced, together with those from other sources available for national purposes, is probably more than a thousand."

The memorialists refer to the communications of Hon. John Branch Secretary of the Navy in 1830, upon the objects of erecting an Observatory, and ask the appointment of a computer and assistants, who shall reduce the entire mass of observations on a uniform system.

A bill to meet the object asked for by the memorialists was reported and committed to the committee of the Whole House. Although no final action was taken, the discussion of this subject (as well as that of a memorial presented not long before from the American Philosophical Society of Philadelphia, asking aid in prosecuting magnetic and meteorological observations) was not without its influence in securing the new movement which Lieutenant Gilliss so ardently desired and in the same year obtained.

Erection of the Observatory.

On the 23d of November, 1843, Lieutenant Gilliss reported to the Navy Department the adoption of a plan for an Observatory, modified as advised by distinguished gentlemen in Europe and in the United States; he also reported the progress of the erection of the building in accordance with the plan.

In noticing this communication, the Secretary of the Navy said in his next annual report:[2] "It is proper to remark that this building is adapted in form and structure not only for a Depot of Charts and Instruments, but for an Astronomical Observatory. It cannot but be gratifying to you to learn how great an interest has been evinced by the learned societies and scientific men of Europe as well as at home, upon the establishment of the Institution by the Government."

The law of Congress directing its erection authorized the President of the United States to locate it on any public ground within the District of Columbia not otherwise appropriated; and the site assigned by President Tyler was the Reservation marked, on the original plan of the city, No. 4, as will presently be more fully shown. It lies on the north bank of the Potomac, in the southwestern part of the city; the north front being 810, the east 1,103, and the west 620 feet in length.

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[1] As regards the official sanction finally given by Congress for a first meridian, the statute of September 28, 1850, is known as the only law authorizing our reckoning. It provides that hereafter the meridian of the Observatory at Washington shall be adopted and used as the American meridian for all astronomical purposes, and that the meridian of Greenwich shall be adopted for all nautical purposes.

[2] Report of Hon. D. Henshaw, Secretary of the Navy, November 25, 1843.

"The site has a north horizontal range, one and a quarter mile, and a south range of eight miles. It is 267 feet from the north; 320, from the east; 490, from the west; and 900, from the south inclosure; the last bordering on the canal, beyond which is the river. The hill is of gravel foundation, with a surface stratum of dry, brittle clay, through which water filters almost as freely as through gravel."

In addition to these statements by Lieutenant Gilliss, I have found the following interesting information as regards—

THE SITE OF THE PRESENT OBSERVATORY.

The earliest trace on the records identifying the lands now occupied is in connection with the march of General Braddock against Fort Duquesne in the Colonial Wars. It seems clear that his troops landed and encamped on this hill.

The record is this:[1]

"April 11, 1755. Four companies of the Forty-fourth Regiment under Lieutenant (afterward Governor) Gage, and a detachment of seamen from Alexandria, landed from the boats of the Sea Horse and the Nightingale, and pitched their tents '*at* Rock Creek.' April 14, General Braddock arrived *at* Rock Creek, and gave orders for transporting the stores; the troops marched from 'Rock Creek' to Owen's house, fifteen miles onward to Frederick." (Rockville.) Traditions are strong as to the camping on this Hill.

Washington's letters show that he afterward crossed here also from Alexandria to join Braddock at Frederick.

The late Colonel Peter Force, of Washington, so well known for his historical collections, repeatedly pointed out the large rock, which yet stands, in the southern part of the original Reservation which the Observatory occupies, as the rock on which these landings were made. The northern channel of the Potomac, it is well known, was good here until our day—until the causeway for the Long Bridge was made.

The second identification of the locality is of more direct interest and value.

In the office of the Commissioner of Public Buildings may be found the original "Plan of the Federal City"—not then named Washington—as presented by the first Commissioners, David Stuart, Daniel Carroll, and Thomas Johnson, appointed under the act of Congress, July 16, 1790, to lay out the city and take measures for the erection of the Federal buildings.

On this manuscript plan, communicated to Congress, December 13, 1791, the grounds on which the Observatory now stands are marked as a blank space with the number "4" upon it. On the engraved plan, published by order of General Washington by Thackara and Vallance, Philadelphia, 1792, the northern and central part of the square is covered by the lines of a proposed fort and barracks.

With the original manuscript plan are connected two letters, the one bearing the autograph of Geo. Washington, and dated March 2, 1797; the other, that of John Adams, July 23, 1798; each letter requesting Thomas Beall of Geo. and Jno. M.

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[1] Braddock's Expedition by Winthrop Sargent, p. 367.

Gantt to convey to the Commissioners of that date, Gustavus Scott, W. Thornton, and A. White, and to their successors, "all the streets, squares, and parcels of ground designated as appropriations, for the use of the United States forever." These appropriations or reservations were sold to the United States by the original proprietors for £25 per acre = $66⅔ United States currency, the spaces for the streets being not counted. The proprietor of space No. 4, Mr. Robert Peter, gave one-half of the area, and received from the Commissioners in exchange for the other half another parcel of ground.

In General Washington's letter,[1] Reservation No. 4 is thus described:

"Fourth. The *appropriation* bounded on the north by the south side of north E street; on the east by the west side of Twenty-third street west; on the west by the east side of Twenty-fifth street west; and on the south by the Potomac River."

The historical value of the record just cited is increased by the fact that, at a date earlier by many years than the official occupancy of this square, it was proposed to make it the site of an Institution of science,[2] the proposal being by the first President and the Commissioners to locate here a National University. At a much later date it was proposed by President Adams as the site of an Observatory. Of the first of these points the following is on record:

In President Washington's letter to the Commissioners, January 28, 1795,[3] he names to them his well-known offer to donate certain shares in the Potomac Company for the purposes of a National University, adding, "If the commissioners have any agency in bringing the matter forward, the information I now give them is in the proper course." In his letter to John Adams, November 27, 1794, and in his speech to Congress, January 8, 1790, he had previously expressed a like desire on this subject.

The Commissioners, February 18, 1795, reply:[4] "Your letter relates to a subject on which we have often conversed together, and we cannot express the satisfaction it gives us to find your opinions on the subject so consonant with our own. * * * We have chosen a piece of ground which, if approved by you, is intended for the site." In their second answer, October 1, 1796, they say, "With respect to a National University we are of the opinion that the space *heretofore proposed* to be appropriated for a *fort* and *barracks* on Peter's hill is the most proper site for that object." In Washington's letter to the Commissioners, October 21, 1796, he notifies them, * * "For a site of the National University, I decide in favor of the squares surrounded by numbers 21, 22, 34, 45, 61–63."

A reference to the map of the city of Washington of a later date than 1796 will not show the squares 34 and 45; they appear, however, on the map placed before General Washington, facing north on E street north; the appropriation faces also south on the Potomac.

In 1796, December 21, Mr. Madison, reporting favorably to the House of Representatives on a memorial of the Commissioners, and upon President Washington's second recommendation for a university, says:[1] "The proprietors of the lands by their deeds of cession authorized the President of the United States for the time being to appropriate such portions thereof as he should judge necessary to public use. In virtue of this power, the President has appropriated nineteen acres one rood and twenty-one perches for the site of a National University."

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[1] Washington's letter to the Commissioners, 1797. First official sanction of the reservation now occupied by the Observatory.

[2] Designation of the reservation for a scientific institution. Washington's letter, October 21, 1796. President Adams's message, December 6, 1825.

[3] Sparks's Writings of Washington, vols. xi and xii.

[4] Letters of the Commissioners in the office of the Commissioner of Public Buildings.

As regards the accuracy of the original survey of this and of the other portions of the city, it is stated on the original engraved plan that Major Andrew Ellicott, (the geographer-general as named by the Commissioners, appointed in 1792 surveyor-general of the United States,) drew a true meridional line by celestial observations, which passed through the area intended for the Capitol, crossing it by another line due east and west passing through the same area; running all the lines of the city by a Transit instrument and determining the acute angles by actual measurement, leaving nothing to the uncertainty of the compass. On the plan of the city the Capitol is marked, latitude 38° 53′.

The elevation now occupied by the Observatory was again known as Camp Hill, from its having been occupied by a part of the American army encamped on it in the years 1813 and 1814. A brigade of militia, including Stull's and Peter's riflemen and the troops from Alexandria, advanced from this hill to the vicinity of Bladensburg, for the defense of the city against General Ross and Admiral Cockburn, August 23, 1814.[2]

As a final point of interest in connection with the Observatory reservation, it may be mentioned that in the report of Lieutenant-Colonel G. W. Hughes to the Secretary of War, January 15, 1851, on the subject of supplying water to the city, reference is made to the "numerous surveys made contemporary with the first plans of the city" for the same purpose of the water-supply. Major Ellicott had reported on these plans, in 1791–'92, that the positions of the several squares were first determined on the most advantageous ground, commanding the most extensive prospects, and susceptible of improvement. The level of the base of the Observatory is one of those positions. They were chosen in 1851 by Colonel Hughes, and afterward by Lieutenant (now Major-General) M. C. Meigs, U. S. A., as the more elevated points of comparison within the city above ordinary low tide. The levels given by the report of Colonel Hughes are as follows:[3]

Foundation of St. John's Church	65.50 feet.
Corner of I and Nineteenth streets, west	82.10 feet.
Base of Observatory	96.20 feet.
East base of Capitol	89.50 feet.
Corner of N and Eleventh streets ("highest point in the city")	103.70 feet.

By levels taken also by Lieutenant (now Rear-Admiral) B. F. Sands, at the time of the first occupancy by the Observatory of its present site, the base of the Observatory was found to be on a level with the floor of the Congressional Library.

It thus appears that the level of the base of the Observatory is the second highest eminence within the city limits; a fact which, in connection with others, doubtless had weight in its choice by the first President and the Commissioners, and subsequently by President Adams for the seat of a Scientific Institution. The founders of the Government, selecting this eminence at first for military occupancy and defense, (for which purposes it has been more than once used,) yielded promptly their first choice for the permanent occupancy of the site by an institution of peace. Have not they, and all others in official and private life up to this day, expected the faithful preservation of the high purposes of the reservation and of its beautiful eminence?

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[1] American Miscellaneous State Papers, vol. 1, p. 153.

[2] National Intelligencer, August 24, 1814.

[3] Reports of March 3, 1851, and February 12, 1853, House of Representatives, Thirty-first Congress, second session, Ex. Doc. No. 33, and Ex. Doc. No. 48, Senate, Thirty second Congress, second session.

Erection of the Buildings.

In February, 1845, Hon. J. Y. Mason, communicated to the Senate a report,[1] and the drawings accompanying the same, by Lieutenant J. M. Gilliss, on the erection of a building in Washington as a 'Depot for Charts and Instruments.'

This report, from which extracts have been already made, was a complete description of the building then erected, and of the astronomical and magnetical instruments to be used. It occupies nearly eighty pages of text, with ten plates descriptive of the instruments. The changes which have been made since the date of that report, in the plan of the building and in some of the instruments, and the yet more important improvements now in progress, are substantial reasons for not accompanying this Memoir with any reproduction of the plates or with descriptions of the instruments.[2] But as it will be found almost impossible to secure now a copy of Lieutenant Gilliss's report, citations of some length are here made, as called for in making up even an outline of the Institution as it was when established in 1842.

Construction of the Main Buildings.

"The ground was excavated to a depth of 8 feet for the foundations of the walls and bases of all the piers, except that for the great telescope, which is 9 feet below the surface of the ground.[3] The end wall of the west wing and foundation for meridian-transit piers are several feet deeper than the others, owing to a natural fall in the ground rendering it necessary to excavate to a greater depth. Directions had been given to go down to the gravel, subsequently found at 27 feet from the surface.

* * * "The position of the house being changed 25 feet to the west, the east wall and pier for the portable transit instrument fell within the cavity; they were therefore built up of solid masonry from the depth of 17 feet below the surface, instead of filling the hole with earth.

"The central building is 50 feet 8 inches square on the outside, from the foundation to a height of 2 feet 6 inches above the ground; and thence to the top of the walls, 50 feet square. All the foundations to the ground-line are of blue rock, 2 feet thick; the remainder of the outside walls are of brick, 18 inches thick, finished in the best manner; and the partition-walls are of brick, 14 inches thick. It is two stories and a basement high, with a parapet and balustrade of wood around the top, and is surmounted by a revolving dome, 23 feet in diameter, resting on a circular wall, built up to a height of

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[1] Report of the Secretary of the Navy, February 17, 1845, Twenty-eighth Congress, second session, Senate Ex. Doc. No. 114.

[2] For these see Washington Astronomical Observations for the Years 1845, 1865 and 1870.

[3] Gilliss's Report, 1845, p. 3.

7 feet above the roof. Its roof is nearly flat, having a rise of only one foot in ten; it is coppered and covered with a grating resting on supports secured to the parapet on one side and the roof on the other, so as to form a level promenade for gazing observations. There are four rooms on each floor, separated by passages 10 feet wide, crossing each other at right angles. Where the dome-wall crosses the passages, it is supported on lintels formed by bolting together five thicknesses of timber, 12 inches wide by 4 inches thick, over which a brick arch is turned. There is, at the intersection of the passages, a foundation of masonry, laid in hydraulic cement, for the great pier. Its diameter at the base is 15 feet, and it is solid to the height of 10½ feet, where the diameter is 12 feet.

"Upon this is erected a conical pier of hard burned brick, laid in the same manner; the diameter at the base being 12 feet, the height 28 feet, diameter at the top 7 feet, and walls 3 feet thick, to within 10 feet of the top, where they gradually increase in thickness; and the last 3 feet are solid. The pier is capped by New York flagging-stone, on which rests the pedestal of the equatorial.

"Stairways from the basement to the second story are of the ordinary kind; but from the second story to the rotunda or dome they are spiral; commencing beside the vertical casing, (which prevents contact with the great pier,) they proceed to a landing at the circumference of the dome, the aperture in the floor being closed by closely-fitting doors, which are kept up by counter weights when the observer is not employed. * *

"To the east and west sides of this edifice are wings, entered from the passages, each 26 feet 6 inches long, 21 feet wide, and 18 feet high. There is also a wing to the south, separated from the house by an entry or passage 10 feet square;—it is 21 feet long, with the same breadth and height as the others. To guard against unequal temperatures likely to be produced by the heated walls of the house, (on the suggestion of Professor Encke,) an extra 9-inch wall is interposed, leaving a space of 6 inches for free passage to the air between them. The side-walls of the wings are 18 inches, and the end-walls 14 inches thick, the former being strengthened by pilasters on each side of the doors."

Astronomical, Magnetic, and Meteorological Instruments.

In regard to the equipment of the Observatory with instruments, Lieutenant Gilliss reported as follows:

"It being evident, from the report of the committee of Congress before named, that it was intended to establish a Naval Observatory in connection with the Depot of Charts and Instruments, it became an object of great importance to obtain instruments of such character in the various departments of astronomy, terrestrial magnetism, and meteorology (designated by them to be pursued) as would render the most efficient service during the largest portion of time. To this end, eminent advice was sought, and a list prepared for the approval of the Hon. Secretary, which, regarding their ultimate usefulness as paramount, still kept economy in view.

"The list embraced

"1. Achromatic refractor.
"2. Meridian transit.
"3. Prime vertical transit.

"4. Mural circle.
"5. Comet-searcher.
"6. Magnetic instruments.
"7. Meteorological instruments.
"8. Books."

"In addition to these, to be purchased, there belonged to the Navy a portable 42-inch Transit instrument and 2 clocks purchased by Lieutenant Wilkes for the Exploring Expedition, and a 30-inch Transit circle and 2 clocks ordered for the Depot; all of which, with a number of mathematical, astronomical, and other scientific books, could be rendered useful in the new establishment."

Two other astronomical clocks were ordered; one for the south wing, and the other for the east wing; the former being the workmanship of Mr. Charles Frodsham, London, and the latter of Mr. W. C. Bond, Boston.

The magnetical instruments purchased under the advice of Professor Lloyd and Colonel Sabine were ordered from Barrow, London. They were a declinometer, bifilar magnetometer, balance magnetometer, and Fox's deflector. The meteorological instruments were a standard barometer of the value of £20, dry and wet bulb and self-registering thermometers, Daniell's hygrometer, and Osler's anemometer, and rain-gauge.

"In token of the interest and gratification at the establishment of the Institution felt by distinguished men abroad, the

Library of the Observatory

received, among its first stores, contributions of 175 volumes from the Royal Society, Royal Astronomical Society, the English Admiralty, and the East India Company, and from the Astronomers Royal at Greenwich, Berlin, Brussels, and Munich, and the directors of other distinguished observatories. The United States Observatory was immediately placed upon their exchange-lists. Seven hundred volumes of standard works were purchased.

Superintendency of Lieutenant M. F. Maury, 1844 to 1861.

At the close of September, 1844, Lieutenant Gilliss reported to the Hon. Secretary of the Navy that the new building was ready for occupancy and the instruments adjusted. October 1, Lieutenant M. F. Maury, then Superintendent of the Depot of Charts, was ordered to take charge of the new Depot and Observatory, and to remove to it all the nautical books, charts, and instruments, with the officers who were at that time attached to the Depot. These officers were Lieutenant (now Rear-Admiral) B. F. Sands, who was placed in charge of all the instruments and charts; Lieutenants W. L. Herndon and G. H. Scott, with Passed Midshipmen J. L. Worden, (now Rear-Admiral;) R. H. Getty, J. M. B. Clitz, J. F. Stenson, W. B. Fitzgerald, and M. K. Warrington.[1]

With the aid and supervision of these officers, the instruments and charts were immediately removed from the building, then rented by the Government, now known as Nos. 2222 and 2224 Pennsylvania avenue, which building had been occupied as the Depot from July 1, 1842.

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[1] Report of Lieutenant Maury to the Secretary of the Navy, in Appendix to the Washington Observations for 1845.

Between the dates of October 1, 1844, and July 1, 1846, the following officers were ordered to the Observatory: Lieutenants T. J. Page, L. Maynard, D. D. Porter, W. B. Whiting, and J. J. Almy; Professors J. H. C. Coffin, J. S. Hubbard, and R. Keith. Mr. S. C. Walker, of Philadelphia, was also appointed an assistant astronomer. From time to time a number of passed midshipmen were ordered; the changes in the orders of these junior officers, however, being too frequent to permit much valuable results from their labors.

Among the names which have been given may be recognized some which have become national, and associated with memories of a nation's gratitude earned by gallant naval service in the late struggle for the preservation of our country and her liberties.[1]

Extensive Astronomical Work Proposed.

On the 6th March, 1846, the Superintendent, Lieutenant Maury, obtained the following order from Hon. Geo. Bancroft, Secretary of the Navy:

"Sir: Desirous that the numerous and able corps employed at the National Observatory at Washington may produce results important to maritime science and to the Navy, I approve your course in making the series of astronomical observations necessary for the preparation of a nautical almanac.

"The country expects also that the Observatory will make adequate contributions to astronomical science. The most celebrated European catalogues of the stars, 'Bessel's Zone Observations' and 'Struve's Dorpat Catalogue' of double stars, having extended to only 15° south of the equator, and the Washington Observatory by its geographical position commanding a zone of 15° farther south, and being provided with all instruments requisite for extending these catalogues, you are hereby authorized and directed to enter upon the observation of the heavens, commencing at the lowest parallel of south declination you may find practicable. You will embrace in your catalogue all stars, even of the smallest magnitude, which your instruments can accurately observe. You will, when convenient, make duplicate observations of stars for each catalogue, and, when time permits, you will determine with precision, by the meridian instruments, the position of the principal stars in each pair or multiple of stars. Simultaneously with these observations you will, as far as practicable, determine the positions of such stars as have different declinations or right ascensions assigned to them in the most accredited ephemerides."

How far the astronomical force of the Institution was able successfully to meet the requirements of this order will appear in the volumes subsequently issued from the Observatory.

It has been said[2] that the work was to be nothing less than assigning color, position, and magnitude to every star in the heavens which could be seen with the instruments—a noble work. Unfortunately, under the circumstances of the Observatory, it would have required a century to complete it.

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[1] National Almanac, 1864.

[2] North American Review, October, 1867.

The work of making this catalogue of stars down to the 9.10 magnitude was begun in 1846 with three meridian instruments, the mural, and meridian circles, and the transit instrument, by Professors Coffin, Hubbard, and Keith, and Lieutenant T. J. Page.[1]

PUBLICATION OF THE FIRST VOLUME OF OBSERVATIONS.

In September, 1846, the volume of observations made during the year 1845 was issued from the press. At the close of the Superintendent's letter to the Hon. Secretary of the Navy forwarding these observations, after repeated statements of the insufficiency in the strength of his astronomical force, he says: "After this year, I purpose to continue the great American work of penetrating regularly and systematically every point of space above the almucantar of 5°. * * * * I have now the honor of presenting the first volume of astronomical observations ever issued from an institution properly entitled to the name of an observatory on this side of the Atlantic."

An impartial and able judge thus estimates the volume: "Besides a fair amount of observations with the two transit instruments, in the meridian and the prime vertical, and those with the mural circle, it contained various important investigations of the errors and corrections peculiar to the instruments; Professor Coffin's masterly discussion of the adjustments of the mural circle, and his expansion of Bessel's Refraction Tables, Walker's investigation of the latitude of the Observatory, and his comparison of the standard thermometers; all of great value." The observers during the year were, with the equatorial, Lieutenant Maury and Mr. S. C. Walker; with the mural circle, Professor Coffin and Lieutenant T. J. Page; with the meridian circle, Lieutenant (now Admiral) D. D. Porter and Professor Hubbard; with the west transit, Lieutenants Maynard and Almy and Professor Keith.

In a table of comparison of the cost of the CHRONOMETERS and other NAVAL INSTRUMENTS, presented also in this volume, (Appendix, p. 6,) the Superintendent showed the large reduction in the cost of these from the prices paid by the Government before the establishment of the Depot of Charts in 1830.

The Secretary of the Navy, in his annual report for the succeeding year, renewed the statement that, with the facilities of the Observatory, we might produce our own Nautical Ephemeris, a small appropriation being sufficient to accomplish the object, the expenditure of which would be returned by supplying our merchant-vessels with nautical almanacs at cost.[2]

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[1] This work, as projected in 1846, was continued during the years following up to and inclusive of the year 1849; "the corps of computers proving, however, altogether insufficient to keep pace with the observers." The observations of the zones made during the year 1846 with the meridian circle by Professor J. S. Hubbard and Lieutenant L. Maynard were reduced under the direction of M. James Ferguson, assistant astronomer, and published in 1860 as volume I, of Zones of Stars.

The zones observed in 1846,–'49, with the mural circle, by Professor J. H. C. Coffin[1], Lieutenants T. J. Page and Charles Steedman, were published is 1872 as Appendix No. II to Washington Observations for 1869. The transit-instrument observations for the same years by Professors Keith[2], Beecher[3], and Hubbard[4], and Lieutenant (now Commodore) J. J. Almy, and Lieutenant W. A. Parker, have just issued from the press. The meridian-circle observations for the years 1847–'49 are ready for the printer. By authority of the Navy Department, given in 1862, all these zone observations for the years 1846–'49, were reduced by Dr. B. A. Gould, then of Cambridge, Massachusetts, now director at Cordoba, of the National Observatory of the Argentine Republic.

[2] Report of Secretary Upshur, December 5, 1846.

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[1] J. H. C. Coffin, appointed Professor of mathematics January 23, 1836; commissioned August 14, 1848.

[2] R. Keith, appointed Professor of mathematics August 17, 1845; commissioned August 14, 1848.

[3] M. Beecher, appointed Professor of mathematics June 14, 1841; commissioned August 14, 1848.

[4] J. S. Hubbard, appointed Professor of mathematics May 5, 1845; commissioned August 14, 1848.

IDENTIFICATION OF NEPTUNE WITH A STAR OF LALANDE'S CATALOGUE OF 1795.

In the second volume of the Washington Astronomical Observations, Lieutenant Maury says of this discovery:

"In the autumn of 1846, after the planet Neptune had been discovered by Leverrier, and seen by Dr. Galle, it was made the duty of Mr. Walker, one of the assistants, to endeavor to trace the path of the planet backward, in order to ascertain if it had not been discovered by some astronomer before, and entered among his observations as a fixed star. February 1, 1847, he reported a list of 14 stars from Lalande's Catalogue which answered the description of the planet, and near the places of which he made Neptune to be in May, 1795, when the French astronomer observed these stars for his great work, the '*Histoire céleste*.' The list was given to Professor Hubbard, in charge of the equatorial, who reported, February 4, that the one which Mr. Walker had singled out as the star most likely not to be found in that part of the heavens where Lalande saw it was missing. It turned out to be Neptune, and that Lalande, not suspecting it to be a planet, had observed and recorded it as a fixed star May 8 and 10, 1795."

Astronomers were thus furnished with an observation of Neptune made fifty-two years before, which afforded the means of a most accurate determination of the orbit, and enabled the Superintendent of the American Nautical Almanac to publish an ephemeris of the new planet two years in advance of all other parts of the almanac.

The Observatory was first brought into prominence by these researches.[1]

The Superintendent of the American Nautical Almanac, Lieutenant (now Rear-Admiral) C. H. Davis, at the later date of October, 1849, wrote to the Hon. Secretary of the Navy: "The theory of Neptune belongs, by right of precedence, to American science. In connection with its neighbor, Uranus, it constitutes an open field of astronomical research, into which the astronomers and mathematicians of the United States have been the first to enter, and to occupy distinguished places. The identity of Neptune with the Lalande star of 1795 (an important fact in history) was discovered at the Naval Observatory, and the discovery was due to the investigations of Mr. Walker."[2]

WORK OF THE OBSERVATORY FROM 1847 TO 1850.

The OBSERVATIONS made during the year 1847 were published in 1853; those made in 1848, in 1856; those made in the years 1849 and 1850, in 1859.[3]

The observations during the years 1847–'50 were with the EQUATORIAL, by Professor Hubbard, and afterward by Mr. James Ferguson, (appointed Assistant Astronomer March 11, 1848); with the MURAL CIRCLE, by Professor Coffin, United States

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[1] Proceedings of the American Association, 1854.

[2] For Walker's full report of this discovery, see Smithsonian Contributions, vol. II, as referred to by Lieutenant Maury; for Walker's Ephemeris of Neptune for 1852, with the letter of the Superintendent of the Nautical Almanac, see Smithsonian Contributions, vol. III.

[3] Those made in the years 1851–'52 were not reduced, nor were any other volumes than those of the three periods named above, issued during Lieutenant Maury's superintendency. The observations for 1851–'52, transcribed from the note-books in 1861 under Mr. Ferguson's supervision, were reduced and prepared for publication in 1862 by Dr. B. A. Gould, of Cambridge, Massachusetts.

Navy, and Lieutenant (now Rear-Admiral) Steedman, with the MERIDIAN CIRCLE, by Professors Hubbard and Major;[1] with the PRIME VERTICAL, by Lieutenant Herndon and Professors Hubbard and Lawrence. In the reduction of some of these observations several other naval officers were employed at various dates, among whom were the then Lieutenants Kennard, Jackson, Almy, and Worden, and Lieutenant (now Commodore) D. Ammen, Chief of the Bureau of Navigation.

The volume for the year 1847 contains three Appendixes: "A," Observations of Solar Spots by Rev. B. Sestini, S. J., of Georgetown College, D. C., made at the college; "B," Observations on the Mississippi River at Memphis, by R. A. Marr, Passed Midshipman United States Navy; "C," Tables for the Reductions of the Places of the Fixed Stars by Professors Coffin and Hubbard, United States Navy.

In the volume of astronomical observations for 1848, the Institution first bears the name of UNITED STATES NAVAL OBSERVATORY in place of National. The Secretary of the Navy had thus ordered, because the Institution had always been under the control of the Navy Department, and was conducted by Navy officers; "its reputation is the property of the Navy."

During the year 1848, the east wing of the Observatory was extended 24 feet beyond its original dimensions planned by Lieutenant Gilliss, connecting the wing with the Superintendent's quarters erected in 1847. This furnished a suitable room for the storing and daily care of the chronometers, a duty closely maintained to the present time.

WIND AND CURRENT CHARTS.

A considerable portion of the volume issued by the Observatory for the first year, 1845, had been occupied by a report on the subject of the Wind and Current Charts, for the preparation of which authority had been given by the Navy Department, and which had thus early begun to occupy the attention of the Superintendent.

For each of the years 1846, 1847, and 1848 he reports that in connection with the preparation of these charts, "a large number of ships were engaged in connection with the Observatory, in making observations on all parts of the ocean upon winds, currents, the barometer, and air and water thermometer, and upon other phenomena calculated to improve navigation."

Upon the examination of the logs and other returns from these vessels, a large corps of lieutenants and passed midshipmen were employed; but often "almost the entire corps were ordered to sea at a moment's warning."

It would appear from the notices of the Institution, by the Secretaries of the Navy and the annual reports of the Superintendent of the Observatory during the years 1849 to 1861, that his chief interest in the Institution was centered in its fulfilling the character of a hydrographic office—in the preparation and publication of the Wind and Current Charts. His letters to the Navy Department to which Congress is referred in the annual reports of the Secretaries and the references to the Institution by the Secretaries themselves, are occupied almost exclusively with the progress and the value of the charts, "as part and parcel," as was said, "of the universal policy of civilized nations to accelerate transit from place to place to the utmost possible extent."

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[1] James Major, commissioned professor of mathematics August 14, 1848.

In 1849, Hon. Mr. Preston reported that "the observations, calculations, and experiments at the Observatory, the preparation of maps and charts, and the regulating of chronometers have been zealously continued, * * * the demands constantly made upon the Institution for scientific information, charts, and sailing instructions evincing the increasing confidence in the Observatory."[1]

In the report of Secretary Graham of November 29, 1851, he says: "The Wind and Current Charts planned by Lieutenant Maury, are being extended to the Pacific and Indian Oceans. * * * "This work has materially shortened the passage along the highways by which our commerce passes into and through the southern hemisphere."

The volumes issued from the Observatory and Hydrographic Office on this subject, beginning with the Abstract Log of 1849, and followed by eight volumes or "editions" of Sailing Directions—the eighth edition being a large quarto of two volumes—bear witness to the ability, earnestness, and labor with which these publications were prepared. The force employed upon them was often changed and reduced by the demands for officers during the Mexican war, and, afterward, for other sea duty.

In regard to the astronomical work of the period referred to, and in reply to inquiries for annual volumes or publications to represent it, it is proper to say, further, that some of the professors, as well as the junior line-officers, were placed on duty upon the charts; that astronomical observations were fully kept up until the close of 1850, although those for that year were not finally reduced and published until 1859; and that the work of the equatorial was fully kept up during the whole period by Mr. Ferguson,[2] and that of the mural circle from the year 1853 by Professor Yarnall.[3]

In the year 1858, Professor Yarnall, finding his results for the previous six years nearly ready for the press, decided, by leave of the Superintendent, to complete them by right-ascension observations with the transit instrument, and thus to put them in form for cataloguing. His catalogue will contain about 10,000 stars. Their positions have been derived from the observations made at this Observatory from the time of its establishment to 1871. The number of observations is from 80,000 to 90,000.

His work, begun August 26, 1858, and continued to the present date, results in the completion of two publications to form appendixes to the annual volume for 1871, now in press.

The results of Mr. Ferguson's observations with the equatorial for the period referred to are also nearly ready for the press. The published results of other officers —the observations with the meridian circle by Professor Hubbard and Lieutenant Maynard; those with the mural circle by Professor Coffin and Lieutenants Page and Steedman; and those with the transit instrument by Professors Keith, Beecher, and Hubbard, and Lieutenants Almy and Parker—have already been noted in the foot-note of page 34 of this memoir. Other observations for this period have not, however, been reduced or published.

Mr. Walker, whose achievements in the outset promised much for the Institution, within fourteen months from the date of his appointment, resigned to accept the direction of the longitude department of the Coast Survey; Professor Coffin was detached in 1852 to join the Naval Academy at Annapolis. With the exceptions of the equatorial, and mural circle observations, the zone observations named above, and the unpublished work of other observers during the latter part of the ten years, (1851–'61,) astronomical work unhappily ceased to be the definite object placed before the Institution. The Wind and Current Charts absorbed the attention of the Superintendent.

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[1] Report of Secretary Preston, December 1, 1849.

[2] Mr. Ferguson was successful in discovering for the Observatory the three asteroids Euphrosyne, Virginia, and Echo.

[3] M. Yarnall, appointed Professor of mathematics February 1, 1839; commissioned August 14, 1848; joined the Observatory in October, 1852.

On the 26th of April, 1861, Commander Maury suddenly left the Observatory and the city to join the cause of the so-called Confederate States of the South.

RESUMPTION OF ASTRONOMICAL WORK.

Superintendency of Captain J. M. Gilliss, 1861 to 1865.

On the 22d of April, 1861—nearly twenty years after the founding of the Observatory—it was placed in charge of the officer by whose efforts chiefly that founding had been secured. His ideas of the true aims and work of the Institution remained unchanged from those expressed at the date of his report in 1845. He had then said that "he would have regarded his time as misspent to labor so earnestly only to establish a depot of charts and instruments; that his aim was to place an institution under the management of naval officers, where, in the practical pursuit of the highest known branch of science, they would compel an acknowledgment of abilities hitherto withheld from the service." Desires and purposes like this marked his brief superintendency, commencing April 22, 1861.

In the introduction to the first volume of observations issued under his charge—those for 1861, published promptly in 1862—he gave a detailed statement of the astronomical, magnetical, and meteorological observations which he found unprepared for the press from the circumstances which have been named in connection with the preparation of the Wind and Current Charts during the previous superintendency.

He also took immediate measures toward the reduction and publication of these observations, and for the regular and prompt issue from that date of annual volumes from the Observatory. Meteorological observations were to constitute a part of each future volume.

The Institution still retained as its full official name "The Naval Observatory and Hydrographical Office," and was under the Bureau of Ordnance and Hydrography, Captain A. A. Harwood, chief. It was still charged with the receipt, examination, and distribution of the books and charts to cruising-vessels; more than 20,000 sheets being sent out from the office during the year under the supervision of Lieutenant (now retired Commodore) W. B. Whiting and Professor A. G. Pendleton.[1]

Under the re-organization of the several Bureaus of the Navy Department, in accordance with the law approved August 31, 1862, the Observatory was transferred to the Bureau of Navigation, of which Commodore (now Rear-Admiral) C. H. Davis was in the same year made Chief.

The astronomical and meteorological observations made during the year 1862 were issued in 1863, as promptly as the Government press during those war-times could deliver them. In addition to a largely-increased number of observations, the volume contained a discussion by Professor Newcomb[1] of the longitude of Washington as derived from moon culminations observed at the Royal Observatory, Greenwich, and the United States Naval Observatory, Washington, during the years 1846–'60, inclusive. The difference of longitude between the Observatories of Greenwich and Washington, as derived from a comparison of 279 corresponding culminations, was $5^h\ 8^m\ 11^s.6$.[2]

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[1] Appointed Professor of mathematics February 19, 1838; commissioned August 14, 1848.

This volume also contained a paper on the aspects of comet II, 1862, with drawings by Professor Harkness[3] of the comet during the period of its greatest brilliancy, the observations of the comet with the equatorial having been made by Professor Asaph Hall[4] United States Navy. The volume has a plate illustrating the appearances of the planet Mars, near the opposition, in that year, as the planet was seen in the equatorial, September 6, 12 p. m., and September 30, 11 p. m.

The astronomical work presented for the year 1863, in addition to the usual routine observations with the several instruments, was an investigation of the solar parallax from observations on the planet Mars, made near the opposition, 1862, by Professor Hall and Mr. James Ferguson; and new elements of Nemausa by Professor Hall.

The aggregate result of astronomical observations made during the year with four instruments consisted of nearly eleven thousand observations, embracing those upon the sun, moon, the larger planets, eleven asteroids, two comets, and sixty-two double stars, sixteen occultations, and differential measurements of thirty-nine stars in the Pleiades group.

Requisition for a New Telescope.

The great defect of the Observatory, arising from the low optical capacity of the telescopes of its meridian instruments, was represented by the Superintendent as becoming each day more grievous. At the time of the founding of the Observatory only four asteroids were known, and "at opposition" all of them were observable with the instruments then selected. Of the seventy-five minor planets added to the list between the years 1845 and 1863, three-fourths of them would be forever invisible with the telescopes of the Observatory, even under the most favorable circumstances; and as the number was constantly increasing, each one observed with the equatorial necessarily involved repeated observations with two other instruments to determine the places of comparison-stars. With its original equipment, three instruments, and three observers at two epochs, were indispensable for determining data which a single proper instrument would enable one assistant to determine more satisfactorily by a single observation. Of necessity, the burden of making the most reliable observations of all these bodies devolved upon the very limited number of establishments having meridian instruments of suitable capacities, and probably they had other marked lines of work which, in consequence thereof, were greatly interfered with. In fact, of the two known observatories having both means and men for the work, Greenwich was the only one that attempted to follow them regularly, and the task had become excessively onerous.

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[1] Simon Newcomb, commissioned Professor of mathematics in the United States Navy, and ordered to the Observatory in September, 1861.

[2] The adopted longitude of the Observatory from Greenwich used in interpolating tabular positions of the moon and planets is $5^h\ 8^m\ 12^s.0$. See Washington Observations for 1869, p. X.

[3] Asaph Hall, commissioned Professor of mathematics May 2, 1863.

[4] William Harkness commissioned Professor of mathematics May 24, 1863.

To the mind of Captain Gilliss it was the imperative duty of the Washington Observatory to assume its portion of the observations and responsibility at the earliest practicable period.

On the representation of these facts to Admiral Davis, Chief of the Bureau of Navigation, authority was promptly and most cordially granted to obtain an instrument commensurate with the demands of astronomy and the character of the Observatory.

THE TRANSIT CIRCLE was therefore contracted for early in the year 1863. Extreme care is shown through the details of this contract, and in the subsequent correspondence with the contractors, Pistor & Martens, of Berlin, that it should meet the highest expectations of the Observatory. The Superintendent repeatedly expresses his solicitude in respect to it, and more than once, in his correspondence with other astronomers, the hope that it would be adjusted and at work by the commencement of the year 1865.

The results of the astronomical work during the years 1863 and 1864 were collated and prepared for the press under Captain Gilliss's supervision, but through the pressure on the Government office for military printing during those years, they were not published before his death.

Among the latest of his official letters are those referring to three important objects which at that time claimed the attention of the Observatory. These were the securing of the transit instrument already referred to, the bringing forward the unpublished observations made during the years preceding his own superintendency, and the success of the simultaneous observations instituted by him for determining the solar parallax.

He was not, however, to see the final success of any one of these aims. His lamented death on the 9th February, 1865, was without any previous illness or indisposition. It has been noted as a strange coincidence of circumstances that the last morning of his life witnessed an announcement of results deduced at this Observatory which had fulfilled his long-deferred hope of determining the solar parallax by simultaneous observations in Chile and in the United States. This announcement would have been peculiarly gratifying to him, because these results were from the joint activity of the two Observatories, founded through his own exertions, five thousand miles apart.[1]

A reference to these new observations, and the results to be deduced, is to be found in the introductions to the volumes of observations for 1862 and 1863; and the full original plan of observations for this object, in Vol. III of United States Naval Astronomical Observations to the southern hemisphere.

Just one week after the death of the Superintendent died, also, and as suddenly, Professor A. G. Pendleton, who had been many years on duty in the United States Coast Survey before his useful connection with the Observatory.

SUPERINTENDENCY OF REAR-ADMIRAL C. H. DAVIS, 1865 TO 1867.

On the 28th of April, 1865, the Observatory was placed in charge of Rear-Admiral C. H. Davis, formerly Superintendent of the American Ephemeris and Nautical

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[1] Annals of American Association for 1866, p. 6.

Almanac, and, at the date named, Chief of the Bureau of Navigation in the Navy Department.

Admiral Davis reported in October of this year the arrival, mounting, and preparation of the great Transit circle contracted for by Captain Gilliss.

"The employment," said the Superintendent, "of this instrument, in the Naval Observatory, constitutes a new era in its progress, and restores it to the rank of a first-class institution. The old instruments of this establishment were fully, both in the size and the style of their construction, up to the standard of the day in which they were ordered. But new and important advances have since been achieved in the art of making astronomical instruments, in size as well as in precision; and we find ourselves now in possession of a circle with which we can measure right ascensions and polar distances at the same moment and with equal exactness."

A precise description of this instrument, accompanied by an elaborate inquiry into the errors of division of its circles, was prepared by Professor Simon Newcomb, United States Navy. The circle was placed in position October 28, 1865, in the then west wing of the Observatory. The cylindrical registering-apparatus in this room was put in connection with the Kessels clock and a regular course of observations with the instrument begun January 1, 1866.

During the years 1865 and 1866, the Superintendent published the volumes containing the astronomical and meteorological observations made during the last two years of Captain Gilliss's superintendency, 1863 and 1864; accrediting their collation and supervision in each case in a note on the reverse of the title-page.

In addition to the observations with the several instruments, reported in the volume for 1864, an appendix by Professor Newcomb, discussed the latitude and longitude of the Observatory, and the declinations of certain circumpolar stars.

DISCUSSION OF THE METEOROLOGICAL OBSERVATIONS, 1842 TO 1867.

With the astronomical work of the year 1866, Professor J. R. Eastman[1] presented a full discussion of the meteorological observations made at the Observatory from June 30, 1842, to January 1, 1867. The investigation of these observations to determine their true character was one of the objects proposed by Commander Gilliss when he took charge of the Institution, in 1861. The investigation proposed to ascertain, if possible, the adopted methods of observation from 1842 to 1867; to learn how far they were made in accordance with the adopted plan; and to determine their value. The discussion, published by Admiral Davis in the volume for 1866, answers these points as favorably as fidelity to the investigation would permit. It forms the Appendix of that volume.

The Institution still retaining the character of a hydrographic office, there was required of the Superintendent, this year, a report on interoceanic canals and railroads under the resolution of the United States Senate of March 19, 1866, which follows:

"*Resolved*, That the Secretary of the Navy furnish, through a report of the Superintendent of the Naval Observatory, the summit-levels and distances by survey of the various proposed lines for interoceanic canals and railroads between the waters of the Atlantic and Pacific Oceans, as also their relative merits as practicable lines for the construction of a ship-canal, and especially as relates to Honduras, Tehuantepec, Nicaragua, Panama, and Atrato lines." * * *

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[1] J. R. Eastman, commissioned Professor of Mathematics February 17, 1865.

In obedience to this call, the Superintendent presented to the Secretary of the Navy, July 11, 1866, a report on the various proposed lines on the Isthmus and their special relations to the practicability of a ship-canal. The report was accompanied by fourteen illustrative maps, profiles, and surveys; of the first and of the second edition, ordered in 1867, eight thousand copies were printed by the Senate, nearly one thousand being distributed by the Observatory. Prof. J. E. Nourse assisted in preparing this Report.

In consequence of the organization of the United States Hydrographic Office under the act of Congress of June 21, 1866, the charts and nautical instruments which had been in the charge of the Observatory until this year, were removed to the Hydrographic Office, New York avenue and Eighteenth street, Washington; chronometers only being retained.

On the 8th of May, 1867, Rear-Admiral Davis was detached from the Observatory to take command of the South Atlantic Squadron.

SUPERINTENDENCY OF REAR-ADMIRAL B. F. SANDS, COMMENCING MAY 8, 1867.

The Observatory was placed under the charge of the present Superintendent, Rear-Admiral Benjamin F. Sands, United States Navy, by order of the Navy Department, May 8, 1867. During this year the work of the Institution was chiefly as follows:

The *Equatorial*, under Mr. James Ferguson, assisted by Professor J. R. Eastman, was chiefly employed in the observations of the more recently discovered asteroids, upon the companion of Sirius, and on stars about the variable star in Corona Borealis.

The *Transit Circle*, under Professors Newcomb and Hall, assisted by Mr. C. A. Thirion, Mr. Joseph A. Rogers, and Mr. C. Abbe, Aids, continued the work of a more accurate determination of the positions of the stars in the American Ephemeris, and of determining the positions of 350 stars required by the Coast Survey in determining the latitudes of its stations. The number of celestial observations for the year reached 5,000, the determinations of the Coast Survey stars requiring more than 1,000 observations.

The *Mural Circle* and the *Transit Instrument* were employed under Professor M. Yarnall, assisted by Mr. M. H. Doolittle, Aid, in observations necessary for the General Catalogue of Stars, now in press as an appendix to the volume for 1871.

The volume of observations for 1865, made under the superintendency of Admiral Davis, was published during this year. It contained two appendixes, the Description of the Transit Circle, with an Investigation of its Constants; and an Investigation of the Distance of the Sun.

The meteorological observations, under Professor J. R. Eastman, were fully kept up; the desirableness of securing yet more valuable results than were found possible with the present instruments prompted special recommendations by the Superintendent, and estimates for the purchase of the latest and most improved meteorological apparatus and the construction of a tower for the observations.

The *Chronometer-Room*, in charge of Commander A. W. Johnson, contained, at the date of the Superintendent's report, October 10, 1867, one hundred and one chronometers running on trial. By collating the history of each chronometer from the date of its manufacture and purchase in connection with its time of trial at the Observatory —a practice introduced during this year—chronometers to the number of eighty-eight were condemned as unreliable, and, by authority of the Bureau, withdrawn from service.

The *Library* received a handsome donation of scientific works from the widow of the former Superintendent, Captain James Gilliss, being a portion of the collection left by him.

During the year 1868, in reporting the progress of the largely increased astronomical work of the Observatory, the Superintendent took occasion to represent the deficiency of the Institution in the want of a telescope at all comparable with many owned by colleges, observatories, and even by scientific individuals throughout the country. He recommended the employment of Mr. Alvan Clark, of Cambridgeport, Massachusetts, to construct for the Observatory the largest refractor in the world.

The full routine work with the Equatorial, Transit Circle, and Mural Circle was maintained during the year.

Besides the volume of Astronomical and Meteorological Observations for 1866, issued in April, 1868, there were distributed the following publications, viz: Report on the Meteoric Shower of November 14, 1867, by Professors Newcomb, Harkness, and Eastman, and a Discussion of the Cyclone in the West Indies of October 29 and 30, 1867 by Prof. Eastman.

In the report of the Superintendent for the year 1869, the wants of the Observatory and the opportunity of securing the refractor from Mr. Clark were again laid before the Navy Department and an appropriation of $50,000 for this instrument was submitted in the estimates.

The erection of a new observing-room for the Transit Circle was completed during the summer of this year. The construction of the room is peculiar, the sides being formed of tinned iron 0.015 of an inch thick, shaded from the rays of the sun by light wooden louver-work, a construction adopted in order to secure equality of temperature.[1] This observing-room forms an extension of the west wing, with the dimensions of 40 feet from north to south and 28 feet 3 inches from east to west. The mounting of the circle in this observing-room was completed February 2, 1870, and observations commenced with it by Professor Harkness in charge, assisted by Professor J. R. Eastman and Assistant Observers Edgar Frisby and Ormond Stone.

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[1] The observing-room and the transit circle are described by the Professor in charge in the volume of Observations for 1870.

The erection of this new room gave opportunity for a removal of the LIBRARY from the south wing to the room previously occupied by the Transit circle—a removal made necessary by the increase of the library, which, at the date of this memoir, embraces more than 5,000 bound volumes.

By the facilities offered by the Western Union Telegraph Company, the *longitudes* of three points were determined during the years 1868 and 1869, through the use of the telegraphic apparatus and connections of the Observatory.[1] These were:

1. Of a station in the arsenal grounds at Havana, Cuba, for determining the longitude of which, at the request of the Spanish government, time-signals were exchanged on four nights of September, 1868, between the Observatory, and Lieutenant C. Pujazon of the Spanish navy. These signals placed the station

$$0^h\ 21^m\ 12^s.58 \pm 0^s.035$$

west of the center of the Observatory dome.[2]

2. Of a station taken at Des Moines, Iowa, by the Observatory party sent to observe the solar eclipse of August 7, 1869. These signals placed the station at Des Moines

$$1^h\ 6^m\ 16^s.05 \pm 0^s.05$$

west of the center of the dome.

3. Of a station taken by a party from the United States Coast Survey at Bristol, Tennessee, whose station was determined

$$0^h\ 20^m\ 32^s.74$$

west of the center of the dome.

Time-signals were also exchanged April 7, 1869, with an observing-party of the United States Coast Survey stationed at Staunton, Virginia.

The astronomical event during the year 1869, exciting general and lively interest, and productive of important results to astronomical science, was

THE TOTAL SOLAR ECLIPSE OF AUGUST 7TH.

This was closely observed by the parties from the Observatory: by Professor Asaph Hall, U. S. N., with Mr. J. A. Rogers, of the U. S. Hydrographic Office, at a station in Plover Bay, Alaska; by Professors Newcomb, Harkness, and Eastman, at the court-house of Des Moines, Iowa; and by Mr. F. W. Bardwell, Aid, at Bristol, Tennessee. Assistant Surgeon, Brevet Major Edward Curtis, U. S. A. accompanied the Des Moines party.

The reports and discussions of this eclipse by the Naval observing-parties—together with those by Dr. Curtis, Mr. J. Homer Lane of Washington City, and Mr. W. S. Gilman, jr. of New York, and Brevet Brigadier-General A. J. Myer, U. S. A., made at other stations—form a quarto volume of 217 pages, with twelve illustrations. Of this volume, besides the usual number furnished within the annual volume of the

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[1] The telegraphic apparatus and connections of the Observatory are in charge of Professor Harkness, assisted by Mr. W. F. Gardner.

[2] The report on this difference of longitude between Washington and Havana forms Appendix I of the volume of Washington observations for the year 1867, published in 1870.

Observatory, three thousand five hundred copies were printed by joint resolution of Congress.[1]

The special astronomical work of the Observatory for the year 1870, in addition to the full progress of the routine observations, was the conclusion of the observations by Professor Hall of the stars in Præsepe, with the publication of a catalogue of 151 stars in that group; the commencement of the revision of the tables of the moon by Professor Newcomb; and the observations in Europe of

THE TOTAL SOLAR ECLIPSE OF DECEMBER 22, 1870.

The Superintendent of the Observatory, believing that the experience of its officers in their observations of the eclipse of August 7, 1869, should be availed of for the further elucidation of the subjects involved in such phenomena, addressed the Navy Department upon the subject of their employment in Europe in observing the eclipse of 1870, by a special letter, March 4th of that year. The Department promptly detailed the Professors who had been the observers of the previous year.

Professor Newcomb, through the courtesy of Sir George Biddell Airy, the Astronomer-Royal, and of Sir James Anderson, President of the Anglo-Mediterranean Telegraph Company, made full arrangements to correct the stations of the American observers by cable for difference of time with the Greenwich Observatory. This was accomplished between Sicily, Malta, and Gibraltar, failing with Greenwich in consequence of a break in the cable between that place and Lisbon. Professor Newcomb's observations of the eclipse were made at a point known as Buena Vista, between the town of Gibraltar and Europa Point. The observations of Professors Hall, Harkness, and Eastman were made at Syracuse, Sicily. Captain Tupman, R. M. A., volunteered to assist Professor Harkness in his observations, and a report of his own results, with his drawing of the eclipse as seen at Syracuse with a 1½-inch telescope, is included in the Observatory report.

Unfavorable weather prevented the most successful observations of this eclipse. Those which were secured tend mainly to corroborate the observations of the eclipse of the previous year. The existence in the corona of a bright line, whose wave-length is 531.6 millionths of a millimeter, was verified, and the line found in *all parts* of the corona. Two other bright lines of less refrangibility were also found in one part of the corona. The radial polarization of the light of the corona was definitely observed.

The following differences of longitude were determined by cable by Professors Newcomb, Hall, and Harkness, of the Eclipse party:

Spencer's monument, Malta, east of flag-staff, at landing-place, Gibraltar, $1^h\ 19^m\ 27^s.52 \pm 0^s.15$. Light-house on Maniace Castle, Syracuse, east of Spencer's monument, Malta, $0^h\ 3^m\ 12^s.19 \pm 0^s.16$.

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[1] The reports embraced, besides the observations named above made with astronomical instruments, returns from more than thirty parties of amateur observers without telescopes, who noted the beginning and the ending of the totality of the eclipse, in accordance with a circular of instructions previously furnished from the United States Naval Observatory. These returns were made by parties who accepted the invitation of the Observatory to co-operate in this way in the observations. The observers resided mostly near the northern or the southern limits of totality in the States of Iowa, Illinois, Indiana, Kentucky, and Missouri.

A very large edition of the report of this eclipse has been called for and mostly distributed. It forms Appendix I, Washington Observations for 1869.

During the year 1871, the work of the Transit Circle was for a time necessarily suspended by the absence of Professors Harkness and Eastman, on duty in Europe, and the nearly fatal illness of the former which delayed his return; and by the re-grinding of the object-glass.

The observations with the Equatorial were uninterrupted. They were made specially on 27 of the minor planets; upon two new comets, discovered during this year by Winnecke and Tempel in Europe; on the two comets, Encke's and Tuttle's, whose periodical returns occurred during the year; and upon moon occultations. The observations on Encke's comet by Professors Hall and Harkness, form Appendix II, of the annual volume for 1870, just issuing from the press. The elements of the orbit of Comet I, 1871, were also computed.

The Transit instrument and Mural circle were employed by Professor Yarnall chiefly on observations necessary for filling in star-places in the General Star Catalogue which is to be found in the volume for 1870.

At the request of the Chief of the U. S. Corps of Engineers, the Observatory aided in determining the differences of longitude between the Observatory and Detroit, and the Observatory and Carlin and Austin, Nevada. In this work the Observatory co-operated with General C. B. Comstock, Superintendent U. S. Lake Survey, and Lieutenant G. M. Wheeler, commanding the Exploring Expedition to Nevada and Arizona.

The revision of the tables of the moon, for which an appropriation of $2,000[1] was made by Congress in the previous year, was materially advanced by the facilities courteously afforded Professor Newcomb, the officer charged with the work, during his visit to the principal observatories and libraries of Europe. The records of observations of eclipses and occultations of the moon which were discovered on this visit, extended as far back as the year 1680—seventy years before the epoch at which it had been generally supposed that our accurate knowledge of the moon's motion begins.

In the work of the Observatory reported October 1, 1872, the *Equatorial* was employed, by the observers Professor Hall and Assistant Professor A. N. Skinner, chiefly in observations on the numerous newly-discovered asteroids. A series of measurements of the double star Sirius was made and furnished, through the Superintendent, to the Astronomische Nachrichten in Altona, Germany.

The *Transit Circle* was employed on the sun, moon, and planets; and on a list of miscellaneous stars whose places were required for the better determination of the latitude of the eclipse-stations of August, 1869, at Des Moines, Iowa, for the reduction of observations to be used in the revision of the theory of the moon, and for reduction of observations made by the equatorial. A new chronograph was received, made by Messrs. Clark, of Cambridgeport, Massachusetts, from designs by Professor Harkness.

With the *Mural Circle*, Professor Yarnall observed a series of stars taken alternately above and below the pole and a number of stars whose declinations were wanted to complete the places of some already observed in right ascension. In the computations on the star catalogue aid was rendered by Professor H. H. Lockwood, U. S. N.

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[1] Under this appropriation, three computers, Messrs. Parker, Hedrick, and Brown, have been employed, rendering valuable assistance.

The first part of the *theory* and *tables of the moon*, under revision by Professor Newcomb, comprising the calculation by a new method of the action of the planets on the moon's motion, was nearly completed. In the preparation of the second part, comprising the comparison of Hansen's tables with observations before the year 1750, very important help in the re-determination of the proper motions of the principal stars was rendered by the eminent astronomer Dr. Auwers, of Berlin, who communicated his re-reductions of Bradley's observations from 1750 to 1860.

In July and August, 1872, the Observatory co-operated with the U. S. Coast Survey by exchanging longitude signals with the Coast Survey parties at Cambridge, Massachusetts, and St. Pierre, near Newfoundland; Professor Harkness exchanging the signals from the Observatory. At the same time, signals were exchanged by the U. S. Coast Survey between Saint Pierre, and Brest, France, and between the latter station and Paris and Greenwich, the object being to obtain another determination of the difference of longitude between the fundamental points in Europe and America.

Successful observations of the meteoric showers both of August and of November of this year were prevented by unfortunate weather.

The usual daily *Meteorological Observations* were made at the regular intervals of

0^h, 3^h, 6^h, 7^h, and 9^h a. m., and 0^h, 3^h, 6^h, and 9^h p. m.

The Chronometer-room during this year received eighty chronometers. At the date of October 1st, ninety-seven were on hand ready for issue to sea-going vessels.[1]

From this room mean time is now sent daily, at 7 a. m., 12 m., and 6 p. m., to the police-stations of this city, and at 12 m. to the Western Union telegraph-office, for communication to the offices of the company's lines throughout the United States.[2]

THE GREAT EQUATORIAL NOW CONSTRUCTING.

In the act making appropriations for the naval service for the year ending June 30, 1871, Congress authorized the Superintendent of the Observatory to contract for the construction of a refracting telescope of the largest size, of American manufacture, at a cost not exceeding $50,000, recommendations for which had been made by him in the years 1870 and 1871. They further authorized, by the naval appropriation bill for 1872, the erection of a tower and dome for this instrument.

By direction of the Superintendent, the contract for the telescope was negotiated in August, 1870, by Professor Newcomb, between Messrs. Alvan Clark & Sons, of Cambridgeport, Massachusetts, and the Observatory. By this contract, Messrs. Clark are to construct a refracting telescope, of good definition and of 26 inches clear aperture, mounted equatorially on the German plan, with all the means necessary to secure easy motion, proper balance in all positions, and the safety of its object-glass; with divided circles, to be each read by two microscopes—right-ascension circle to seconds, declination-circle to tenths of a minute of an arc;—with a driving-clock, and with the usual number of eye-pieces and ring-micrometers, a filar micrometer, an Airy double-image micrometer, a mica-scale micrometer, and a spectroscope. Messrs. Clark engage to complete and mount this telescope within four years from the date of the contract.

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[1] Under the sanction of the Navy Department, Chronometers are also issued from the Observatory to the various surveying and scientific Expeditions of the Government.

[2] A time-ball is dropped on the roof of the Observatory daily at noon. The clocks at the Navy Department and the U. S. Signal-Office of the War Department are controlled electrically by the Observatory clock, the expectation being to include in the circuit the several Department buildings.

The object-glass, made in the rough by Chance & Co., of Birmingham, England, was received by Messrs. Clark in December, 1871. It was ground, polished, and completed by them in November, 1872. The glass entirely satisfies the expectations of the Observatory. The work on the tower and the dome has been commenced.

CO-OPERATION OF THE OBSERVATORY IN THE OBSERVATIONS OF THE TRANSIT OF VENUS, DECEMBER 8, 1874.

Preparatory measures for this object were early taken by the Observatory. At the request of the Superintendent, Congress appropriated, in 1871, the sum of $2,000 for experiments to be made on the best forms of instruments to be used in these observations.

By section 2 of the naval bill making this appropriation, a Commission in reference to this Transit was made to consist of the Superintendent of the Observatory, the President of the National Academy of Sciences, the Superintendent of the United States Coast Survey, and two Professors of Mathematics of the Observatory. Prof. Simon Newcomb, U. S. N., and Prof. William Harkness, U. S. N., were detailed as members of the Commission.

In March, 1872, the Navy Department was addressed by the Superintendent, on the advisability of making national provision for the observation of the Transit, the expedition for which would also render important service in determining the position of points in the Pacific Ocean.

The estimate of the Commission of $150,000 (to be expended in three annual installments) was submitted in this letter of the Superintendent, endorsed by the Secretary of the Navy, Hon. G. M. Robeson, and responded to by Congress in the grant of the first installment of $50,000 for the purchase of instruments, June 10, 1872.[1]

This cordial response in Congress was secured by the support of the Senate Committee on Education, an able report from which was presented by the Hon. Mr. Sawyer; and by the influence in the House of Representatives of the chairman of the Committee of Appropriations, Hon. Mr. Garfield, with that of other Representatives.

Among those who memorialized Congress for this object were the Connecticut Academy of Sciences, the California Academy, the American Philosophical Society of Philadelphia, the Chamber of Commerce of San Francisco, and the University of California.

Under the appropriation already made, the Commission have contracted for most of the necessary instruments, and are carrying forward the previously-required experimental work for observing this rare and most important event.

They have issued the first two papers of a series upon this subject:

No. I, comprising a Correspondence with Mr. L. M. Rutherfurd, of New York, and a paper on the Application of Photography, by Professor Newcomb;—

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[1] While these pages have been in press, Congress has appropriated the remaining $100,000; March 2, 1873.

No. II, —— Charts and Tables for facilitating Predictions of the several Phases of the Transit; prepared by Mr. G. W. Hill, Assistant in the Nautical Almanac Office, under the direction of Professor J. H. C. Coffin, Superintendent of the Almanac.

In reply to inquiries in regard to the plans of the Commission, Professor Newcomb, as their secretary, has replied in substance: That the principal reliance during the observations of the transit will be on photography; and that arrangements are being made for equipping eight photographic stations—four in the Northern Hemisphere in China, Japan, and probably in the adjacent islands; and four in the Southern Hemisphere in New Zealand, Chatham Island, Tasmania, and probably Kerguelen Island. Each station will be provided with an astronomer, an assistant astronomer, and photographic assistants.

The record of the work of the Observatory offered in the preceding Memoir closes with this reference to the transit of Venus and to the natural relation to it held by the Institution. It purposes to fulfill that share in the observations and in the results to be deduced from them, which the astronomical world justly expects of it. The daily increasing interest in this phenomenon and its astronomical importance may be yet more appreciated by the general reader by attention to the following recent statement of a distinguished writer on astronomy, Professor R. Grant, Director of the Royal Observatory, Edinburgh:

"The approaching transits of Venus in 1874 and 1882 are looked forward to by astronomers with intense interest. Steps have already been taken by the principal nations of Europe to observe the transit of 1874 with the aid of all the appliances ot modern science. The transit of 1882 will be eminently *favorable for observation in America.* Between those two important phenomena there will occur one of those oppositions of the planet Mars which are peculiarly favorable for the same purpose. We have thus three phenomena—the transit of Venus in 1874, the opposition of Mars in 1877, and the transit of Venus in 1882—all favorable for obtaining a fresh determination of the value of the solar parallax; and it cannot be doubted that the various efforts which they will call forth on the part of astronomers will lead to a value of that important element still more trustworthy than any yet arrived at."

In CONCLUDING this Memoir, it is proper to say as regards the future of the U. S. Naval Observatory, that the position now accorded to it by the free tributes of scientific men in the Old World, as well as at home, is not without honor to our country; and this notwithstanding the comparatively recent founding of the Institution and the as yet limited appropriations sustaining it. It may, therefore, justly claim a yet more generous support; and the pledge may be safely made that if thus supported and efficiently directed, it will make returns yet more gratifying to national pride, and advancing the highest aims of scientific research. The increasing work of the Institution, especially during the last four years, is fairly presented in the extent and character of its publications.[1] To these only a general reference has been found practicable throughout the preceding sketch. The Table closing it will show the issue of the now completed work of some previous years—until lately unreduced—as well as the full labors of current years of observation.

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[1] The demand for these has nearly exhausted the supply of all publications which precede the volume for 1870.

Independently, however, of all claims derived from its own records, the unprecedented advance of science in our day demands the best national provision for the *personnel* and equipment of the Observatory, and for its efficient direction to the highest astronomical aims.

The extent of the field of investigation which is opening, its *practical usefulness*, and the claim that *National Institutions* shall enter upon what cannot otherwise be secured, have been lately urged on more than one occasion before the first of astronomical societies, the Royal Astronomical Society of London.

The following is from a paper read by Lieutenant-Colonel Strange, F. R. S., at the session of the Society of April 12, 1872:

"I content myself with stating my opinion that permanent national provision for the cultivation of the Physics of astronomy is urgently needed. If the study of the sun only were in question, that alone would, I think, justify such a measure; for there can hardly be a doubt that almost every natural phenomenon connected with *climate* can be distinctly traced to the Sun as the great dominating force, and the inference is unavoidable that the changes, and, what we now call, the uncertainties, of climate, are connected with the constant fluctuations which we know to be perpetually occurring in the Sun itself. The bearing of climatic changes on a vast array of problems connected with *navigation*, *agriculture*, and *health* need but be mentioned to show the importance of seeking in the Sun, where they doubtless reside, for the causes that govern these changes. It is, indeed, my conviction, that of all the fields now opened for scientific cultivation, there is not one which, quite apart from its transcendent philosophical interest, promises results of such high utilitarian value as the exhaustive, systematic study of the Sun."

What further share the Naval Observatory shall secure in such investigations, or in others of like character within special fields of research, or in the general advancement of science, and what shall be its future records of success—must remain with the support extended by the Government and the fidelity of those who are entrusted with its administration. It is certainly a source of congratulation to the Government and especially to the Navy, that this Institution, nurtured and fostered by the Navy Department through successive changes of administration in the Heads of that Department and under the zeal and labor of Naval Officers, has advanced from so humble an origin to the position which it has secured.

SUPERINTENDENTS OF THE OBSERVATORY.

Commander M. F. Maury, from October 1, 1844, to April 20, 1861.
Captain J. M. Gilliss, from April 22, 1861, to February 9, 1865.
Rear-Admiral C. H. Davis, from April 28, 1865, to May 8, 1867.
Rear-Admiral B. F. Sands, from May 8, 1867.

Officers in Charge of Instruments Since 1861.

The Equatorial.—Assistant Astronomer J. Ferguson, Professors Newcomb, Hall.
The Prime Vertical.—Professors Hubbard, Newcomb.
The Transit Instrument.—Professor Yarnall.
The Mural Circle.—Professors Hubbard, Newcomb, Yarnall.
The Transit Circle.—Professors Newcomb, Hall, Harkness.
The Meteorological Instruments.—Professor J. R. Eastman.

The Chronometers and Nautical Instruments.—Very frequent changes have occurred in the orders of the officers of the line, on duty at the Observatory in charge of the naval instruments and the charts.

After the transfer of the charts and other naval instruments at the date of the organization of the Hydrographic Office, 1866, Commander A. W. Johnson was in charge of the *chronometers.* He was succeeded by Commander W. N. Jeffers, and Commander Jonathan Young. At the present date, Commander James H. Gillis is in charge.

PUBLICATIONS OF THE OBSERVATORY.

I.—Volumes of Observations.

Astronomical Observations for	the year	1845	published in	1846
Do.	do.	1846	do.	1851
Do.	do.	1847	do.	1853
Do.	do.	1848	do.	1856
Do.	do.	1849–1850	do.	1859
Do.	do.	1851–1852	do.	1867
Astronomical and Meteorological Observations for		1861	published in	1862
Do.	do.	1862	do.	1863
Do.	do.	1863	do.	1865
Do.	do.	1864	do.	1866
Do.	do.	1865	do.	1867
Do.	do.	1866	do.	1868
Do.	do.	1867	do.	1870
Do.	do.	1868	do.	1871
Do.	do.	1869	do.	1872
Do.	do.	1870	do.	1873
Do.	do.	1871	in press.	

II.—SPECIAL OBSERVATIONS AND REPORTS.

Observation or Report.	Author.	Appendix to volume for the year—
Superintendency of Commander Maury.		
A.—Observations on sun spots	Rev. B. Sestini, S. J	1847
B.—Observations on the Mississippi River, at Memphis	Passed Midshipman R. A. Marr	
C.—Tables for facilitating reduction of apparent places of fixed stars to their mean places.	Professors J. H. C. Coffin, and J. S. Hubbard.	
[Zones of stars observed at the National Observatory in 1846, reduced by Assistant Astronomer James Ferguson, published in 1860.]	Lieutenant L. Maynard, Professor J. S. Hubbard.	
Superintendency of Captain Gilliss.		
Longitude of U. S. Naval Observatory from moon culminations	Professor S. Newcomb	1862
A.—Solar parallax from observations on the planet Mars, made near the opposition, 1862, with the equatorial.	Professor A. Hall	1863
A.—Solar parallax from observations on the planet Mars, made near the opposition, 1862, with the meridian instrument.	Assistant Astronomer J. Ferguson	
B.—Orbit of Nemausa	Professor A. Hall	
Investigation of the latitude and longitude of the Observatory and of the declination of certain circumpolar stars.	Professor S. Newcomb	1864
Superintendency of Rear-Admiral Davis.		
Description of the Transit Circle Investigation of the distance of the sun	Professor S. Newcomb	1865
Discussion of the meteorological observations from 1842 to 1867	Professor J. R. Eastman	1866
Report on interoceanic canals and railroads	Rear-Admiral C. H. Davis	
Report on November meteors of 1866		
Superintendency of Rear-Admiral Sands.		
I.—Report on the difference of longitude between Washington and Havana.	Professor W. Harkness	1867
II.—Reports on the total solar eclipse in the United States, August 7, 1869.	Professors S. Newcomb, A. Hall, W. Harkness, J. R. Eastman and others.	
III.—Positions of fundamental stars deduced from Washington observations 1862–'67.	Professor S. Newcomb	
IV.—Catalogue of 151 stars in Præsepe	Professor A. Hall	
Catalogue of stars observed by the United States Astronomical Expedition to the Southern Hemisphere, 1850–'52.	Lieutenant James M. Gilliss, Superintendent; Lieutenant A. McRae, Master S. Ledyard Phelps, and Mr. E. R. Smith, Assistants.	1868
I.—Reports on total solar eclipse in Europe of December 22, 1870	Professors Newcomb, Hall, Harkness, Eastman.	1869
II.—Zones of stars observed with the Mural Circle in the years 1846, 1847, 1848, and 1849.	Professor J. H. C. Coffin, Lieutenant T. J. Page, Lieutenant C. Steedman.	
I.—Report on the difference of longitude between Washington and St. Louis.	Professor W. Harkness	1870
II.—Reports on observations of Encke's Comet, during its return in 1871.	Professors Hall and Harkness	
III.—Right ascensions of the equatorial fundamental stars and corrections necessary for reduction of right ascensions of different catalogues to a mean homogeneous system.	Professor S. Newcomb	
IV.—Zones of stars observed at the U. S. Naval Observatory, with the Meridian Transit Instrument, in years 1846, 1847, 1848, and 1849.	Lieutenant J. J. Almy, Lieutenant W. A. Parker, Professors R. Keith, Mark H. Beecher, J. S. Hubbard.	
Report on November meteors of 1867	Professors Newcomb, Harkness, Eastman.	
Discussion of West India Cyclone of October 29 and 30, 1867. Report on November meteors of 1868	Professor J. R. Eastman	
IN PRESS.		
I.—A list of mean places of stars observed at the U. S. Naval Observatory in the years 1858, 1859, 1860, for right ascensions, and 1853, 1854, 1855, 1856, 1857 and 1858, for declinations.	Professor M. Yarnall	1871
II.—Catalogue of stars observed at the U. S. Naval Observatory in the years 1845 to 1871, inclusive, reduced to the mean epoch 1860.0.	Professor M. Yarnall	
III.—Zones of stars observed with the Meridian Circle in the years 1847, 1848, 1849.	Professors Hubbard and Major; Lieutenant Muse.	
IV.—Memoir of the founding and progress of the U. S. Naval Observatory.	Professor J. E. Nourse	

Additional Notes to the Catalogue of Stars forming Appendix III to the Washington Observations for 1871.

Page.	Number.	Remarks.
14	535	The Declination given is that of Weisse O, 950, previously observed.
22	859	The Right Ascension differs 10^{s} from Weisse I, 772.
25	959	The Declination given to this star is that of Weisse I, 1043.
27	1047	The Right Ascension differs 10^{s} from Weisse II, 189.
34	1323	The Declination of the star differs $2' 23''$ from Weisse II, 1069.
43	1682	The Declination differs $1'$ from Weisse (2) III, 917.
44	1743	The Declination given of this star is not that of Weisse (2) III, 1143.
45	1761	The Right Ascension differs 10^{s} from Weisse (2) III, 1214.
55	2187	This is probably Weisse (2) V, 49, 1^{m} earlier.
66	2594–2595	The Declinations of these stars should be transposed.
68	2682	The Declination differs $31''$ from Weisse (2) VI, 935.
69	2722	This is not Weisse (2) VI, 1198.
74	2922	The Declination is that of Weisse VII, 274.
77	3042	This does not seem to be Weisse (2) VII, 625.
78	3093	The Declination of this star is notably different from that of Weisse VII, 924.
81	3206	This does not appear to be Weisse (2) VII, 1263.
84	3344	This star differs from Weisse VIII, 294, $42''$ in Declination.
86	3426	The Right-Ascension differs 10^{s} from Weisse VIII, 569.
93	3703	The Declination of this star is not that of Weisse (2) VIII, 1016.
96	3797	The Right Ascension differs 10^{s} from Weisse VIII, 1367,
97	3835	The Declination differs $1'$ from Weisse (2) VIII, 1475.
103	4090	The Right Ascension differs 30^{s} from Weisse IX, 887.
108	4292	This is not Weisse X, 204.
126	5002	The Declination given is not that of Weisse (2) XI, 1013.
128	5085	The Declination differs $3'$ from Weisse XII, 49.
129	5131	The Declination differs $1'$ from Weisse XII, 184.
134	5316	The Right Ascension differs 9^{s} from Weisse XII, 626.
135	5360	The Right Ascension differs 9^{s} from Weisse XII, 743.
153	6096	This star could not be found on re-examination.
161	6392	The Declination differs from Weisse (2) XV, 571.
169	6724–6725	The names of these stars should be interchanged.
176	7030	The Declination differs $1'$ from Weisse XVI, 958.
182	7239	The Declination is not that of Weisse XVII, 322.